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**"QUANTIFICATION OF FARMING SYSTEMS  
IN THE NEGUEV SETTLEMENT**

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Location of the study area.

The Atlantic Zone Programme (CATIE-AUW-MAG) is the result of an agreement for technical cooperation between the Centro Agronómico Tropical de Investigación y Enseñanza (CATIE), the Agricultural University Wageningen (AUW). The Netherlands and the Ministerio de Agricultura y Ganadería (MAG) of Costa Rica. The Programme, that was started in April 1986, has a long-term objective multidisciplinary research aimed at rational use of the natural resources in the Atlantic Zone of Costa Rica with emphasis on the small landowner.

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## 1 INTRODUCTION

The general objective in this study is to quantify farming systems. The goal is to find relations between inputs, soil types, cropping systems and the farm income. A farming system analysis method was used to quantify these relations on crop and farm level. The research area was the Neguev settlement, located in the Atlantic Zone of Costa Rica.

The report presented is the result of a study done within the Programma Zona Atlántica, a cooperation between the Tropical Agronomic Research and Education Centre (CATIE), the Department of Agriculture and Livestock (MAG) and the Agricultural University of Wageningen (AUW), within the scope of a five month during practical period.

The Department Development Economics of the Agricultural University of Wageningen is involved in the Programma Zona Atlántica since the beginning in 1986 and started investigations in the Neguev settlement in January 1991. The study was set up by Jogchum Finnema and we succeeded him in July 1991. In this report data collected from January 1991 till November 1991 are analyzed.

This report contains eight chapters. Chapter 2 discusses the study in it's wider context and deals with the set up of the research. In the 3rd chapter a general introduction of the research area is given. Chapter 4 is a detailed description of the 13 sample farms. The following chapter, chapter 5, presents an economic analysis of the farms, while chapter 6 analyses their subsystems.

## SUMMARY

The Department Development Economics of the Agricultural University of Wageningen is involved in the Programma Zona Atlantica since the beginning in 1986 and started investigations in the Neguev Settlement in January 1991. The study was set up by Jogchum Finnema and we succeeded him in July 1991. In this report data collected from January 1991 till November 1991 are analyzed.

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## 2 ORGANIZATIONAL SET UP

### 2.1 The objective in a wider context

As stated in the introduction the objective of this study is to quantify relations on crop and farm level. These relations in combination with additional information will be used by Schipper of the Department Development Economics of the AUW to distinguish several farm types to be used in a linear programming model. The outcomes of this model will contribute to the aims of the Programma Zona Atlántica; to contribute to a sustainable development and increase of the well being of the population of the Atlantic Zone of Costa Rica by means of agricultural investigation (VF program., 1990). The work of the Programma Zona Atlántica as it is, can partly be considered as a further development and testing of the integrated land evaluation and farming system analysis sequence (LEFSA), combining the strong points of both methods, in the actual practice of land use planning (Fresco et al. 1990).

### 2.2 Time schedule of the study

The study was started by J. Finnema in October 1990 and he selected a first group of farms. Data on these farms have been collected since January 1991 and will go on till January 1992. In July 1991 we succeeded him and selected a second group of farms which will be investigated till July 1992. The plan is to start with a third group, in Río Jiménez, in January 1992. In this report data collected from January till November 1991 are analyzed. Up till now a succeder has not been found but data collection will be continued by an employee of the Programma Zona Atlantica who also assisted us during our investigation.

### 2.3 Stratification

As stated above the sample farms which were investigated can be primarily divided into two groups, the first group selected in January 1991 and a second stratified random sample in July 1991. In both selection procedures the same database was used. This database consists of the following data; the IDA (Instituto Desarrollo Agricola) parcel numbers, the names of the owners, the areas of the parcels, the prevalent soil types and information on previous studies done at the farms. With this database Jogchum selected 15 farms in three strata, five farms on fertile soils, five farms on poor soils and five farms on poor soils with palmheart. When we continued his work seven farms were still in the sample, three on fertile soils and four on poor soils, the other eight farmers did not like to continue the cooperation.

After qualitative land use information was added to the database the second group was selected. In particular attention was paid to livestock farms because they were underrated in the first sample up till then. Information on livestock farms on the fertile soils of La Lucha and livestock farms on the poorer soil types in the area south of the river Parismina were the main focus. To take a sample of these livestock farms it was stated that the farms should be larger or equal to four hectares of which 50% or more should be pasture. This resulted in a stratum of 25 farms on the poorer soils in the area south of the river Parismina and 28 in La Lucha. In each stratum the farms were numbered and some were selected by using random tables in order to select six farms in each stratum.

In practice the farms, as selected by the above described procedure, often could not be analyzed. The following problems occurred; only one farmer was willing to cooperate others didn't live on the parcel, were not at home, claimed to do almost only off farm work or were just not interested in cooperation. Finally three farms were selected. The group of farms used in this study is larger because we also investigated two farms on which other students had experimental fields and one farmer that showed his interest on previous occasions. Eventually five new farmers were willing to cooperate because one of the three selected farmers didn't have time after all. In the La Lucha area 12 farms were visited but the same problems as before occurred. This time only one farmer was willing to cooperate and even afterwards not one extra farm could be selected notwithstanding the help of the already selected farmer.

## 2.4 Data processing

### 2.4.1 The schedule

Detailed information about the way farmers work depends largely on the quality of the information collected in the field. For that reason a weekly survey with schedule was chosen so standardized information was obtained (appendix 1). Besides these weekly interviews a stock interview was taken when a farmer was added to the sample (appendix 2). The stock interviews give information on the family labour supply, the current and former land use, the agroforestry component, the equipment and the livestock situation. The next chapter gives an enumeration and analysis of stock interview data. Another stock interview was done in October, on livestock only, to support the weekly information on growth and trade of the cattle.

As mentioned above a weekly schedule was used. In some cases the farmer was willing to keep daily records. Some wanted this for their own business administration others as a mnemonic device. Because the means, to register the daily records, were supplied in the same form as the schedule it is likely that the obtained information is more accurate than it would have been otherwise. The accuracy of the information also increased in time because the many interviews and other field work more and more enlarged the understanding of the farms.

In practice the following system of asking was used. Day by day information was asked about the past week. Within each day the farmers made a subdivision for the different activities they implemented. Per activity, they gave information on the type of labour, it's duration, the costs of hired labour, used inputs and their quantity. Furthermore a weekly overview was asked of bought inputs and sold outputs, their quantity and the costs and yields. This usually took about twenty minutes per interview. When done carefully the next step, the data processing in Dbase, was not a very time-consuming activity.

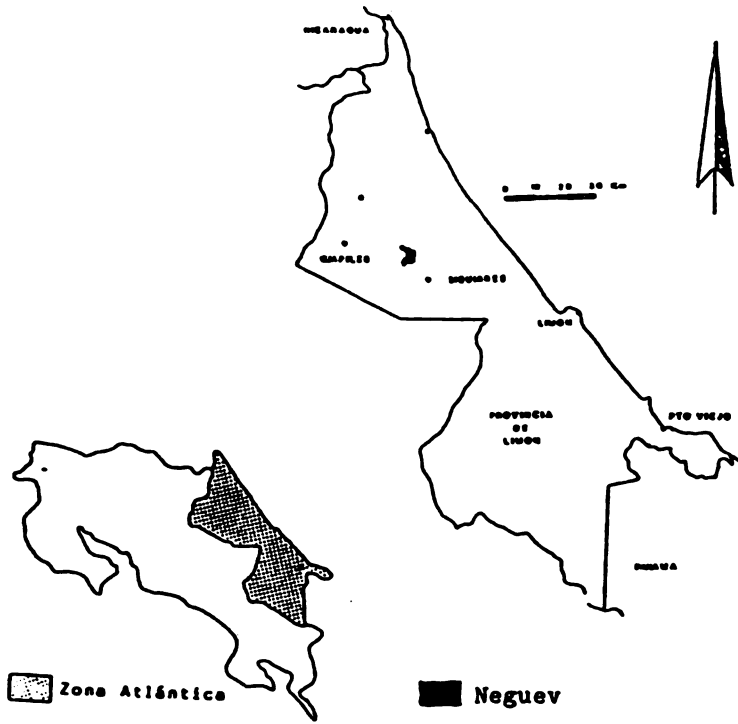
#### 2.4.2 The Dbase file

The first step towards a useful database to analyze the way farmers are managing their farms is the field work. But to make sure that all the valuable data could and can be processed afterwards it is necessary to store it orderly and in a univocal way. For that purpose a the Dbase data processing system was used. However the activities of the farmers are very divers and a guideline is indispensable to guarantee a unambiguous process. In appendix 3 a detailed guideline is presented how to process the field data in practice. Furthermore this appendix explains the way the Dbase file can be imported in the program Pepe V (J. Arze, 1991).

Although the executive part of the data processing in Dbase had been taken care of, some theoretical questions remained. It was for example not always clear to which cropping system costs had to be allocated. As far as possible these were solved consistent with the farm economics theory but sometimes arbitrary decisions had to made.

#### 2.4.3 Pepe V

The program Pepe V quantifies economic activities per month on farm level and presents these data in convenient tables (appendix 4). For every cropping system within a farm the program calculates: total costs and benefits, family and hired labour per month, labour input per activity, inputs per month, some simulations and a summary record. This summary record contain the most important economic data of a crop. The summarized records together give an impression of the economic situation at farm level.



Map 3.1 The Atlantic Zone of Costa Rica.



Map 3.2 The Neguev settlement

### 3 THE RESEARCH AREA

#### 3.1 The Atlantic Zone

The Atlantic Zone of Costa Rica (Map 3.1) is an area with a large diversity of soils, fertile alluvial soils coincident with very poor. Some parts of the zone are still covered with tropical rain forest, others have been used for agriculture for more than 80 years. The way the areas have been cultivated, is also diverse. Large multinationals, banana plantations, and big livestock farms exist next to small farms often with low inputs and a diversity of crops. This situation briefly outlined above results in a complicated agrarian situation with lots of different themes, for example, insecurity about land tenure, failing financial and technical assistance, deforestation and other problems with respect to sustainable land use.

In 1986 the Atlantic Zone Programme (Programa Zona Atlantica, PZA) started. On the basis of an exploratory survey one studied the total zone to characterize it, the result was a very diverse picture so one decided to investigate four smaller areas more closely. The "asentamiento" Neguev, one of these four, is the area in which our investigation took place.

#### 3.2 The Neguev settlement

The Neguev settlement (Map 3.2) is the result of an invasion, organized by a union of small farmers in the region (UPAGRA - Union de Pequeños Agricultores de la Región Atlántica) in september 1979, on the property owned by a livestock firm called Industrial Neguev S.A., which was owned by Inmobiliaria Agromercantil Caribe S.A..<sup>1</sup> When the situation became more hostile, after other groups entered the "finca" as well, the institute for agricultural development (IDA) intervened to subdivide the land. Later on the Neguev settlement was included in the so called "0-34" program, financed by a convention with the Agency of International Development (AID).

The Neguev settlement is located between the 5.80 and 5.90 degree of longitude and the 2.40 and 2.50 degree of latitude on the maps of Bonilla and Guácimo, in the districts of Germania and Cairo of the canton of Siquirres and the districts of Pocora and Río Jiménez of the canton Guácimo, in the province of Limón.

The Neguev settlement is divided in five sectors: La Lucha, Milano, Bella Vista, El Silencio and El Peje. The total area is 5.340 ha, with 311 parcels of a magnitude between 10 and 17 ha each. Every sector has its own communal center with a school, sports green, some small shops and a small public center. The office of IDA, the official authority responsible for the management of the Neguev, is situated in the center of Milano. Recently the electricity network is being extended. Before only Milano had this facility. This is still the case with respect to running water and telephone services.

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<sup>1</sup> Invasions like this are tolerated by the Costarican government as long as the invaders can prove that the way the land was exploited was out of proportion in comparison with the possible land use.



### 3.3

#### Farming systems

After a first brief look at the farms of the Neguev settlement one could say that they are more or less alike: They all were recently founded, they live under the same institutional assistance, they are about the same size and have access to the same markets (HALL, 1984). Of course the climate is about the same for each farm. This means high temperatures and lots of rain, 3.666 mm on average a year. The distribution over the year is fairly equal although the months February till May are relatively dry. The humidity is always above 80%. These physical conditions together make plagues and diseases all the more likely to occur (Oñoro, 1990).

No doubt, that after a second look, one would notice an important variation in the farm- and production systems. These differences originate in the various soil types, farm families and are related to the different factors in time. In program paper no.7 (Oñoro, 1990) H. Waaijenberg gives a general picture of these differences.

In the following paragraphs an enumeration is given of the data obtained by the stock interviews. In order to check the representativeness of the sample a comparison with program paper no. 7 is made where possible. As a matter of convenience the analysis holds on to the order used by H. Waaijenberg in programme paper no.7.

The stock interview information is based on 13 stock interviews, 7 in January and six in July. Data from January until July were collected by J. Finnema but checked and supplemented when necessary. The 'encuesta general', realized in February 1987, contains data from 53 farms in the Neguev settlement. The statistical relevance of the information given by the stock interviews is therefore smaller but the method of investigation was more specifically meant to quantify relations between variables on farm level and the following aggregations are merely a welcome side product.

#### 3.3.1 Antecedents

Of the 13 farms in the sample, six farmers obtained their farm by means of buying from other farmers, one by means of IDA and five of them were occupiers. It's interesting to see that four of these occupiers live in 'La Lucha', north of the river Parismina, and only one south of the river Parismina. Probably this has it's cause in the higher fertility of the soils in La Lucha.

Table 3.1                    Some antecedents of the farms in the sample and their producers (n = 13). Neguev settlement, Costa Rica, 1991.

	average (years)	range (years)
age	44	30-66
education	4	0.5-10
experience in agriculture	30.	5-48
experience on current farm	10	5-12

Note: \* Not only working as a independent farmer but all experience in agricultural work is included.

The numbers in table 3.1 still show, although it is not so obvious anymore as in program paper no. 7, that many original occupiers abandoned their properties. Although it is known that in the settlement the parcels change relatively often of owner, it is most likely that the actual situations on the farms are the result of the management of the current farmer.

The average age doesn't show any changes in comparison with the 'encuesta general' neither does the level of education. All farmers except one worked in agriculture their whole live, which usually means since their 7<sup>th</sup> year (table 3.1).

Of the sample farmers only three originate from the province Limon, three came from Guanacaste, one from Puntarenas, four from San José and two from Cartago.

### 3.3.2                    Families

In the Neguev settlement the same two categories of owners were found as were identified in the 'encuesta general'. Roughly there are the ones that live and work on the farm and others who live elsewhere and let someone else take care of their property. One of the reasons that elsewhere living owners keep there land in order and use, is their fear for occupiers. This may sound as a contradiction, after all not long ago the settlement was founded by occupiers, but it is a paradox. In contrary to the more or less permanent landownership in western countries the land changed relatively often of owner since the occupation. As a result almost none of the current owners was an occupier and fears, when he is not actually cultivating his land, that his property will be 'legally' expropriated by other occupiers.

In the sample 'on farm living' farmers were visited and interviewed so the following table (table 3.2) can not be extrapolated for the whole settlement.

Table 3.2 Average composition of the 13 families in the sample. Neguev settlement, Costa Rica, 1991.

		number of families	average family	range family	total
children	0-14	9	2.4	0 - 5	22
boys	15-20	7	1.4	0 - 2	10
girls	15-20	4	1.3	0 - 2	5
men	21-60	13	1.5(1.1)	1 - 6(2)	20(14)
women	21-60	11	1.6(1.1)	0 - 5(2)	17(12)
men	60 >	2	1.0	0 - 1	2
women	60 >	1	1.0	0 - 1	1
total		13	5.9	1 - 10	77(66)

Note: The figures of the groups 'men 21-60' and 'women 21-60' are seriously influenced by one family with 11 older children who all live outside the settlement. Recalculations are given between brackets.

As Waaijenberg found, an underrepresentation of older people was encountered on the sample farms. An underrepresentation of girls and women wasn't found, neither that the families consisted of more than one nuclear family (table 3.2).

### 3.3.3 Labour

Labour still is a very important factor in the production systems, possibly the most scarce factor. In the Neguev settlement the family is the principle source of labour; the activities of the members depend on age and sexe. Boys and men work on the land and girls and women in the house (Oñoro, 1990)(table 3.3).

Table 3.3 Primary activities of the family members. Neguev settlement, Costa Rica, 1991.

		working			
		in house	on the farm	off-farm	total
boys	15-20	0	3	7(5)	10
girls	15-20	2	0	3(0)	5
men	21-60	0	11	9(3)	20
women	21-60	12	0	5(0)	17
men	60 >	0	2	0	2
women	60 >	1	0	0	1
total		15	16	24	55

Note: The figures between brackets corrected for non on farm living family members.

Table 3.3 shows that from the boys and men who live on the farms, 36% works off-farm. These are usually no full time jobs and in times with a higher labour requirement on the farm they work less off-farm. Nevertheless the fact remains that in this situation of relative labour scarceness many hectares are not cultivated but people work off-farm at the same time. Off-farm work is most frequently done on a banana farm, cardboard plant, ornamental company or on other small farms.

### 3.3.4 Equipment

From table 3.4 it should be clear that the sprayer is still the most used and owned equipment, if the field knife ('machete') is not counted in. The number of farmers using a chain saw, car and motorcycle are tentative estimations on the basis of our observations during the interviews and other field work. Besides the already named equipment the farmers have disposal of shovels grubbing hoes and other similar equipment. Further one farmer possesses a small motor mower another a boat and one farmer a workshop to process wood.

Table 3.4 Use and possession of equipment on the 13 sample farms. Noguev settlement, Costa Rica, 1991.

	Use	Numbers in possession		
		1	2	3
Sprayer	13	8	2	3
Chain saw	6	3	0	0
Car	5	3	0	0
Motorcycle	3	3	0	0
Tractor	3 <sup>a</sup>	0	0	0

Note: <sup>a</sup> Some farmers hire mechanical traction for land preparation.

### 3.3.5 Land tenure

The total surface of the sample farms is 183 ha. In size they variate from 9.45 ha. to 19.89 ha. with an average of 14.49 ha.(table 3.5).

Table 3.5 The sample farms, their surface (ha.), price of land (1.000 colones) and main soil type. Noguev settlement. Costa Rica, 1991.

farm surface	main soil type(s)	price
19.89	Pa Ne	80
16.20	Ne/c-d	48
14.80	Li	75
14.96	Pa	82
10.15	De	
17.16	Pa Si/d	91
11.79	Ne/e Ne	60
10.80	Ne/e Ne	52
12.76	Ne/b/e	
12.51	Ne/e	52
12.42	Si	55
9.90	Mi/b	55
9.45	Si/c-u	68

Note: With 'main' soil type(s) is meant that two soil types together are more than 50% of the total surface or one alone more than 40%. The prices given above are the prices that the farmers must pay the IDA, according to the farmers.

The farmers do not own the parcel they work on, in the sense that they do not have the paper of ownership yet but will receive this paper in January 1992. They have the right to buy the parcel from IDA. The pay off period is 15-20 years. The value of the parcels according to IDA is much lower than the price some farmers paid when they bought the parcel from an occupier. The reason for that is that the farmers together pay the initial amount that IDA paid to Industrial Neguev S.A.. From the moment IDA bought the land the farmers have increased the value of their land by making it ready for cultivation. All farmers had to pay about 3000 or 6000 (when the field consists of two parts) to IDA for administration costs and have to pay for the infrastructure in the future. Besides their parcels some farmers own a small plot in the nearest sector centre, most of them sold it, others use it to grow fruit trees or for other activities that are not economically important.

### 3.3.6 Soil types

Roughly two kinds of soil types can be distinguished; low or non fertile hilly soils and flat fertile soils. On the soil map (S. de Bruin, 1991) 1:20.000 we encountered 11 different soil types on the 13 sample farms. All farms have more than two different soil types. Because it can be helpful in the detailed analysis in the next chapter, and because all 11 soil types are mentioned in this chapter, a further division of the soil types is given. Followed by a short description (Table 3.6).

Table 3.6 Subdivision of the low and high fertile soils in five groups. Neguev settlement. Costa Rica, 1991.

		drainage	texture	(chemical)fertility
low fertility:	group 1	well	clayey	poor
	group 2	well	clayey	moderate
high/moderate fertility :	group 3	bad	variable	variable
	group 4	moderate	clayey/loam	well
	group 5	well	clayey/loam	well

In table 3.7 one can find all the soil types on the 13 sample farms and in which group they can be placed.

Table 3.7                    The soil types and there classification. Neguev settlement. Costa Rica, 1991.

group 1: Neguev	Ne	(A/B/C/D/E)
Silencio	Si	''
group 2: Milano	Mi	''
group 3: Swampo	U	
Destiero	De	(2/3/4)
group 4: Williamsburg	Wi	''
Bosque	Bo	(III)
La Lucha	Lu	
group 5: Parismina	Pa	
Ligia	Li	
Flores	F1	

Some soil types need additional information to complete a comprehensive description. The additions A/B/C/D/E indicate the hilliness of the Ne., Si. and Mi. soils, A means that the land is almost flat and E that it is quite steep. The numbers 2/3/4 indicate the depth of the De. and Wi. soils with increasing depths from 2 to 4. Bo. and BoIII differ in quality of drainage but according to A. Nieuwenhuys ought to be in the same group. BoIII has a better drainage.

The figure below shows the distribution of the soil types on the sample farms.

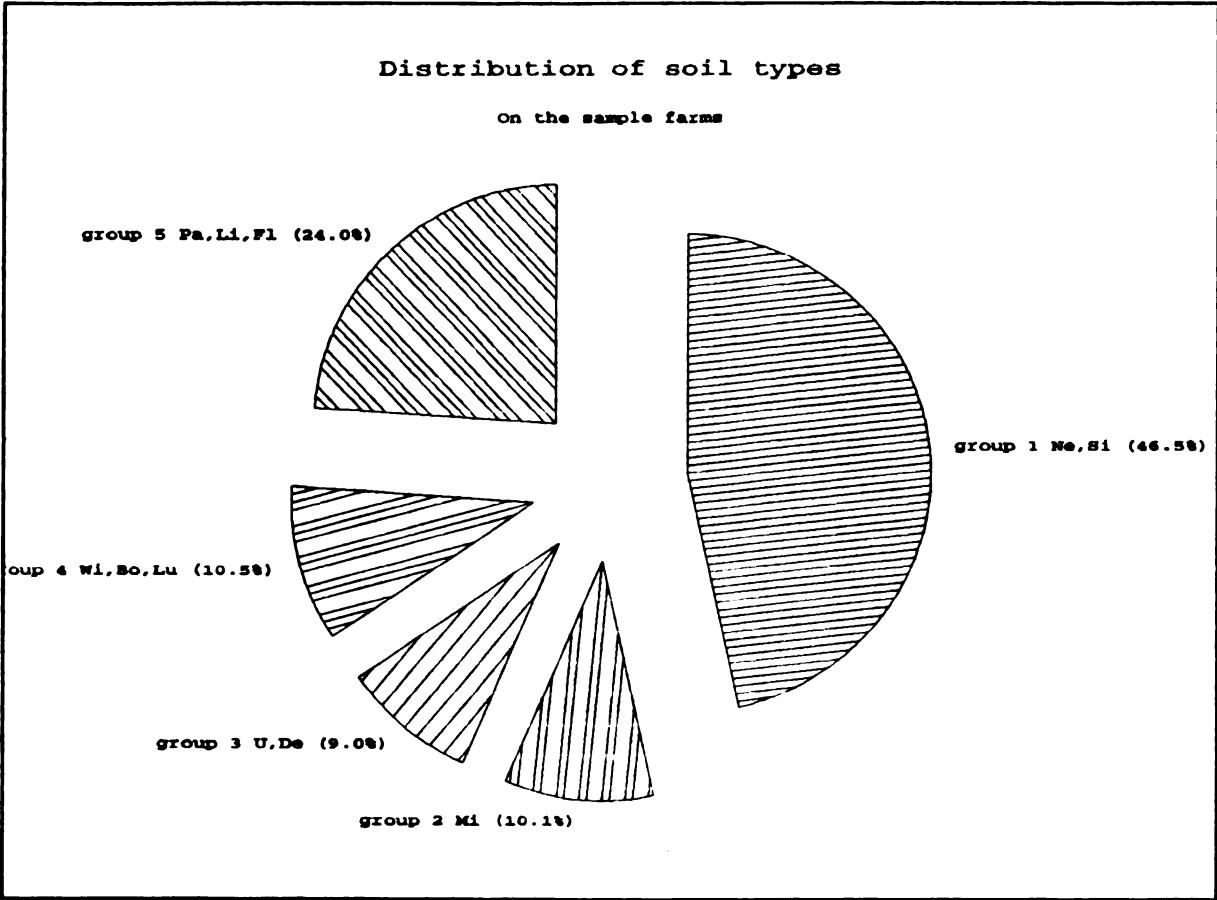


Figure 3.1 Distribution of the soil types in the sample. Neguev settlement. Costa Rica, 1991.



### 3.3.7 Land use

The area which is cultivated with annual or perennial crops is relatively small in comparison with the total area of the settlement (table 3.8). Most farmers cultivate annual and perennial crops. The difference between pasture and forest (secondary forest) is not always clear, therefore we had to make an arbitrary division on the basis of our own observations.

Table 3.8 Land use (ha) on the 13 sample farms.  
Neguev settlement. Costa Rica, 1991.

	annual	perennial	pasture	forest	others	total
no. fincas	10	11	10	8	13	13
minimum	0.25	0.20	0.30	1.40	0.30	9.45
maximum	5.57	4.53	11.62	14.18	3.30	19.89
average	2.1	1.7	5.8	8.5	0.7	14.1
total	20.96	19.82	58.05	68.04	8.57	183.3

Note: The data in table 3.8 are derived from the tables in chapter four.

## 3.4

Cropping systems

In contrast to the description of the various types of crops in program paper no. 7, only a view on the most frequent crops, their importance and their function is given here. The importance is measured in hectares and the functions are according to field experience.

Table 3.9 Most important crops of the 13 sample farms, their importance (in ha) and their function. Neguev settlement, Costa Rica, 1991.

Crop	total no. of farms	importance			function			ha/farm	
		<1	1-2	>2	1	2	3	average	range
cassava	7	2	3	2	0	7	0	1.9	0.1-2.2
cacao	3	0	3	0	3	0	0	1.7	1.5-2.0
pumpkin	4	1	2	1	4	0	0	1.5	1.0-2.0
maize 1	5	1	2	2	0	5	0	1.6	0.3-3.4
maize 2	5	2	3	0	0	5	0	0.9	0.5-1.3
beans	8	8	0	0	0	0	8	0.3	0.1-0.9
plantain	3	1	1	1	0	3	0	1.2	0.2-2.6
palmheart	6	1	3	2	0	6	0	1.9	0.8-2.8
pineapple	4	4	0	0	4	0	0	0.5	0.2-0.8
pepper	1	1	0	0	0	1	0	0.9	
maracuyá	1	0	1	0	0	1	0	1.8	
ñampi	1	1	0	0	0	1	0	0.7	
chamol	1	1	0	0	0	1	0	0.3	
ñame	1	1	0	0	0	1	0	0.1	
pasture	9	0	1	8				11.6	1.3-44

Note: Function: 1 - only to sell,  
2 - mostly to sell but for consumption as well,  
3 - only for family consumption.

From table 3.9 it is clear that all crops are cultivated on relatively small fields. For most cultivated crops the ranges are fairly small and the averages are more or less alike. One exception is beans, which is the most frequent cultivated crop, they are cultivated on small plots but one exception of 0.9 ha. All farmers have more than one crop but some depend highly on one crop. It can also be seen that 'summer' maize<sup>2</sup> is cultivated more often than 'winter' maize and on larger fields, indicating the more favorable climatic circumstances.

<sup>2</sup> 'Summer' maize is cultivated from January till July in contrary to 'winter' maize that is cultivated between July and December.

Fields with rice were not encountered, probably because the government subsidizes rice in other part of the country. One should keep in mind that the table is made with data of only 13 farms, seven from January till September and six from July till September. Field areas are counted double because of the time range and intercropping systems.

### 3.5 Livestock systems

Cattle breeding still is the most generalized economic activity in the Neguev settlement, or at least in our sample; 11 of the 13 farms possess livestock. In program paper no.7 three livestock systems were distinguished; small scale milk system; bigger scale milk/nursing system; development/fattening system. These three types can also be distinguished in table 3.10.

Table 3.10 Survey of the livestock on 11 of the sample farms. Neguev settlement, Costa Rica, 1991.

	cows			bulls			total
	< 2	1-2	> 2	< 2	1-2	> 2	
1	1	0	0	0	0	0	2
14	24	4	0	0	0	1	43
0	0	0	15	0	0	0	15
3	8	10	3	0	1	1	25
6	9	0	0	0	1	1	16
2	0	2	0	0	0	0	4
0	0	4	0	0	0	0	4
0	0	2	0	0	0	0	2
3	0	2	0	40	0	0	45
7	12	6	5	1	1	1	32

Of the 11 farms, five farms only have some female animals for family milk consumption and for risk averting purposes, it supplies cash money for difficult times. Four others farms also have mainly female animals but on a larger scale and for production purposes the remaining two possess mainly male animals for fattening. On all farm cattle breeding was combined with an other activity in agriculture or off-farm.

### 3.6 Agroforestry systems

On every farm in the sample trees can be found that can be qualified as wood producing trees but on none of them the trees were an important component in the economic activities. The same conclusion can be made for the fruit trees. Living fences are often used but seldom for more then just fences.

As far as known only some farmers receive a credit to finance the cultivation of a crop. The most well known example is the credit for cacao but there are also possibilities to receive a credit for reforestation. The cacao credit didn't work out the way it was meant to be because the cacao was infected gravely by the 'monilia' disease. The CATIE introduced this 'resistent' cacao variety and accuses IDA of a lack of support to the farmers. On the contrary IDA claims the CATIE variety is not resistant enough. Anyway the farmers are left with debts but probably the government will acquit a part of it.

Although no study was made of marketing channels it is clear that several farmers have problems to sell their products for a reasonable price. Usually intermediates buy at the farm gate at a price that reflects the inequality in market power. Sometimes it appears to be more profitable when a farmer rents a little truck and sells the products at the market himself. Other problems appear when the intermediates don't visit the farms or because of the well known undamped oscillations of the cobweb model. In the undamped oscillations of the cobweb model supply reacts with a delay to price stimulations, because the product does not allow a quick reactions, for exemple on the pig market. When supply is finally adjusted to the price of some time ago the price will lower because of the high supply and supply will fall down. This cycle repeats it selfs in a form depending on the elasticities of supply and prices.

This chapter gives a detailed description of every sample farm, and is written for several reasons. During the interviews often new facts came up which couldn't be processed in the Dbase file because they were qualitative data. Furthermore it will help a successor, who will continue the research on the second group of farms, to get a good and quick understanding of the sample farms and their specific problems.

For each farm a description, partly based on data obtained by the stock interview, is given in combination with two maps, a figure and a table. The first map shows the different plots on the parcels and the second the soil types on the parcels. The figures give the distribution in terms of percentage of the soil types on the parcels. In the table one can find a subdivision of the parcel into plots combined with area, soil type, cultivated crop and period of cultivation information.

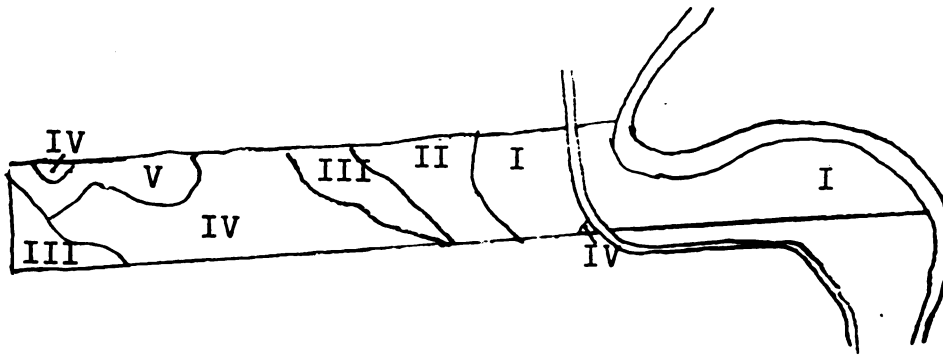
The area information is based on several sources; the areas of the plots given in the report of J. Finnema, aerial photo interpretation and own measurements in the field. The soil type information was obtained from the ICTO soil map (S. de Bruin). Aerial photos and the soil map were combined, with the help of a sketch master, to make the parcel maps.

As stated before the sample consists of two groups, one that has been investigated since January '91 and another since July '91. The farms 1, 2, 4, 6, 7, 8 and 9 represent the first group. The numbers correspond to the numbers used by J. Finnema in his report. Farms 3, 5, 10, 11, 12 and 13 have been investigated since July '91.

This farmer is the oldest in the sample. He is 66 years old and the age of his wife is 58 years. The only formal education he received was one year primary school and he has worked in agriculture ever since. The parcel on which he has lived and worked for 12 years now, became his 'property' during the land occupation in September 1979. The farmer has two sons, 32 and 22 years old, and a daughter who is 17 years old. Only the farmer works at the farm daily but less hours than most other farmers do due to his advanced age. Sometimes his youngest son helps him at the farm but usually both sons work at a banana plantation. Now and then the farmer brings day labourers into action to supplement the scarce family labour supply.

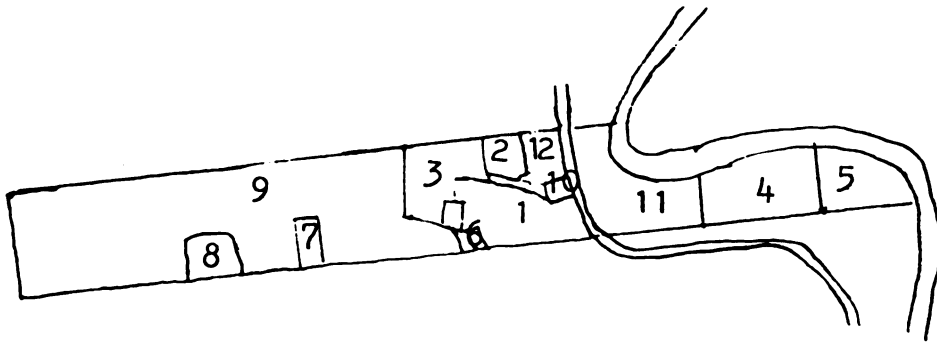
The investigation of farm 1 started in January 1991. Farmer 1 cultivated 1.34 ha of pumpkin (ayote) from February '91 till July '91. In February '91 the farmer started with an intercropping system of maize and cassava on several plots with a total area of 2.06 ha. As usually when maize is cultivated in an intercropping system with cassava, the maize was cultivated only one time on these plots this year. On another plot of 0.75 ha, farmer 1 cultivated 'summer' maize as only crop and after he harvested this in the last weeks of May '91, he started to cultivate 'winter' maize on the same plot in June. Cultivation of plantain was started on a plot of 0.5 ha in March '91.

In January cacao has been cultivated on a plot of 1.25 ha. At that time cacao had already been cultivated for four years. He is one of the many farmers who received support and credit from IDA to start with the cultivation of cacao. All his cacao has been infected by a disease called "monilia". Even an outsider could easily see that there was something wrong with the cacao because the fruits were black instead of green and yellow. As a consequence of this disease the farmer hasn't been able to sell any cacao nor to receive any returns at all. Up till now he paid off half of the IDA credit of 120.000 colones. Recently he stopped to pay off his debts because there are rumors that the government will back up the unfortunate IDA support and acquit a part of the debts of the cacao farmers.



I	PA
II	BoIII
III	Lu
IV	Ne/B
V	U

Map 4.1: Soil types of farm 1 (1:10.000).



Map 4.2: Subdivision into plots of farm 1 (1:10.000).

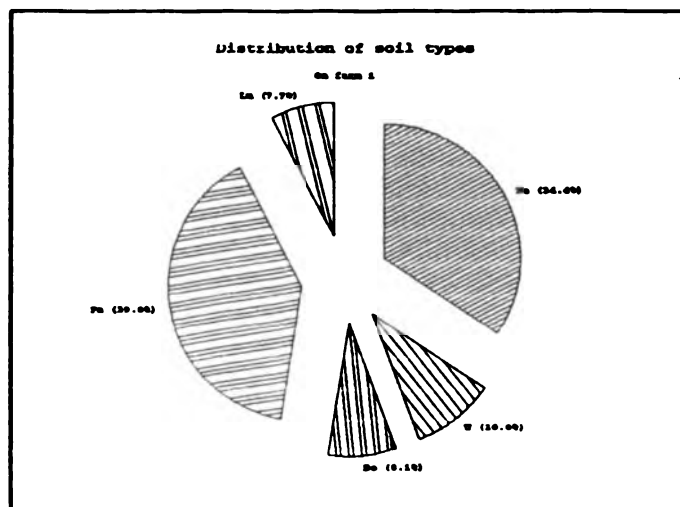


Figure 4.1: Distribution of the soil types on farm 1.

Probably the cacao will not have been completely useless since the farmer has the intention to cultivate yam and ñampi in the cacao stand. These crops need to be propped up so the cacao can still be of any use. Partially he will cut the trunks so he can use them to prop up the plantain. During the year he cultivated beans, pumpkin and ñampi between the cacao trees. The pumpkin in the cacao didn't give him any return.

The farmer has a small plot of pasture with which the livestock of his wife was fed. She had two calves, one between one and two years and the other one was older than two years in January '91. The wife bought this livestock from money she got from her former husband. During the year she sold this small livestock. The rest of farm 1 is secondary forest (13.02 ha.).

Table 4.1 A subdivision in plots of farm 1 including areas (ha), main soil type, the cultivated crop(s) and the cultivation period. Neguev settlement. Costa Rica, 1991.

number of plot	area in ha	main soil types	cultivated crop	period of cultivation
1	1.05	Pa	maize	Jan'91 - May'91
			cassava	Feb'91 --»
2	0.26	Pa	maize	Jan'91 - May'91
			cassava	Dec'90 --»
3	0.75	BoIII	cacao	Jan'87 --»
			pumpkin	Jan'91 - May'91
	(0.2)		beans	Sep'91 --»
4	1.15	Pa	maize	Jan'91 - May'91
			maize	Jun'91 - Oct'91
5	0.75	Pa	maize	Jan'91 - May'91
			cassava	Feb'91 --»
6	0.15	BoIII	beans	Oct'91 --»
7	0.20	Ne/B	plantain	Mar'91 --»
8	0.50	Ne/B	cacao	Jan'87 --»
9	13.02	Ne/B Lu U	secondary forest	--»
10	0.30		house	--»
11	1.46	Pa	pumpkin	Feb'91 - Jun'91
			pumpkin	Oct'91 --»
		Pa	experiment maize	Jul'91 --»
12	0.30	Pa	pasture	--»
Total	19.89	Pa Ne/B		

Note: The area of secondary forest was estimated by subtracting all other plots of the total area (digital soil map).

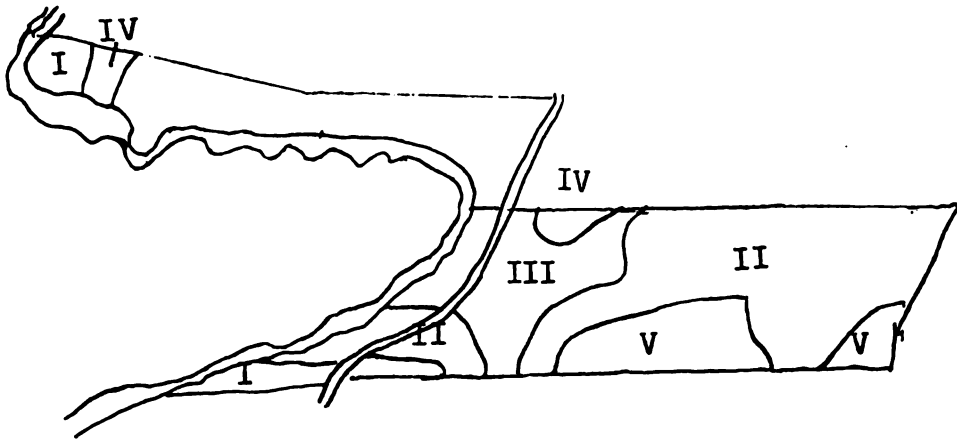


The farmer originates from Puriscal and has a primary education. The family of farm 2 is relatively small. Besides the farmer and his wife, 55 and 46 years old respectively, they have two sons of 10 and 15 years and one daughter of 20 years. Although these sons sometimes help on the farm, the labour they supply is not substantial. The farmer does a lot of off-farm work in certain periods but brings day-labourers into action in other periods.

When Finnema started to investigate this farm in January '91, maize was the main annual crop, cultivated on different plots with a joint area of 0.9 ha. One of the maize plots was cultivated in an intercropping system with cassava. On another plot, where maize was harvested in May '91, beans were sown in September '91.

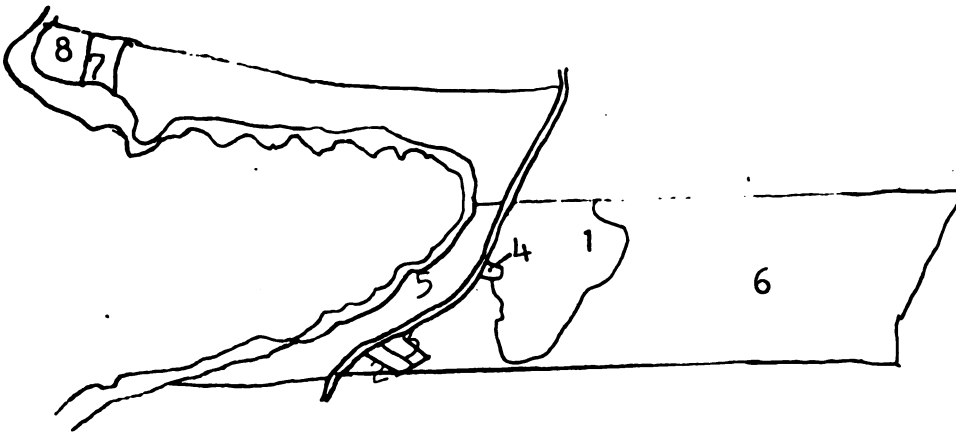
The farmer cultivated two plots of maize on the farm of his neighbour as well. Farmer 2 keeps an eye on the farm and the small livestock of his neighbour because his neighbour doesn't live at his parcel. As a compensation for guarding the neighbours' property, he doesn't have to pay for the use of the land and his family has 'free' milk supply as well.

On a plot of 1.52 ha the farmer cultivates cacao with some fruit trees inbetween. He had been cultivating cacao on this plot for seven years, when investigation was started. In August '91 he planted laurel and cedra on the same plot as well. This big investment is partly financed by a so called reforestation credit. Although the farmer said that his cacao hasn't been infected by 'Monilia', because he knows how to treat the cacao, he has the intention to cut it down when the laurels and cedras have been grown older. Subtracting the cultivated areas from the total amount of hectares leaves 14.18 ha of wasteland and secondary forest.



- I PA
- II Ne/cd
- III Ne/B
- IV Ne/D
- V U

Map 4.3: Soil types of farm 2 (1:10.000).



Map 4.4: Subdivision into plots of farm 2 (1:10.000).

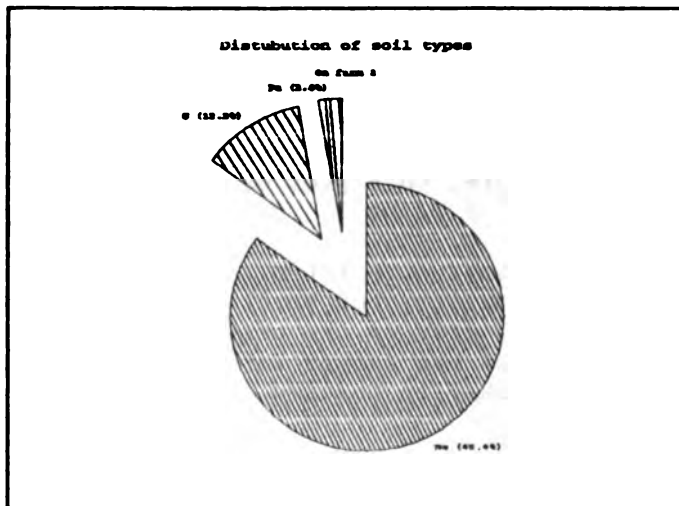


Figure 4.2: Distribution of the soil types on farm 2.

Table 4.2

A subdivision in plots of farm 2 including areas (ha), main soil type, the cultivated crop(s) and the cultivation period. Neguev settlement. Costa Rica, 1991.

number of plot	area in ha	main soil types	cultivated crop	period of cultivation
1	1.52	Ne/B	cacao	Jan'85 --»
2	0.10	Pa	maize	Feb'91 - Jun'91
			beans	Sep'91 --»
3	0.10	Ne/C-D	maize	Feb'91 - Jun'91
			cassava	Apr'91 --»
4	0.30		house	--»
5	14.18	Ne/C-D	secondary forest	--»
Total	16.20	Ne Pa		
7	0.25	Ne/D	maize	Jan'91 - May'91
			cassava	Feb'91 --»
8	0.45	Pa	maize	Jan'91 - May'91
				Oct'91 --»
Total	16.90*			

Note: \* Including the neighbours' area cultivated farmer 2.  
Total area from digital soil map.

#### 4.3 Farm 3

The owner of farm 3 has lived his whole life in the Atlantic Zone. He originates from Guacimo, a town west of the Neguev settlement. He has the age of 40 years, his wife is 37 years old. They have five children who are 20, 18, 17, eight and two years old respectively. Only the eldest son and the two youngest children still live with their parents. None of the children works at the farm. The eldest son works at an ornamental company.

The farmer cultivates six ha of cassava which had already been cultivated for 10 months when we started to investigate this farm in July '91. These six hectares are rented for 8000 colones per hectare per year. From September'91 up till November'91 he brought many day labourers into action to harvest the cassava. On his own land he cultivates cacao, which is not in production anymore, on a plot of 0.75 ha. In October he sowed pumpkin on a total area of 2.12 ha.

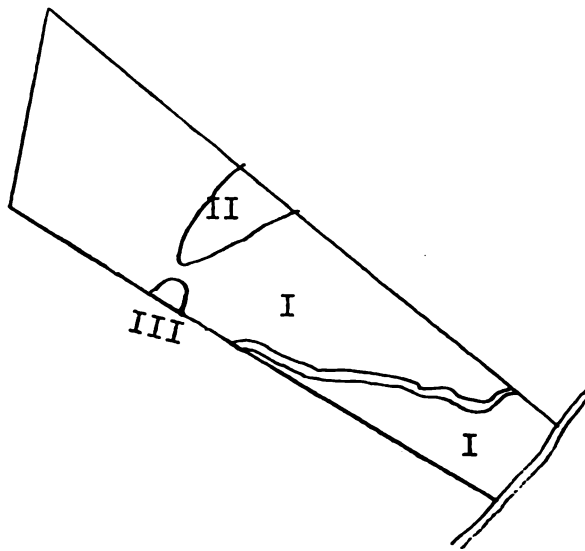
The farmer is the owner of a lot of cattle. The 11 ha can be considered as increased quality, but still bad, pasture (ratana). About 60 trees (laurels and cedras) grow on the pasture and in the cacao. Besides his agricultural activities the farmer works at the community council and at the farmers union "UPAGRA" in Guacimo for about 10 hours a week.

Table 4.3

A subdivision in plots of farm 3 including areas (ha), main soil type, the cultivated crop(s) and the cultivation period. Neguev settlement. Costa Rica, 1991.

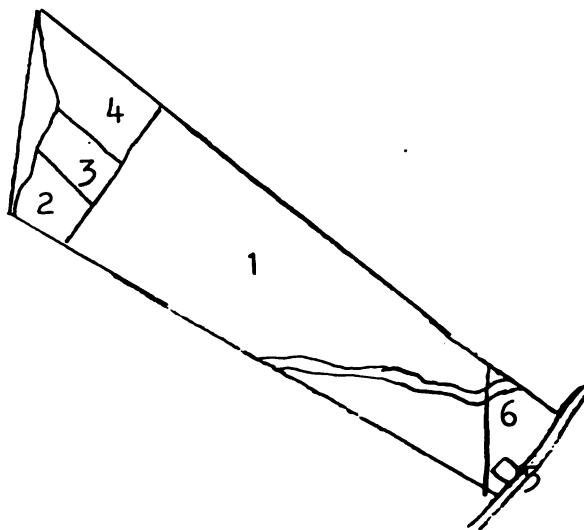
number of plot	area in ha	main soil types	cultivated crop	period of cultivation
1	11.0	Li Ne/B	pasture	--»
2	0.63	Li	wasteland	--»
3	0.65	Li	pumpkin	Oct'91 --»
4	1.47	Li	pumpkin	Oct'91 --»
5	0.30		house	--»
6	0.75	Li	cacao/trees	--»
Total	14.80*	Li		
7	6.0	Li	cassava (parc.1)	Oct'90 --»
Total	20.80'	Li		

Note: \* Total area according to own estimation.  
 ' Total area including rented plots.



I Li  
 II Ne/B  
 III Si/C

Map 4.5: Soil types of farm 3 (1:10.000).



Map 4.6: Subdivision into plots of farm 3 (1:10.000).

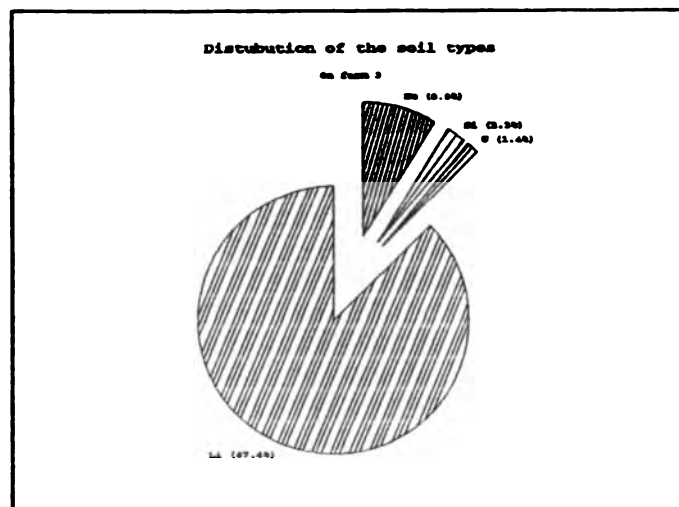


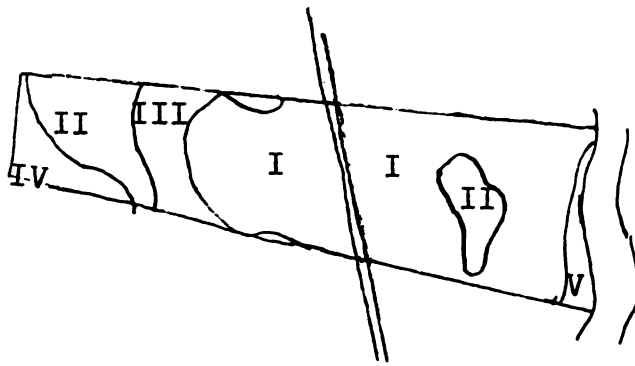
Figure 4.3: Distribution of the soil types on farm 3.

The farmer of farm 4 is a very ambitious farmer. He is 30 years old but he is not married yet. He was educated in primary school. During our investigation a beautiful house was built on his parcel. Wood which was used for constructing the house, originated from his own parcel. Although he has no family to supply labour he cultivates many crops on a large area. To meet the labour requirements he brings a lot of day labourers into action, sometimes more than 40 hours a week.

The two most important crops are palmheart and plantain. The farmer cultivates these two perennial crops in an intercropping system with annual crops, maize and pumpkin. The objective of the farmer is to cultivate only palmheart and plantain in the future. Not only the plantain plants differ in age but the palmheart do so as well. Gradually the farmer started to cultivate plantain and palmheart on a big part of his farm. On three plots that were cacao this crop was cut down in July '91, as happened almost with all cacao in the settlement, and on these plots cultivation of plantain in an intercropping system with maize and pumpkin was started. Palmheart is mainly cultivated in an intercropping system with maize. On some plots palmheart and plantain are cultivated in an intercropping system together. Apparently this is an unfortunate experiment because the plantain provides too much shade for the palmheart to grow very well. The farmer has the intention to cut down the plantain and to sell the suckers in order to give the palmheart better growing conditions.

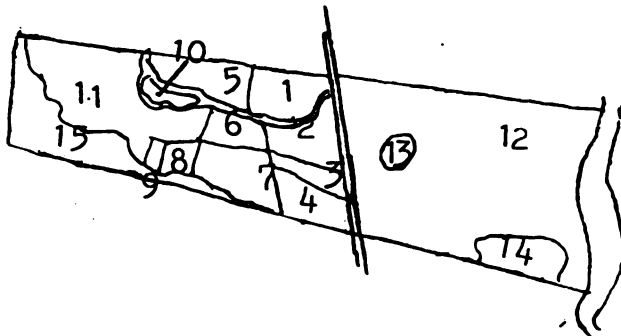
The annual crops are mainly cultivated in an intercropping system with perennial crops but on some plots maize is cultivated solitary and on two other plots cassava is cultivated in an intercropping system with maize. Cassava is cultivated on a total area of 0.8 ha, in March '91 cassava was harvested and afterwards it was sowed another time. In March '91 the farmer sowed bamboo which he will use to prop up the plantain.

Notwithstanding the many crops that are cultivated the farmer has a big cattle stock as well. His cattle consists of 20 bulls which are between one and two years old. He keeps them to sell them when they have grown older. The farm contains 6.7 ha of pasture to feed the cattle. Now and then the pasture is cut and sometimes the (living) fence around the pasture is maintained. The rest of his parcel, 1.6 ha, can be defined as wasteland.



I	PA
II	Bo
III	BoIII
IV	U
V	Fl

Map 4.7: Soil types of farm 4 (1:10.000).



Map 4.8: Subdivision into plots of farm 4 (1:10.000).

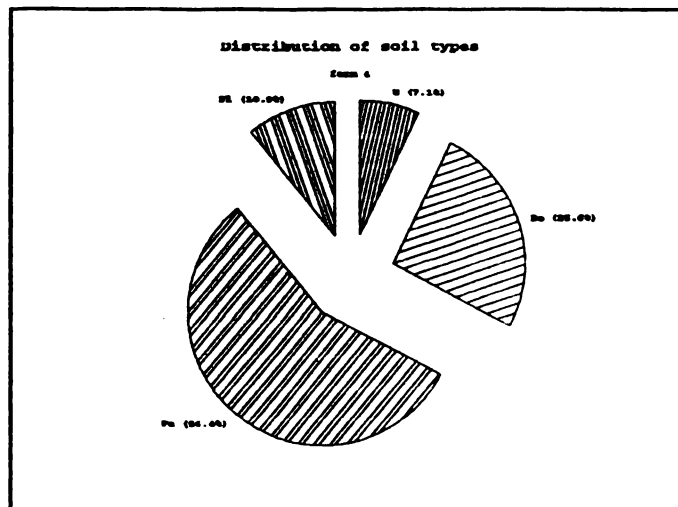


Figure 4.4: Distribution of the soil types on farm 4.

Table 4.4

A subdivision in plots of farm 4 including areas (ha), main soil type, the cultivated crop(s) and the cultivation period. Neguev settlement. Costa Rica, 1991.

number of plot	area in ha	main soil types	cultivated crop	period of cultivation
1	0.53	Pa	cacao plantain maize pumpkin	Jan'84 - Jul'91 Jul'91 --» Jul'91 --» Aug'91 --»
2	0.41	Pa	cacao plantain	Jan'84 - Jan'91 Jan'91 --»
3	0.25	Pa	cacao plantain maize pumpkin	Jan'84 - Jul'91 Jul'91 --» Jul'91 --» Aug'91 --»
4	0.47	Pa	cacao plantain pumpkin	Jan'84 - Jul'91 Jul'91 --» Aug'91 --»
5	0.60	Pa/BosIII	maize cassava cassava	Jan'91 - May'91 May'90 - Mar'91 Mar'91 --»
6	0.28	Pa	plantain palmheart	Jul'89 --» May'90 --»
7	0.65	Pa	plantain palmheart	Jul'89 --» Jan'91 --»
8	0.16	BoIII	maize maize	Jan'91 - May'91 Jun'91 - Oct'91
9	0.08	BoIII	palmheart maize	May'91 --» Jan'91 - May'91
10	0.15	BoIII	maize maize	Jun'91 - Oct'91 Jan'91 - May'91
11	1.86	Bo/BoIII	maize palmheart	Jun'91 --» Jan'91 - May'91 May'91 --»
12	6.70	Pa	pasture	--»
13	0.30	Pa	house	Apr'91 --»
14	0.52	Pa	cassava cassava maize	May'90 - Mar'91 Mar'91 --» Jan'91 - May'91
15	3.00		wasteland	--»
total	14.96	Pa BoIII		

Note: Total area according to field measurements of Finnema.  
Wasteland area by subtraction of own plot measurements of total.



This farmer originates from Guanacaste and he has lived in the Neguev settlement for 11 years. He was educated in primary school. He is 48 years old and has a wife of 40 years. They have three sons, at the age of 18, 17 and 7 respectively, and one daughter, at the age of 10. The eldest son works outside the farm at Matas de Costa Rica, a big ornamental company situated at the frontier of the Neguev settlement. The middle son helps his father at the farm.

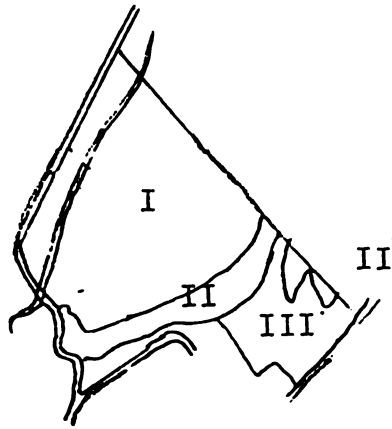
The farmer cultivates many crops on small plots, which cover a total area of 2.16 ha. With the advice of a representative of the FAO he tried to introduce a form of sustainable land use. He took measures to avoid erosion, for example he cultivates limon weeds (zacate de limon) on the steep parts of the plots and pineapple plants as a winding path in between the crops. If one overviews this 'garden' one can't escape the idea that he expresses horticultural feelings in this work.

Coconut palms have been cultivated on a plot of 0.54 ha for 2.5 years. When the coconut palms had a younger age, maize and beans were cultivated on this plot as well. Other perennials which are cultivated, are pineapple, papaya, pejobaye and plantain. The pineapple had already been cultivated for eight months and the plantain for 13 months when we started to investigate this farm in July '91. The farmer sold the pineapple which is cultivated on a plot of 0.35 ha to another person for 50000 colones. This person has to manage this plot of pineapple himself but has disposal of the crop.

The farmer also cultivates several annual crops on small plots, beans, culantro, cassava and tiquisque. During our investigation he began to cultivate maize on a plot of 0.5 hectare. Cultivation of pepper failed once as result of heavy rainfalls.

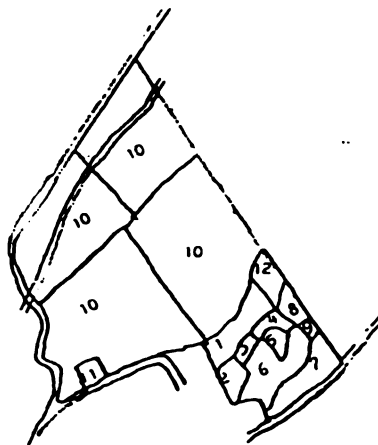
The farmer has livestock as well and keeps it for two purposes, dairy and breeding. A part of the milk is consumed by the family, a part is fed to their livestock and another part is sold to neighbours. To feed his cattle the farmer has eight ha of pasture (estrella and ratana) which has been divided in five plots.

Off farm work is an important source of income for the farmer. He works in construction several hours almost every week.



I De  
 II Mi/E  
 III Mi/A

Map 4.9: Soil types of farm 5 (1:10.000).



Map 4.10: Subdivision into plots of farm 5 (1:10.000).

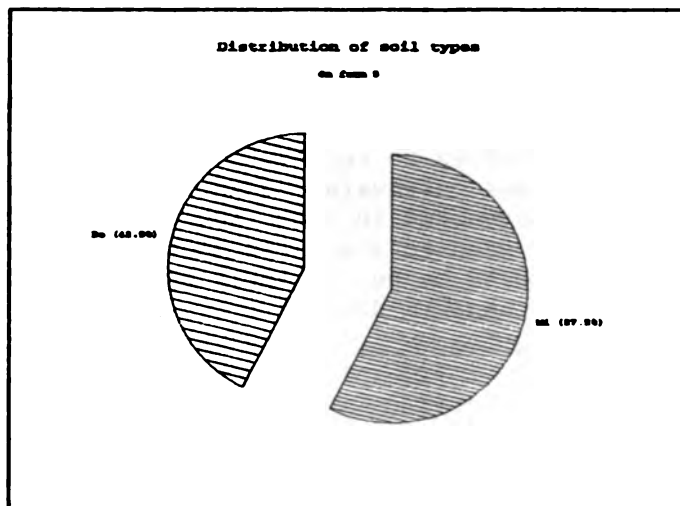


Figure 4.5: Distribution of the soil types on farm 5.

Table 4.5

A subdivision in plots of farm 5 including areas (ha), main soil type, the cultivated crop(s) and the cultivation period. Neguev settlement. Costa Rica, 1991.

number of plot	area in ha	main soil types	cultivated crop	period of cultivation
1	0.4	Mi/A	coconut, 51 ibrio coconut, 12 arafia coconut, 25	Jan'89 --» Sep'91 --»
2	0.15	Mi/A	plantain, 130 pl.	Jul'90 --»
3	0.08	Mi/A	cassava culantro/papaya	-
4	0.14	Mi/A	beans coconut suckers	
5	0.08	Mi/A	pineapple	Jan'91 --»
6	0.5	Mi/A	maize	Aug'91 --»
7	0.35	Mi/A	pineapple	Jan'91 --»
8	0.1	Mi/E	pejibaye plantain curare	
9	0.05	Mi/E	tiguisque	
10	8.0	De	pasture	--»
11	0.30		house	--»
Total	10.15	Mi/A		

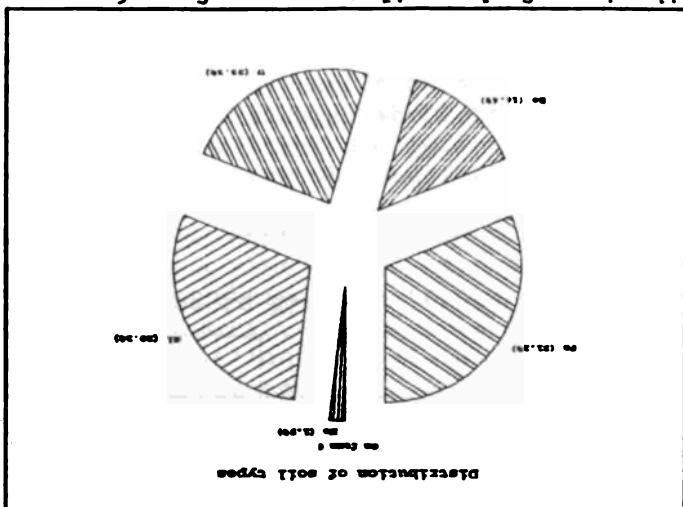
Note: The total area is an estimation on the basis of our own measurements and information of the farmer.

#### 4.6 Farm 6

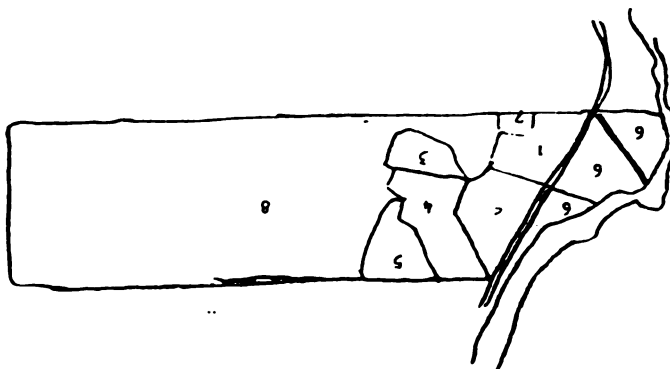
Investigation of this farm was started in January '91. The farmer and his wife are both approaching the age of 40 years. They have two sons, one is a bit older than 20 years the other just a bit younger than 20 years. One of the sons is married, his wife is almost 20 and has a young daughter. All the members of the family live at the farm but one can say that the farmer himself is the only person who spends all his available labour time at the farm. One son works quite regularly at his fathers' farm but the other members of the family don't. On occasions when a lot of work has to be done at the farm, the farmer brings day labourers into action.

In January'91 he started to cultivate pumpkin on a total area of 1.21 ha. One plot of pumpkin was cultivated in an intercropping system with maize. Both crops were harvested in June. The 'summer' maize yield was very low, just to have enough seed to sow maize another time. Cacao was cultivated on a plot of 0.69 ha but in April he cut the cacao because it was badly damaged by the monilia disease.

Figure 4.6: Distribution of the soil types on farm 6.

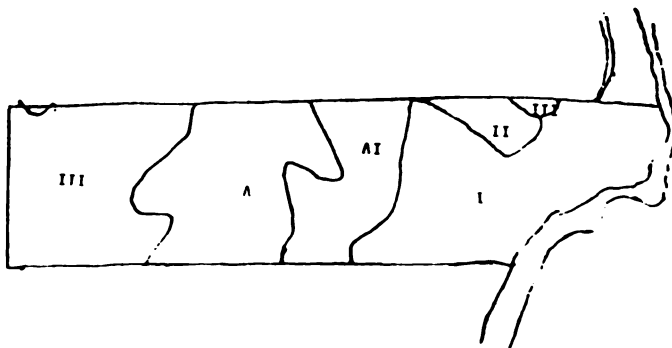


Map 4.12: Subdivision into plots of farm 6 (1:10,000).



Map 4.11: Soil types of farm 6 (1:10,000).

- I PA
- II Ne/E
- III U
- IV Bo
- V St/D



Note: Total area according to Finmemsa.

number of plot	area in ha	main soil types	cultivated crop	period of cultivation
1	0.52	Pa	pumpkin	Jan,91 - May,91
2	0.69	Pa	pumpkin	Jul,91 - May,91
			cacao	Apr,91 - Jul,91
3	0.85	Pa	pumpkin	Jan,91 - May,91
			papaya	Oct,91 - Jul,91
4	0.45	Pa	cassava	Nov,91 - Jul,91
5	0.65	Pa	maize	Jul,91 - Aug,91
6	1.5	Pa	pumpkin	Sep,91 - Nov,91
			secondary forest	Jul,91 - Sep,91
			cacao	Jul,91 - Sep,91
7	0.3		beans	Jul,91 - Sep,91
8	12.20	Bo S1/D U	house	Jul,91 - Sep,91
			secondary forest	Jul,91 - Sep,91
Total	17.16	Pa		

Table 4.6 A subdivision in plots of farm 6 including areas (ha), main soil type, the cultivated crop(s) and the cultivation period. Neguev settlement. Costa Rica, 1991.

In July,91 he started to cultivate pumpkin a second time on the plot of 0.52 ha for a second time and on a plot of 0.69 ha which was cultivated with cacao before. Cassava was cultivated from November,90 till August,91 on a plot of 1.10 ha. In July,91 the farmer started with 'winter' maize. The land the farmer cultivates is fertile, his parcel is situated close to the river Parismina. This location confronts him with problems as well, heavy rainfalls cause inundations almost every year. In March,91 the farmer started to cultivate sweet pepper (chile) and beans on small plots but these crops were lost by inundations. Because his land is very fertile and not hilly, a Bananera wants to buy his parcel but up till now he didn't decide whether to sell it or not. Maybe, when he receives his ownership papers in January,92, he will make up his mind.

## 4.7

Farm 7

The farmer and his wife are both in their forties. They have three children, two sons of 13 and eight years old and one daughter of 10 years old. His wife and his sons work part time at the farm. The farmer himself also doesn't work all his available labour time at the farm. Besides a farmer he is a trader in livestock and goes to the livestock market in Guápiles. He wants to buy a farm on more fertile soils.

One annual and one perennial crop are cultivated on this parcel. Cassava was cultivated on a plot of 1.7 ha. and was harvested in August '91. A plot of 0.75 ha is cultivated with pineapple. This crop varies in age, 15000 plants were 10 month, 9000 plants four month and 4500 plants 2.5 month old when the investigation started in January '91. In February '91 he sowed beans but the harvested amount is unknown. Probably the family consumed the harvest as often happens in case of beans production. In July '91 a plot was prepared on which pepper was sowed in September '91.

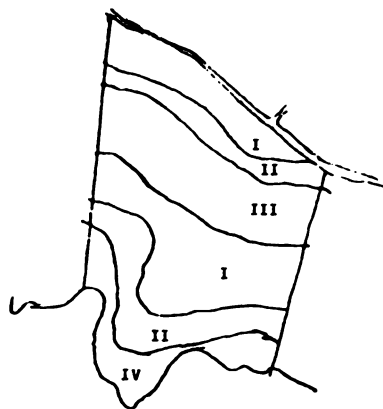
The biggest part of the farm is pasture. The 7.64 ha of pasture serves to feed his cattle. His cattle consists of nine cows older than two years, six calves and one bull. Besides this cattle he has a horse as well. The rest of his parcel can be defined as wasteland.

Table 4.7

A subdivision in plots of farm 7 including areas (ha), main soil type, the cultivated crop(s) and the cultivation period. Neguev settlement. Costa Rica, 1991.

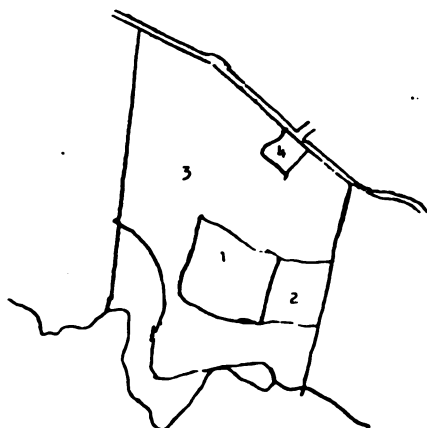
number of plot	area in ha	main soil types	cultivated crop	period of cultivation
1	1.70	Ne/B	cassava	
2	0.75	Ne/B	pineapple	
3	7.64	Wi2 U	pasture	--»
4	0.30		house	--»
5	1.40	De	secondary forest	
Total	11.79	Ne/B/E Wi2		

Note: Total area according to digital soil map.



I Ne/B  
 II Ne/E  
 III Wi2  
 IV De

Map 4.13: Soil types of farm 7 (1:10.000).



Map 4.14: Subdivision into plots of farm 7 (1:10.000).

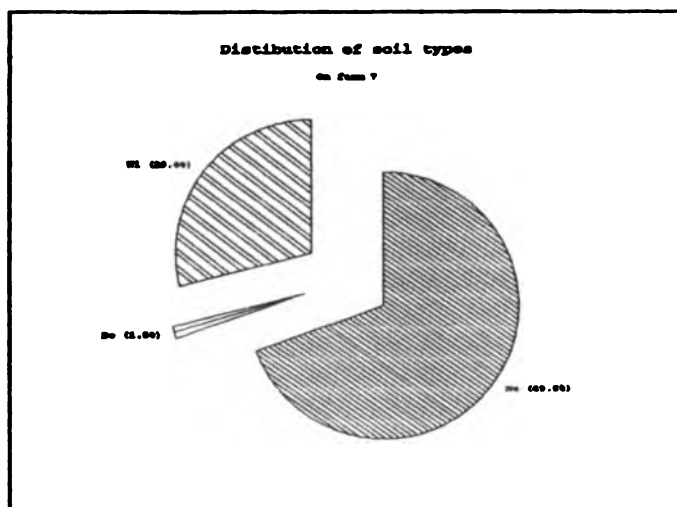


Figure 4.7: Distribution of the soil types on farm 7.

At farm 8 lives a rather young family , the farmer is 36 and his wife 30 years old. They have three little children, nine, six and four years old respectively. The farmer originates from Cartago and was educated in primary school. Other family members, his younger brother who is about 25 years old and the father of the farmer, work part time at the farm. The farmer doesn't bring a lot of day labourers into action. The farmer wants to sell his farm and work at a banana plantation or some another big farm because he is tired of worrying about his farm.

At the farm the main crop "palmheart" has been cultivated on a plot of 0.97 ha for four years and on a plot of 0.25 ha since February '91. The palmheart requires most of the farmers' available labour time. Besides palmheart he cultivated beans from March '91 till July for family consumption purposes. Although he doesn't have a big livestock he maintains four hectares of pasture. The maintenance of the living fences around the pasture also require some labour time. In January '91 when the investigation of farm 8 started, the cattle consisted of two calves and two cows. The rest of farm 8, 5.30 ha., can be defined as secondary forest.

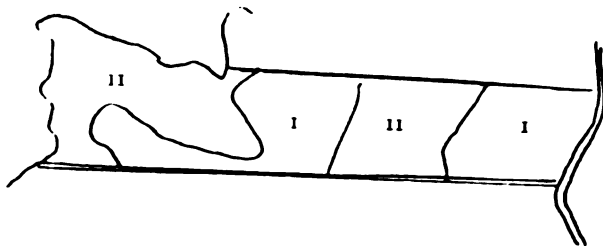
Besides cultivating palmheart, the production of char coal is an important activity. Sometimes the farmer works off-farm.

Table 4.8                      A subdivision in plots of farm 8 including areas (ha), main soil type, the cultivated crop(s) and the cultivation period. Neguev settlement. Costa Rica, 1991.

number of plot	area in ha	main soil types	cultivated crop	period of cultivation
1	0.97	Ne/B/E	palmheart	Jan'91 --»
2	0.25	Ne/B	maize	Feb'91 - Jun'91
			palmheart	Feb'91 --»
3	3.98	Ne/B/E	pasture	--»
4	0.30	Ne/B	beans	Feb'91 - Jun'91
			fruit trees	--»
			house	
5	5.30	Ne/E	secondary forest	--»
Total	10.80	Ne/B/E		

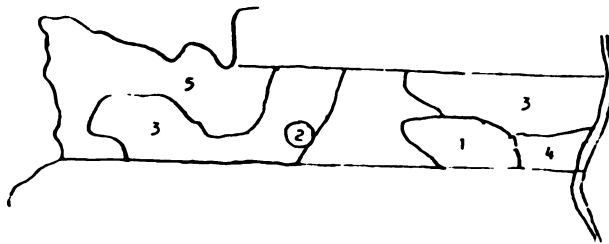
Note: Total area according to digital soil map.  
Secondary forest area by subtraction.





I Ne/B  
 II Ne/E

Map 4.15: Soil types of farm 8 (1:10.000).



Map 4.16: Subdivision into plots of farm 8 (1:10.000).

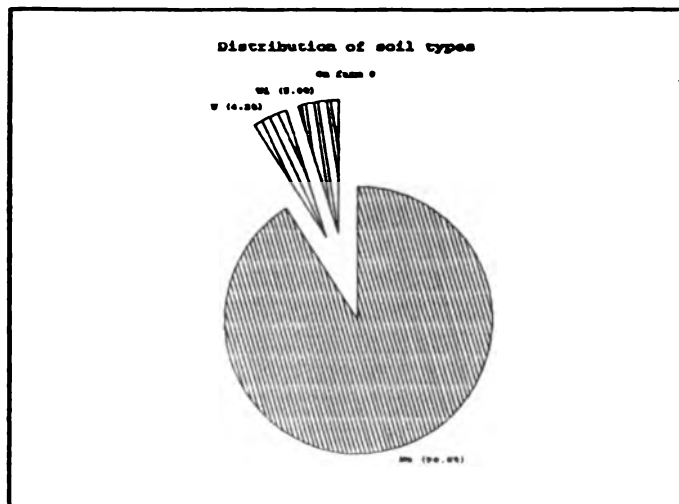
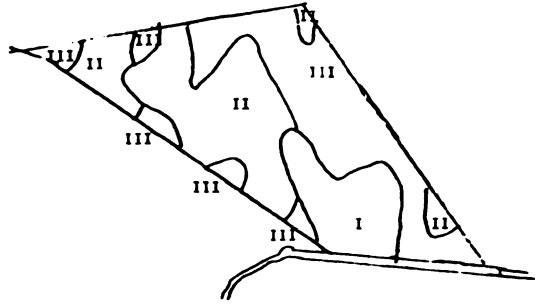


Figure 4.8: Distribution of the soil types on farm 8.

The farmer originates from San José and went to primary school for six months. The farmer and his wife are both in their forties. The farmer has eight children, four daughters of whom one is married and four sons of whom one works full time on the farm and another part time because he goes to school.

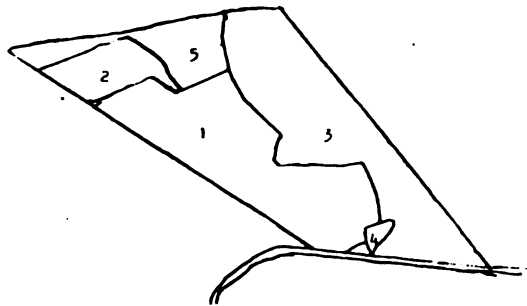
The most important crop which is cultivated at farm 9 is palmheart. The total area cultivated with palmheart amounts 3.9 ha. The palmheart varies in age, on two ha the palmheart was four years, one ha was one year and another 0.9 ha was half a year old when the investigation of this farm was started in January '91. An intercropping system of beans and pepper is cultivated on a plot of 0.1 ha. Farmer 9 rents an additional two ha on two other farms on which he cultivates cassava. To rent the first plot of one ha he has to pay 7000 colones per year, to rent the other plot of one ha he has to pay 12000 colones per year. The latter one is more fertile.

The sale of palmheart and cassava doesn't always take place at the farm as is often done by the other farmers. The harvested palmheart is processed by the family, the sliced parts are put in little bags up till a weight of two kilos. Two or sometimes almost three stems of the harvested palmheart fit in one bag. Every Friday the farmer rents a pick up and goes to the market in Siguirres to sell some harvested cassava and these bags with palmheart. Sometimes the farmer buys pineapple, maracuya or palmheart from other farmers and sells them at the market as well. Only when big amounts of palmheart or cassava are harvested an intermediate comes along and buys these unprocessed crops at the farm. The farmer owns six ha of pasture on which his four cows graze.



I Mi/B  
 II Ne/B  
 III Ne/E

Map 4.17: Soil types of farm 9 (1:10.000).



Map 4.18: Subdivision into plots of farm 9 (1:10.000).

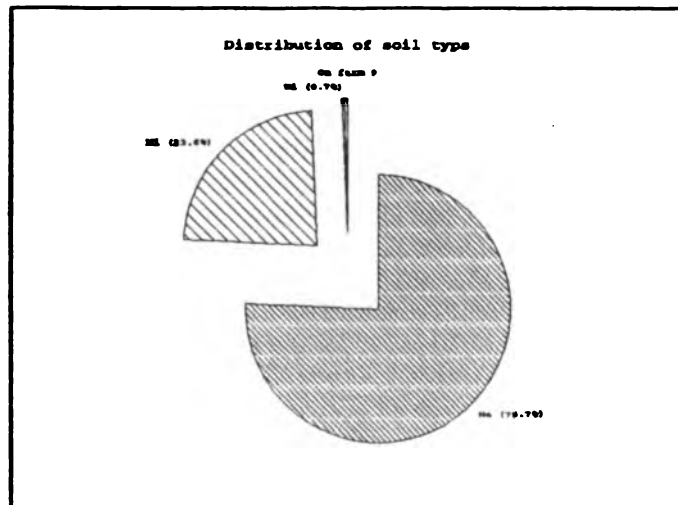


Figure 4.9: Distribution of the soil types on farm 9.

Table 4.9

A subdivision in plots of farm 9 including areas (ha), main soil type, the cultivated crop(s) and the cultivation period. Neguev settlement. Costa Rica, 1991.

number of plot	area in ha	main soil types	cultivated crop	period of cultivation
1	3.90	Ne/B	palmheart	Jan'87 --»
	(1.0)		palmheart	Jan'90 --»
	(0.9)		palmheart	Jul'90 --»
2	0.75	Ne/B	beans	Jan'91 - Apr'91
			beans	Aug'91 --»
			pepper	Jul'91 --»
3	4.81	Ne/E	pasture	--»
4	0.30		house	--»
5	1.00	Ne/E	wasteland	--»
Total	10.76	Ne/B/E		
6	1.0	Ne/B	cassava (par.191)	Nov'90 --»
	1.0	Ne/B	cassava (par.229)	? --»
Total	12.76*	Ne/B/E		

Note: Total area according to Finnema.

#### 4.10 Farm 10

Farmer 10 is the neighbour of farmer 9. Though closely situated next to each other they are in many ways very different. This family has its roots in Guanacaste. They would like to go back to Guanacaste in the future but the farmer hasn't yet decided what kind of work he prefers. He has several ideas, he thinks of to become an administrator, farmer again or both, but he is also thinking about an car repair shop.

The age of the farmer is 30 and his wife is 25 years old. They have three children of six, five and two years old respectively. The farmer usually works on the land alone. With five years of secondary school the farmer is rather well educated in comparison with the other farmers in the sample.

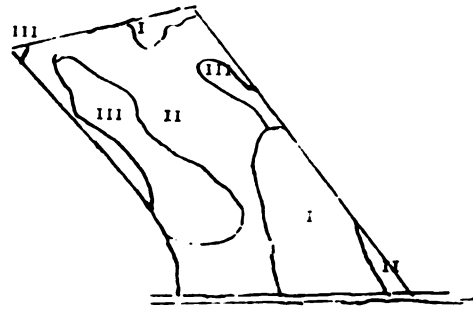
He kept records of all the farm work since July 1990 because the farm is a joint venture between him and his brother. In July '90 he and his brother made an investment of 500.000 colones each. The brothers prearranged that each of them would pay half of the costs and would get half of the incomes. So, if the farmer buys some fertilizer his brother has to pay half of the price, if the farmer sells maracuya he has to give his brother half of that total return.

To solve the labour input problem, the farmer works at the farm and his brother doesn't, therefore the brothers value all labour input as they would do if it would be done by day labourers. The farmer has to pay himself half the value of the wage a day labourer would earn and his brother has to pay the farmer an equivalent amount.

Because the farmer collected data of his farm from July '90 it was possible to use a data range that was longer than in any other case. When he started to register the data he made a lot of investments and began to cultivate new crops. He invested in a pick up, a chain saw and three sprayers to apply insecticides and fertilizers. Since July '90 he has been cultivating palmheart and maracuyá. Because he separately registered data about all inputs and investments of both crops one can get an impression of the starting costs of these crops (appendix 4).

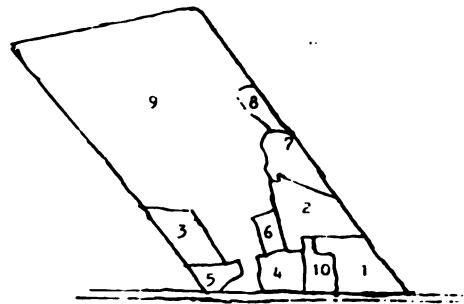
Since he started cultivation of maracuyá and palmheart in July '90 and he didn't cultivate other crops at that time, he didn't have an income for almost a year. He cultivates almost two ha of maracuyá where pineapple and cacao used to be cultivated and about 1.5 ha of palmheart. In August '91 he sold the first maracuyá harvest and in September '91 he sold the first palmheart harvest. The farmer sells his products usually at the market in Siquirres but sometimes at the market in San José. When he sells palmheart, he processes it into slices and put these in small bags just like his neighbour, farmer 9, does. The farmer doesn't like to sell the products at the market and he tries to make arrangements with restaurants and supermarkets to supply them with his palmheart and maracuyá. By doing so he hopes to, get a better price, secure sales and to save time.

Farm 10 contains two ha of pasture on which two cows graze. Another 7.15 ha can be defined as secondary forest.



I Mi/B  
 II Ne/E  
 III Ne/B

Map 4.19: Soil types of farm 10 (1:10.000).



Map 4.20: Subdivision into plots of farm 10 (1:10.000).

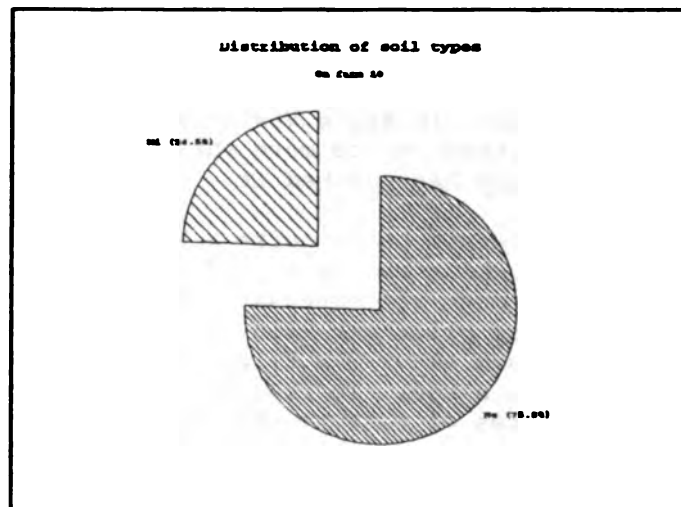


Figure 4.10: Distribution of the soil types on farm 10.

Table 4.10

A subdivision in plots of farm 10 including areas (ha), main soil type, the cultivated crop(s) and the cultivation period. Neguev settlement. Costa Rica, 1991.

number of plot	area in ha	main soil types	cultivated crop	number plants	period of cultivation
1	0.52	Mi/B	maracuya		Aug'90 --»
2	0.61	Mi/B	maracuya		Oct'90 --»
3	0.68	Ne/B/E	maracuya		Feb'91 --»
4	0.35	Mi/B Ne/E	palmheart	1750	Aug'90 --»
5	0.22	Ne/E	palmheart	1110	Oct'90 --»
6	0.18	Mi/B Ne/E	palmheart	920	Nov'90 --»
7	0.62	Mi/B	palmheart	3100	Jan'91 --»
8	0.18	Ne/B	palmheart	880	Feb'91 --»
9	7.15	Ne/B/E	sec. forest		--»
10	2.00	Ne/B	pasture		--»
11	0.30		house		--»
Total	12.51	Mi/B/Ne/E			

Note: Total area according to digital soil map.

#### 4.11 Farm 11

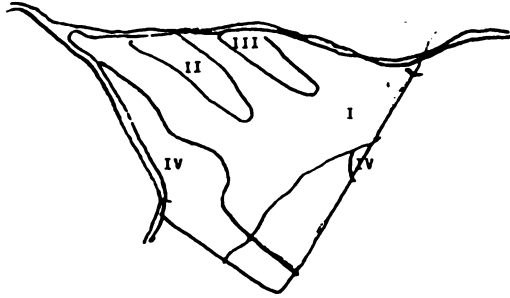
Investigation of this farm was started in July '91. The farmer is rather old in comparison with the other farmers in the sample, he is 62 and his wife is 60. They have 11 children but none of them live on the farm. One of the children lives in the United States of America and the farmer has many things in and around the house which originate from the USA. He has a primary education. Before the farmer and his wife went to the Neguev settlement, they lived in Alajuela and Cartago for 35 years. In these towns, in the Meseta Central, the farmer worked as a carpenter. The parcel in the Neguev has been his property for five years now but he and his wife have lived on it for one year.

Though they moved to the Neguev, he didn't give up his old profession entirely. He still works with wood but not as a carpenter but as processor of raw material into planks. In Bella Vista, a nearby village, he owns a workshop but he has the intention to move this workshop to his own parcel when the electricity supply has reached it.

Besides a wood processor he is quite a big livestock farmer as well. He owns 40 bullcalves of about two years old. The main purpose is to get these animals fattened enough to compensate the decrease in the price per kilo. Last year the buying price per kilo was 125 colones and the selling price 115. The animals gain about 250 kilo's so he earns 817.500 colones when he trades 30 animals a year. To feed his cattle the farmer needs a lot of pasture. The 10 hectares of pasture (Ratana) on his own parcel is not sufficient and he rents another 34 hectares of pasture which costs him 5400 colones a month. The maintenance of the pasture is included in the rent.

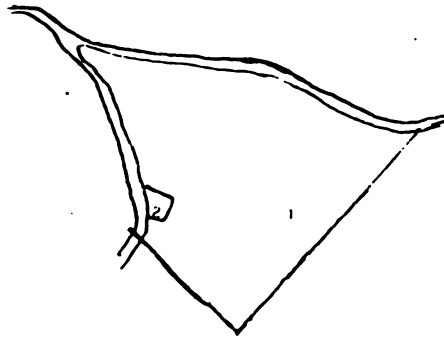
Pineapple is the only crop he is cultivating, on a plot of 0.5 hectare. This plot can be divided in two parts, one part is rather old and produces less then the other part which has been cultivated with pineapple since one year now. The most important capital stock on the farm are a car and the wood processing equipment.





I Ne/E  
 II U  
 III Ne/C  
 IV Ne/B

Map 4.21: Soil types of farm 11(1:10.000).



Map 4.22: Subdivision into plots of farm 11 (1:10.000).

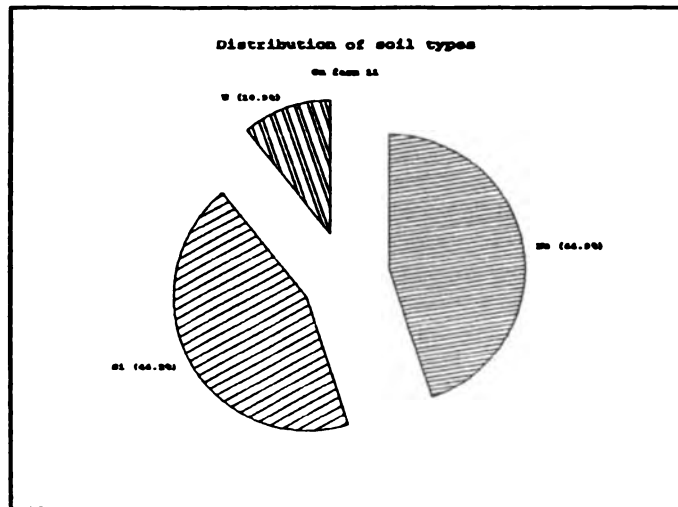


Figure 4.11: Distribution of the soil types on farm 11.

Table 4.11

A subdivision in plots of farm 11 including areas (ha), main soil type, the cultivated crop(s) and the cultivation period. Neguev settlement. Costa Rica, 1991.

number of plot	area in ha	main soil types	cultivated crop	period of cultivation
1	11.62	Ne/C/E U	pasture	--»
2	0.5	Ne/B	pineapple	Jan'90 --»
3	0.3		house	--»
<b>Total</b>	<b>12.42<sup>a</sup></b>			
4	17.0	Ne/B/C U	pasture (par. 97)	--»
5	17.0	Si/D/E	pasture (par. 98)	--»
6			workshop in Bella Vista	--»
<b>Total</b>	<b>46.42<sup>b</sup></b>			

Note: <sup>a</sup> Total area according to digital soil map.

<sup>b</sup> Total area including rented area.

#### 4.12 Farm 12

The owner of this farm is the father of the man who was interviewed. The son is 20 years old born in Guacimo and has a primary education. He lives on the farm of 10 ha with his father, mother and brother of 47, 41 and 21 years old respectively. Besides the youngest son the father works on the farm. The eldest son works in a cardboard factory. Sometimes they use day labourers but in times with less labour requirement they work off farm.

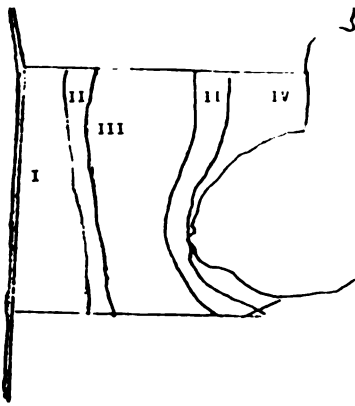
Several crops were already in cultivation at the farm for some time when we started to investigate farm 12 in July '91. Palmheart has already been cultivated for three years. The son told that this plot yields 8000 to 9000 stems of palmheart a year. Pineapple has reached an age of one year and is cultivated on a plot of 0.2 ha, which was pasture and a maize field before. The plot contains 11000 pineapple plants and yielded 3000 pineapples up till now. Chamol is cultivated on a plot of 0.27 hectare and was sowed in April '91. Nampi was cultivated on this plot before. The yield of the 48 coconut palms and seven orange-trees near the house is consumed by the farmers family. During our investigation cultivation of flampi, yam and beans was started on plots of 0.70, 0.10 and 0.10 ha respectively.

The farm has also seven hectares of pasture (ratana). Between July and November the pasture had no use because there was no livestock. Two ha with forest is also property of the farmer.

Table 4.12 A subdivision in plots of farm 12 including areas (ha), main soil type, the cultivated crop(s) and the cultivation period. Neguev settlement. Costa Rica, 1991.

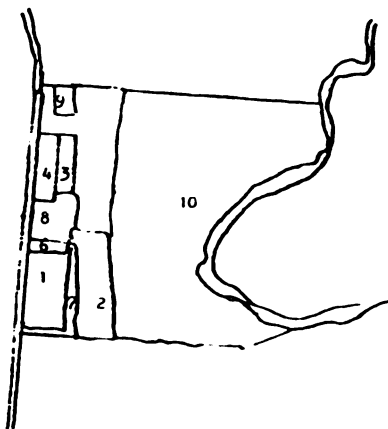
number of plot	area in ha	main soil types	cultivated crop	period of cultivation
1	0.70	Mi/B	flampi	Sep'91 --»
2	0.75	Mi/B/E	palmheart	Jul'88 --»
3	0.20	Mi/B	pineapple	Jul'90 --»
4	0.27	Mi/B	chamol	Apr'91 --»
5	2.00	Wi2 De	pasture	--»
6	0.10	Mi/B	yam (flame)	Aug'91 --»
7	0.10	Mi/B	beans	Sep'91 --»
8	0.30		house	--»
9	0.04	Mi/B	maize experiment	Aug'91 --»
10	5.44	Mi Wi De	Charal/sec.forest	--»
Total	9.90	MI/B		

Note: Total area according to digital soil map.



I Mi/B  
 II Mi/E  
 III Wi2  
 IV De

Map 4.23: Soil types of farm 12(1:10.000).



Map 4.24: Subdivision into plots of farm 12 (1:10.000).

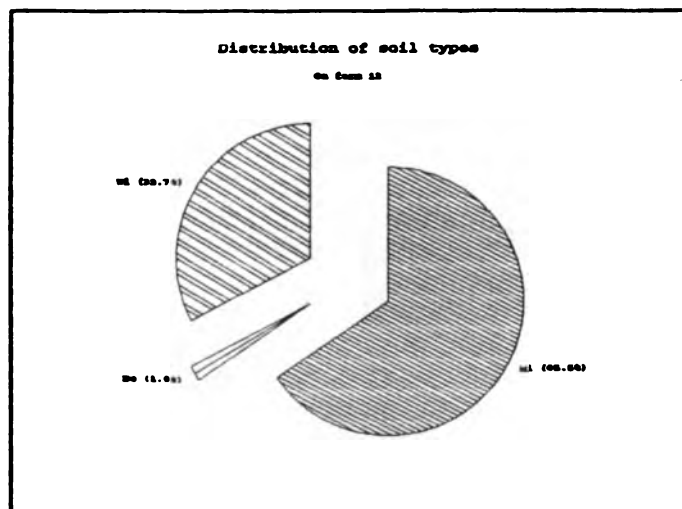
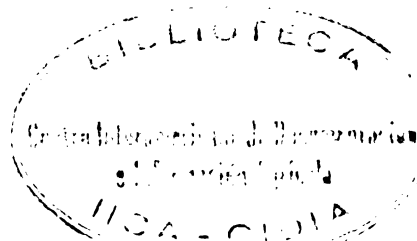


Figure 4.12: Distribution of the soil types on farm 12.



## 4.13

Farm 13

Farmer 13 originates from Quepos, he has a primary education. The farmer is 34 years old and his wife is 27. They have three children who have the age of four, two and a half respectively. The farmer gets support from his younger brother.

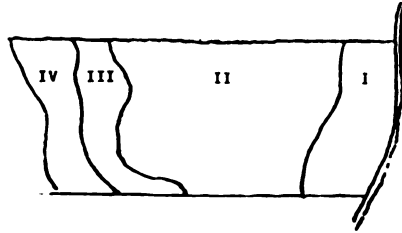
Only one crop is cultivated on this farm, namely palmheart. It is cultivated on two plots that differ in age. On one plot the cultivation of palmheart started in January'90 and on the other in January'91. Several fruit trees are cultivated on the farm, orange trees, pejibaye, apple trees, limon trees, aquacate and quabas. The rest of the farm, 7.85 ha of pasture serves to feed the cattle.

The farmer works a lot off-farm. Most of the time he works as a contract labourer with his own chain saw and gets far better paid than a normal day labourer. The farmer earns with his chain saw about 250 colones per hour, a day labourer earns about 100 colones per hour. This may seem very profitable but a chain saw is a big investment and the maintenance costs can be very high.

Table 4.13 A subdivision in plots of farm 13 including areas (ha), main soil type, the cultivated crop(s) and the cultivation period. Neguev settlement. Costa Rica, 1991.

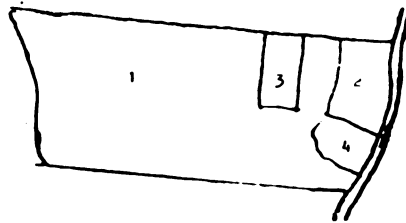
number of plot	area in ha	main soil types	cultivated crop	number plants	period of cultivation
1	7.85	Si/C/D/E/Wi	pasture sec. forest		
2	0.80	Ne/B	palmheart	4000	Jan'90 --»
3	0.50	Si/C/D	palmheart	3000	Jan'91 --»
4	0.30		house		--»
Total	9.45	Si Ne			

Note: Total area according to digital soil map.



I Ne/B  
 II Si/cd  
 III Si/E  
 IV Wi

Map 4.25: Soil types of farm 13 (1:10.000).



Map 4.26: Subdivision into plots of farm 13 (1:10.000).

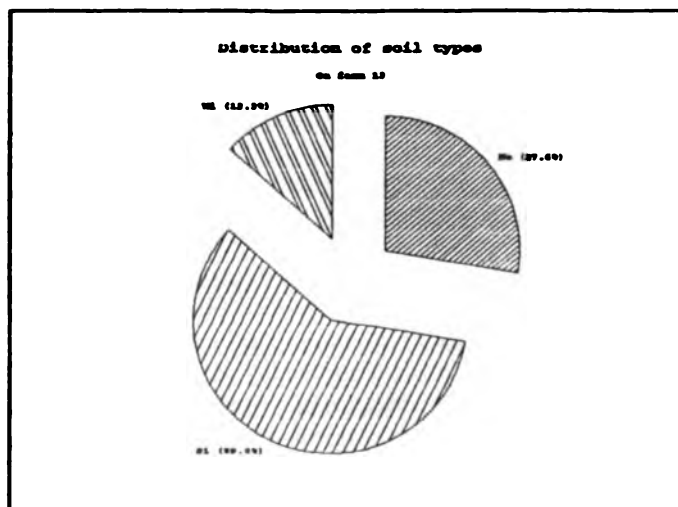


Figure 4.13: Distribution of the soil types on farm 13.

In this chapter the data output of the Pepe V program is analyzed (appendix 4). The first paragraph gives an economic analysis on farm level resulting in an indication of the farmers' income. In the next two paragraphs a comparison between the sample farms of gross margin levels and labour use is made.

### 5.1 Farm economics

For each farm a summary table, of the economic activities that took place in the investigation period, is given. Of each subsystem including livestock, maintenance and off farm work (O.f.w.) the benefits, inputs and margins are enumerated. For livestock the increased value of the livestock and trade are not included because tentative estimates have to be made and the results distort the view. Since some farms only have been investigated for a short time a comprehensive analysis can't be given. Therefore only an enumeration of the processed data of these farms is shown. The sample farms which have been investigated since January 1991 will be treated more extensively (Appendix 4).

In the following tables some crops have an additional number. This is done to make a differentiation in the cultivating periods of the same crop. Maizel is the same as 'summer' maize and maize2 is 'winter' maize.

The cacao on farm 1 was infected by the Monilia disease and didn't give a yield. A large part of the inputs, hired labour and family labour used in the cacao are costs of beans, yam and ñampi but couldn't be allocated because of the intercropping system (table 4.1). Beans were used for family consumption. The second maize yield was partly used as food for the farm animals and partly sold as maize cobs. The second cassava harvest had not been completely finished in October.

Table 5.1 Farm economic analysis of farm 1. Benefits, inputs, hired labour and margins in colones. Period from January'91 till November'91.

crop	ha	benefits (1)	inputs (2)	hired labour (3)	gross margin (1-2-3)	family hours	gross margin/ fam.hrs.
Pumpkin	1.46	100.000	3.342	6.450	90.208	87	1.043
Cacao	1.25	0	1.034	2.200	-3.234	65	-50
Beans	0.35	0	0	0	0	45	0
Maizel	3.21	146.640	26.613	13.850	100.177	434	231
Maize2	1.15	3.600	3.439	0	160	132	1
Nampi	0.10	10.000	0	0	10.000	21	476
Plantain	0.20	0	1.003	1.000	-2.003	53	-38
Yam	0.10	0	2.000	0	-2.000	30	-67
Cassaval	1.26	26.161	1.458	15.260	9.443	55	172
Cassava2	2.06	15.074	1.405	11.630	2.040	188	11
<b>Total</b>	<b>11.14</b>	<b>295.476</b>	<b>40.293</b>	<b>50.390</b>	<b>204.791</b>	<b>1.110</b>	<b>185</b>

The costs of animal alimentation, on farm 2, are benefits of the first maize cultivation. Beans were consumed by the family. The second maize and cassava hadn't yet been harvested in October 1991.

Table 5.2 Farm economic analysis of farm 2. Benefits, inputs, hired labour and margins in colones. Period from January'91 till November'91.

crop	ha	benefits (1)	inputs (2)	hired labour (3)	gross margin (1-2-3)	family hours	gross margin/ fam.hrs.
Animals	0	0	4.095	0	-4.095	0	0
Cacao	1.52	21.533	1.575	8.500	11.457	232	49
Forestry	1.52	0	10.000	0	-10.000	56	-179
Beans	0.10	0	606	2.500	-3106	23	-135
Maizel	0.90	32.760	11.588	0	21.172	209	101
Maize2	0.45	0	500	1.500	-2.000	31	-65
Mainten.	0	0	90	500	-590	10	-59
Cassava	0.35	0	800	3000	-3.800	80	-48
<b>Total</b>	<b>4.84</b>	<b>54.293</b>	<b>29.254</b>	<b>16.000</b>	<b>9.038</b>	<b>641</b>	<b>14</b>
O.f.w.	0	44.400	0	0	44.400	313	142
<b>Total</b>	<b>4.84</b>	<b>98.693</b>	<b>29.254</b>	<b>116.000</b>	<b>53.438</b>	<b>954</b>	<b>56</b>



Table 5.3

Farm economic analysis of farm 3. Benefits, inputs, hired labour and margins in colones. Period from July'91 till November'91.

crop	ha	benefits (1)	inputs (2)	hired labour (3)	gross margin (1-2-3)	family hours	gross margin/ fam.hrs.
Animals	0	0	0	0	0	61	0
Pumpkin	2.12	0	6.272	2.000	-8.272	63	-131
Livest.	0	0	2.470	0	-2.470	108	-23
Pasture	11.00	0	4.500	800	-5.300	23	-230
Cassava	6.00	70.997	48.000*	23.800	-803	18	-67
Total	19.12	70.997	61.242	26.600	-16.845	273	-62
O.f.w.	0	0	0	0	0	130 <sup>o</sup>	0
Total	19.12	70.997	61.242	26.600	-16.845	403	-42

Note: \* Costs of renting six ha.      <sup>o</sup> Income unknown.

Not much can be said about farm 3 because the picture is very distorted, especially by cassava. Livestock will be treated more extensively in the next chapter.

The choice of farmer 4 to work towards a system with plantain, palmheart and cassava and maize seems logical if one looks at the gross margins. Some distortions have to be noticed. The palmheart is relatively young and the first cassava mainly shows a yield whereas the second cassava only contains costs.

Table 5.4

Farm economic analysis of farm 4. Benefits, inputs, hired labour and margins in colones. Period from January'91 till November'91.

crop	ha	benefits (1)	inputs (2)	hired labour (3)	gross margin (1-2-3)	family hours	gross margin/ fam.hrs.
Pumpkin	1.25	0	7.260	1.100	-8.360	49	-171
Bamboo	0.00	0	0	0	0	5	0
Cacao	1.66	31.449	0	9.740	21.709	102	213
Livest.	0.00	42.000	16.000	0	26.000	7	3714
Maize1	2.85	135.952	21.688	34.910	79.354	94	844
Maize2	1.17	15.000	9.371	7.130	-1.501	95	-16
Mainten.	0.00	0	0	500	-500	5	-100
Palmheart	2.87	39.315	54.535	74.360	-89.580	344	-260
Pasture	6.70	0	820	8.370	-9.190	34	-270
Plantain	2.59	142.480	38.102	39.650	64.728	358	181
Cassava1	1.12	51.502	4.000	9.880	37.622	33	1140
Cassava2	1.12	0	3.209	11.260	-14.469	58	-249
Total	21.33	457.698	154.985	196.900	105.813	1184	89
O.f.w.	0.00	0	0	0	0	24	0
Total	21.33	457.698	154.985	196.900	105.813	1208	88

The abbreviation 'mainten.' stands for maintenance which indicates all kind of operations that could not be allocated to one of the crops.

The livestock activities of farmer 5 will be more extensively treated in the next chapter.

Table 5.5 Farm economic analysis of farm 5. Benefits, inputs, hired labour and margins in colones. Period from July '91 till November '91.

crop	ha	benefits (1)	inputs (2)	hired labour (3)	gross margin (1-2-3)	family hours	gross margin/ fam.hrs.
Animals	0.00	0	7.635	0	-7.635	1	-7.635
Chile	0.00	0	1.611	0	-1.611	25	-64
Coco	0.54	0	100	0	-100	22	-5
Beans	0.14	0	0	0	0	5	0
Livest.	0.00	0	0	0	0	14	0
Maize	0.50	0	2.761	3.000	-5.761	38	-154
Mainten.	0.00	0	0	0	0	32	0
Pasture	8.00	0	820	0	-820	140	-6
Pineapple	0.35	50.000*	0	0	50.000	0	0
Plantain	0.25	0	0	0	0	6	0
Tequisq.	0.05	0	0	0	0	4	0
Cassava	0.08	0	0	0	0	7	0
Total	9.56	50.000	12.927	3.000	34.073	294	116
O.f.w.	0.00	17.280	0	0	17.280	168	103
Total	9.56	67.280	12.927	3.000	51.353	462	111

Note: \* Benefits of sold crop in cultivation.

Chapter 4 already dealt with the information on farm 6 but it's quantified beneath. As can be seen only pumpkin and the second maize have reasonable gross margins. The cassava is disappointing as a result of the low price.

Table 5.6 Farm economic analysis of farm 6. Benefits, inputs, hired labour and margins in colones. Period from January '91 till November '91.

crop	ha	benefits (1)	inputs (2)	hired labour (3)	gross margin (1-2-3)	family hours	gross margin/ fam.hrs.
Pumpkin1	1.37	114.500	23.103	4.000	87.397	191	458
Pumpkin2	1.21	26.000	9.703	200	16.097	194	83
Pumpkin3	0.65	0	1.974	400	-2.374	94	-25
Cacao	0.69	0	1.551	0	-1.551	100	-16
Pepper	0.85	0	4.036	400	-4.436	38	-117
Culantro	0.00	760	0	0	760	8	95
Beans	0.00	0	1.961	0	-1.961	24	-82
Maizel	0.52	0	0	500	-500	8	-67
Maize2	1.30	82.800	24.975	18.580	39.245	256	153
Mainten.	0.00	0	148	540	-688	43	-16
Papaya	0.00	0	2.450	400	-2.850	0	0
Cassava	1.10	35.000	12.208	4.800	17.992	231	78
Total	7.69	259.060	82.109	29.820	147.131	1.187	124
O.f.w.	0.00	7.880	0	0	7.880	40	197
Total	7.69	259.060	82.109	29.820	155.011	1.227	126

Off farm work is an important source of income on farm 7 but unfortunately not quantifiable. The other data are relatively unreliable because of low response from the farmer.

Table 5.7 Farm economic analysis of farm 7. Benefits, inputs, hired labour and margins in colones. Period from January '91 till November '91.

crop	ha	benefits (1)	inputs (2)	hired labour (3)	gross margin (1-2-3)	family hours	gross margin/ fam.hrs.
Pepper	0.00	0	630	500	-1.130	35	-32
Beans	0.00	0	200	0	-200	6	-33
Livest.	0.00	36.320	2.300	0	34.020	0	0
Mainten.	0.00	0	0	0	0	0	0
Pasture	7.64	0	0	34.940	-34.940	40	-874
Pineapple	0.75	162.604	84.260	4.000	74.344	270	275
Cassava	1.70	113.904	2.077	35.000	76.827	108	711
Total	10.09	312.828	89.467	29.820	148.921	459	324

The livestock activities of farm 8 are not discussed in the next chapter because almost nothing happened, only two sales and some maintenance. Although the farmer is disappointed about his results the gross margin per family hour seems to be quite reasonable.

Table 5.8

Farm economic analysis of farm 8. Benefits, inputs, hired labour and margins in colones. Period from January '91 till November '91.

crop	ha	benefits (1)	inputs (2)	hired labour (3)	gross margin (1-2-3)	family hours	gross margin/ fam.hrs.
Coal	0.00	40.800	2.800	100	37.900	491	77
Beans	0.30	0	29	0	-29	3	-10
Livest.	0.00	40.000	700	0	39.300	0	0
Maiz	0.25	0	645	0	-645	3	-215
Palmheart	1.22	139.540	12.491	0	127.049	498	255
Pasture	3.98	0	0	0	0	61	0
Total	5.75	220.340	16.665	100	203.575	1.056	193
O.f.w.	0.00	3.525	0	0	3.525	32	110
Total	5.75	223.865	16.665	100	207.100	1.088	190

The most important thing to notice of farm 9 is the large amount of off farm hours. This number is the result of the fact that palmheart processing and cassava- and palmheart sales were allocated under this activity. The crop- and processing benefits were separated in this manner. Cassava has not yet been harvested completely.

Table 5.9 Farm economic analysis of farm 9. Benefits, inputs, hired labour and margins in colones. Period from January'91 till November'91.

crop	ha	benefits (1)	inputs (2)	hired labour (3)	gross margin (1-2-3)	family hours	gross margin/ fam.hrs.
Animals	0.00	0	1.823	0	-1.823	0	0
Pepper	0.75	0	3.908	500	-4.408	79	-56
Beans	0.75	0	534	0	-534	18	-31
Beans	0.75	0	0	0	0	14	0
Livest.	0.00	0	3.558	0	-3.558	11	-339
Palmheart	3.90	426.114	66.560	4.720	354.833	1.564	227
Pasture	4.81	0	0	7.600	-7.600	241	-32
Yam	0.00	0	3.500	0	-3.500	154	-23
Cassava	2.00	27.325	20.306*	1.000	6.019	100	60
Total	12.96	453.439	100.189	13.820	339.429	2.181	164
O.f.w.	0.00	447.923	194.064	500	253.360	1.250	202
Total	12.96	901.362	294.253	14.320	592.789	3.431	173

Note: \* Including ₡19.000 for renting two ha.

Notwithstanding the long data range of farm 10 table 5.10 gives a distorted picture. The starting costs still dominate the data and there are not many benefits yet. Further investigations should make it clear whether the investments will pay off. Off farm work consists of car renting and palmheart processing.

Table 5.10 Farm economic analysis of farm 10. Benefits, inputs, hired labour and margins in colones. Period from July'90 till November'91.

crop	ha	benefits (1)	inputs (2)	hired labour (3)	gross margin (1-2-3)	family hours	gross margin/ fam.hrs.
Mainten.	0.00	0	2.300	6.310	-8.610	167	-52
Maracuyá	1.81	125.139	155.004	427.210	-457.075	790	-578
Palmheart	1.55	5.340	42.758	31.355	-68.773	505	-136
<b>Total</b>	<b>4.36</b>	<b>130.479</b>	<b>200.063</b>	<b>464.875</b>	<b>-534.458</b>	<b>1.462</b>	<b>-366</b>
O.f.w.	0.00	26.000	18.180	0	7.820	20	391
<b>Total</b>	<b>4.36</b>	<b>156.479</b>	<b>218.243</b>	<b>464.875</b>	<b>-526.638</b>	<b>1.482</b>	<b>-355</b>

The main activity on farm 11 is livestock but that is treated more extensively in the next chapter. Because of the large costs of rented pasture the picture is seriously distorted.

Table 5.11 Farm economic analysis of farm 11. Benefits, inputs, hired labour and margins in colones. Period from July'91 till November'91.

crop	ha	benefits (1)	inputs (2)	hired labour (3)	gross margin (1-2-3)	family hours	gross margin/ fam.hrs.
Livestock	0	0	1.250	0	-1.250	211	-6
Pasture	45.62	0	21.600	10.000	-31.600	111	-90
Pineapple	0.50	0	400	0	-400	0	0
Total	47.12	0	23.250	10.000	-33.250	322	-103
O.f.w.	0.00	31.000	0	0	31.000	355	87
Total	47.12	31.000	23.250	10.000	-2.250	677	-3

Note: Costs of renting 34 ha. of pasture (4 month).

Table 5.12 Farm economic analysis of farm 12. Benefits, inputs, hired labour and margins in colones. Period from July'91 till November'91.

crop	ha	benefits (1)	inputs (2)	hired labour (3)	gross margin (1-2-3)	family hours	gross margin/ fam.hrs.
Chamol	0.27	0	401	0	-401	33	-12
Beans	0.10	0	0	0	0	7	0
Mainten.	0	0	0	0	0	29	0
Nampi	0.70	0	22.053	12.200	-34.253	374	-91
Palmheart	0.75	46.800	3.612	2.500	40.688	160	254
Pineapple	0.20	15.830	0	800	15.030	68	221
Yam	0.10	0	1.292	1.300	-2.592	81	-32
Total	2.12	62.630	27.358	16.800	18.472	752	24
O.f.w.	0.00	3.500	0	0	3.500	23	152
Total	2.12	66.130	27.358	16.800	21.972	775	28

Up till October the off farm activity of farmer 13, working with his chain saw, was very profitable but then his saw broke down and had to be repaired. Again livestock will be treated in the next chapter.



Table 5.13

Farm economic analysis of farm 13. Benefits, inputs, hired labour and margins in colones. Period from July'91 till November'91.

crop	ha	benefits (1)	inputs (2)	hired labour (3)	gross margin (1-2-3)	family hours	gross margin/ fam.hrs.
Animals	0	0	1.320	0	-1.320	0	0
Livestock	0	0	7.020	0	-7.020	40	-175
Palmheart	1.30	56.580	8.551	1.100	46.929	253	185
Pasture	7.85	0	2.567	1.500	-4.067	41	-99
Total	9.15	56.580	19.458	2.600	34.521	334	103
O.f.w.	0.00	57.000	70.000	0	-13.000	228	-57
Total	9.15	113.580	89.458 <sup>o</sup>	2.600	21.521	562	38

Note: ¢ 70.000 costs of repairing chain saw.

<sup>o</sup> Considering the sample farms it seems possible to classify the farms in the Neguev settlement in three farming systems. The first type has relatively fertile soils and cultivates mainly annual crops (maize, cassava and pumpkin). The second type is located on the poorer soils and cultivates mainly perennial crops (palmheart, pineapple). The farmers on the second farm type work more off farm than farmers in the first type do. On the third farm type, on the poorer and fertile soils, livestock activities are an important source of income. The farmers of the last type work more off farm than farmers of the first and second type do. Type one consists of the farms 1, 2, 4 and 6, type two contains the farms 7, 8, 9, 10 and 12 and the third type the farms 3, 5, 11 and 13.

## 5.2 Gross margins

The following figure shows the gross margins of the sample farms (appendix 4). Especially the farms that have been investigated since January are of interest. The gross margins of the farms with important livestock activities are distorted. In figure 2 the margins are adjusted with estimates of income out of livestock.

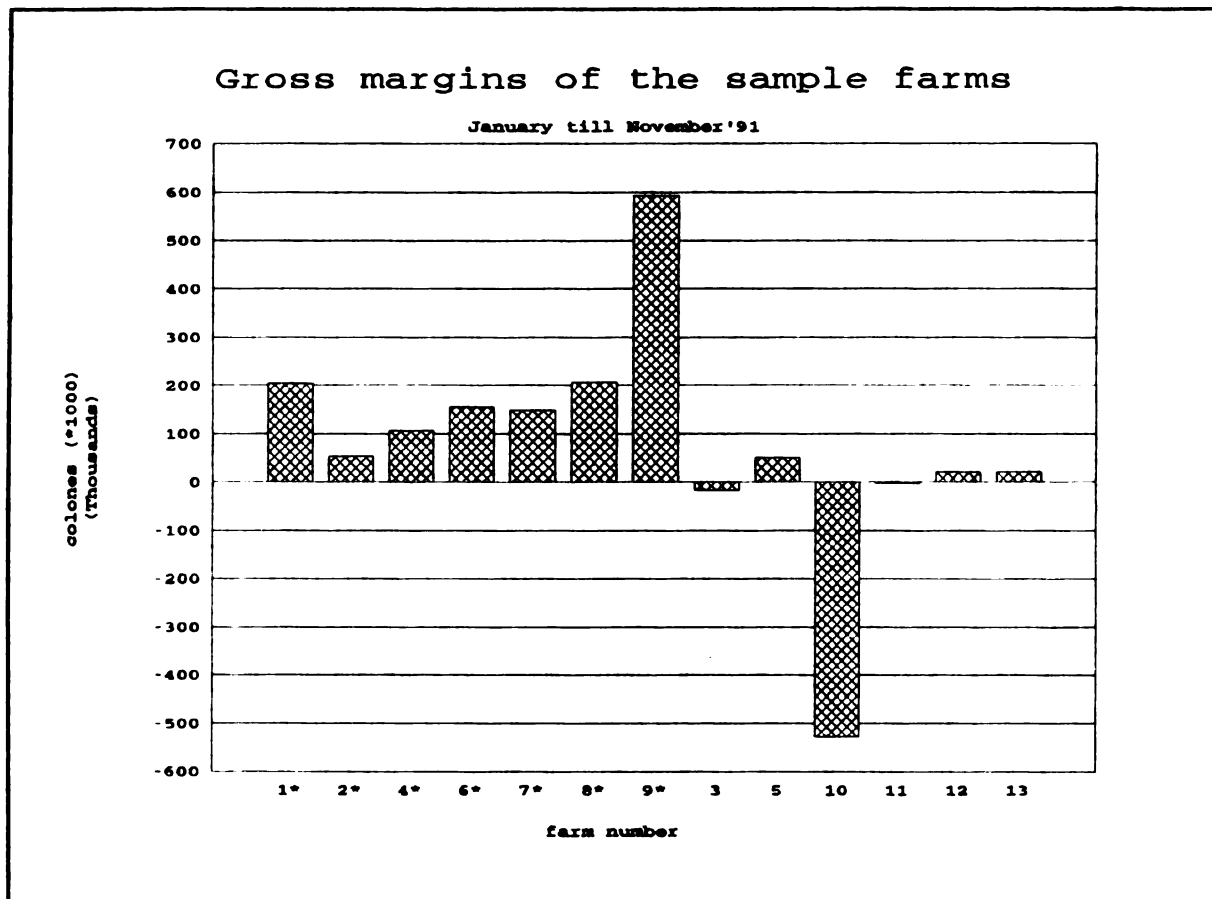


Figure 5.1 Gross margins of the sample farms.

Note: Farms with a "\*" have been investigated for 10 month, farm 10 for 16 month and the others for four month.

Naturally the required minimum income level of a family depends on the family size but generally one can say that an income of at least C20.000 per month may be sufficient. Three farms reach that income level but only one has a better income. This family however is the biggest in the sample. One should keep in mind that some farms have a low gross margin because they invested a lot.

In chapter 3, paragraph 3.3.6, a subdivision of the soil types into five groups was made. Unfortunately the sample size is too small to use that subdivision and therefore only a division into high- and low fertility soils is used. Farms 1,2,4 and 6 are situated on fertile soils and farms 7,8 and 9 on relatively poor soils.

Table 5.14 Structure of the gross margins on the sample farms.

farm	ani mals	pump kin	cocoa	chile	beans	live stock	maize 1	maize 2	maint. heart	palm ture	pas	pine apple	plan tain	cass ava	o.f.w. ers	oth ers	gross margin
1*	0	90208	-3234	0	0	0	100177	160	0	0	0	0	-2003	11483	0	8000	204791
2*	-4095	0	11457	0	-3106	0	21172	-2000	-590	0	0	0	0	-3800	44400	-10000	53438
4*	0	-8360	21709	0	0	26000	79354	-1501	-500	-89580	-9190	0	64728	23153	0	0	105813
6*	0	101120	-1551	-4436	-1961	0	-500	39245	-688	0	0	0	0	17992	7880	-2090	155011
7*	0	0	0	-1130	-200	34020	0	0	0	0	-34940	74344	0	76827	0	0	148921
8*	0	0	0	-29	0	39300	-645	0	0	127049	0	0	0	0	3525	37900	207100
9*	-1823	0	0	-4408	-534	-3558	0	0	0	354833	-7600	0	0	6019	253360	-3500	592789
3	0	-8272	0	0	0	-2470	0	0	0	0	-5300	0	0	-803	0	0	-16845
5	0	-7635	0	-1611	0	0	0	-5761	0	0	-820	50000	0	0	17280	-100	51353
10	0	0	0	0	0	0	0	0	-8610	-68773	0	0	0	0	7820	-457075	-526638
11	0	0	0	0	0	-1250	0	0	0	0	-31600	-400	0	0	31000	0	-2250
12	0	0	0	0	0	0	0	0	0	40688	0	15030	0	0	3500	-37246	21972
13	-1320	0	0	0	0	-7020	0	0	0	46929	-4067	0	0	0	-13000	0	21522

Table 5.14 shows the structure of the gross margins. One can see again that the farms on fertile soils generate their gross margin with annual crops, maize cassava and pumpkin. Farms on poorer soils generate an equal or higher income with perennials mainly palmheart and pineapple. Farm 4 has relatively much perennials for a farm on fertile soils. His lower income is not a result of that cultivation system but is due to the young age of these perennials.

As mentioned above figure 5.2 shows again the gross margins but now corrected for livestock activities on the farms 3,5,11 and 13. In the next chapter these corrections are explained. The livestock margins also cover a period of four months.

Because these farms have been in the sample for four month a gross margin of more than ₡100.000 could be an indication that livestock farms can be profitable. Indeed this is the fact on three of the four livestock farms. Furthermore one can see that (table 5.14) that livestock farmers more often work off farm than other farmers do, thereby increasing their income even more.

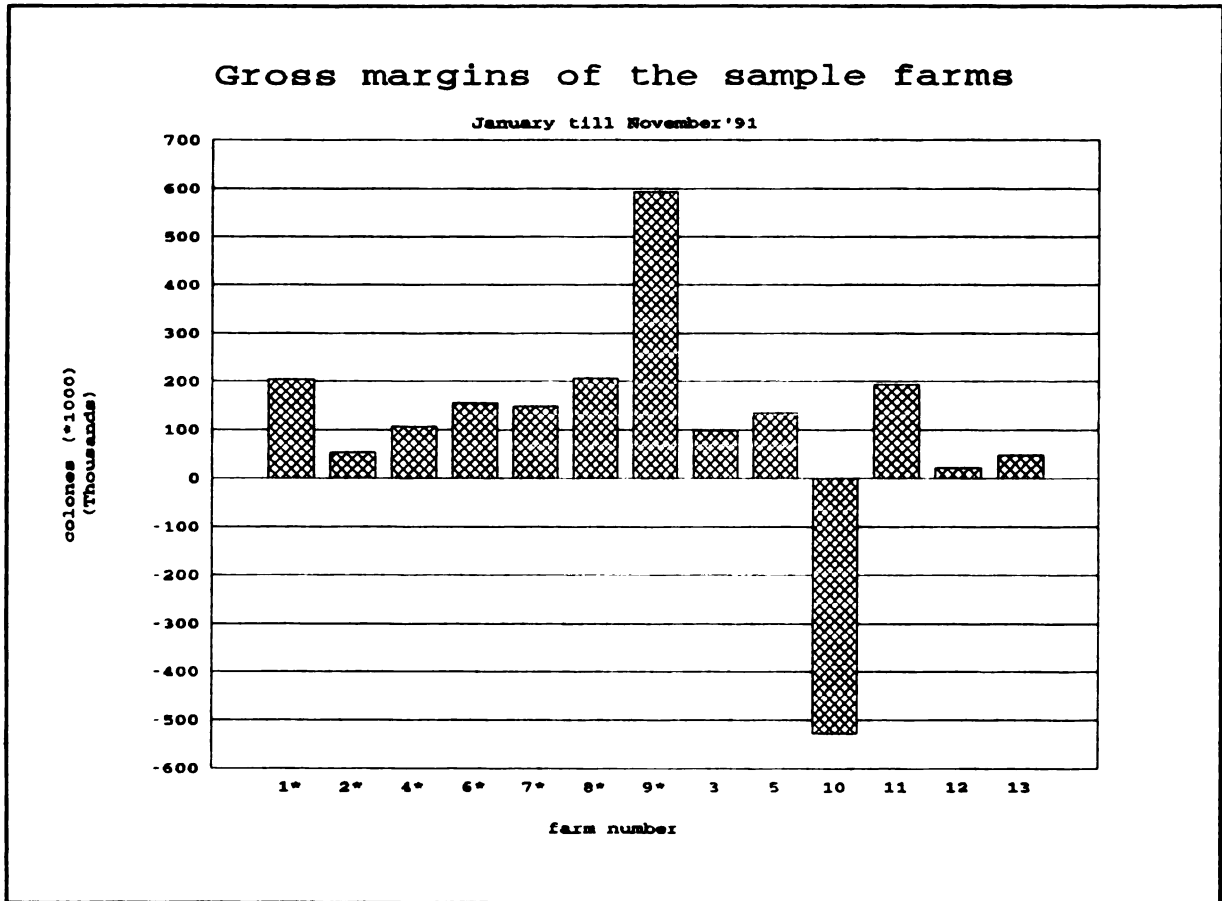


Figure 5.2 Gross margins corrected for income out of livestock activities.

Labour use

On all farms family labour goes together with hired labour and on all but one farm, farm 1, as well with off farm work. Farmer 7 works many hours off farm but information about this is not available. It's also clear from figure 5.3 that livestock farmers 3, 5, 11 and 13 work less hours on farm. If one looks at the total of the family labour, including off farm work, it becomes clear that on the average the farmers worked about 1200 hours in 10 month. This means an average of 30 hours per week and thus five per day. Distortions on this subject are due to a lack of data (farm 7) or due to an extraordinary large family (farm 9).

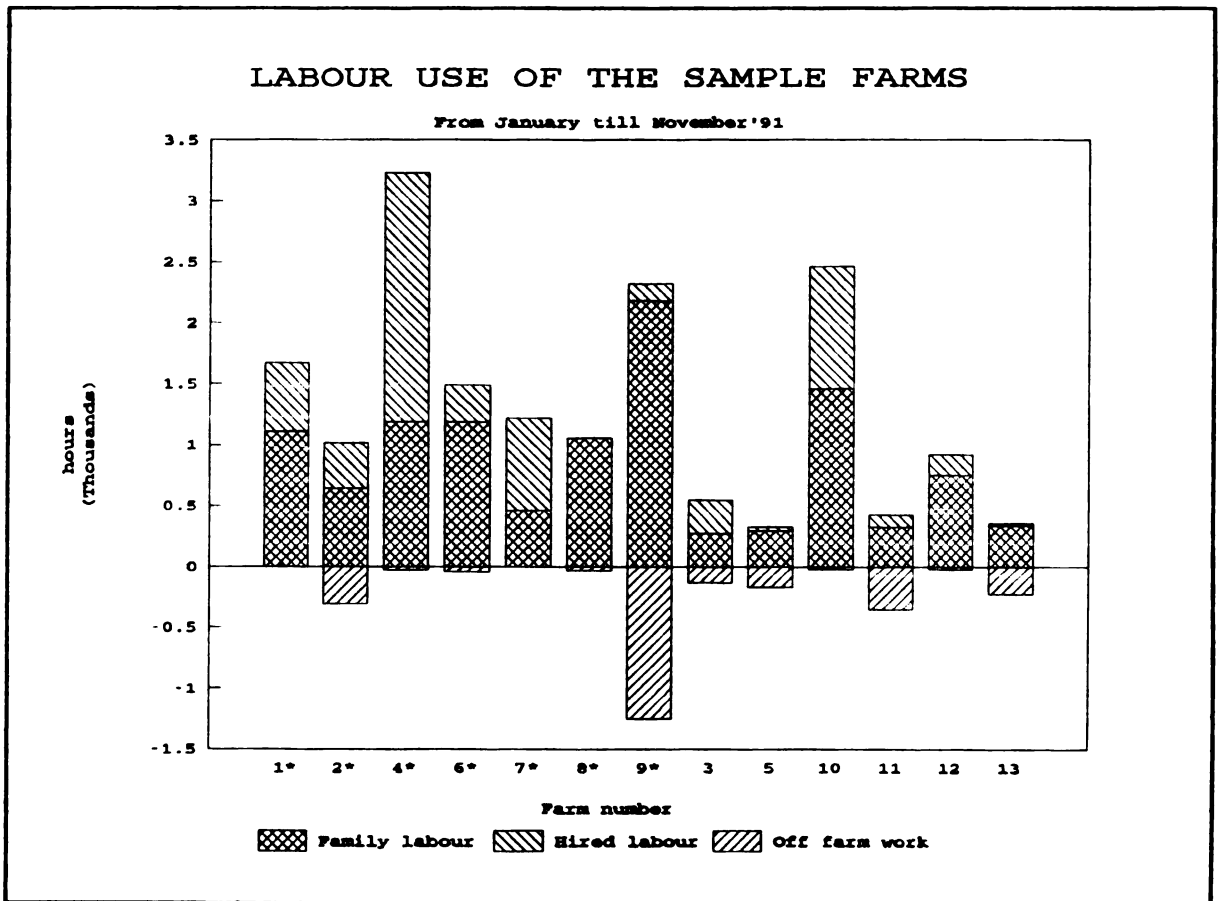


Figure 5.3 Labour use of the sample farms.  
Note: The labour use of farm 10 covers a period of 16 month.

In appendix 4 one can find the flow of family- and hired labour since January per month. This appendix doesn't contain the four month investigated farms because the time range is too short to conclude anything. For the settlement as a whole there can not be concluded much about the labour flow but it can be stated that the farms with mainly perennials have a more constant input of family labour than the farms with mainly annuals and that the farms with an important livestock component require less on farm work. Furthermore appendix 4 depicts on each farm the structure of the mentioned labour flow.

Generally it can be concluded that in the settlement, and plausibly the whole zone, labour is the most scarce production factor. Both capital and land seem to be extensively used in comparison with labour. It may be for this scarcity of labour that farmers choose for off farm work in stead of more crops to complete their labour supply. The risk of too high labour costs or the difficulties to find hired labour when there is a labour peak do not offset the possibility of a profitable crop.

## 6 CROPPING AND LIVESTOCK SYSTEMS

This chapter describes five cropping systems, palmheart, 'summer' and 'winter' maize, pumpkin and cassava as well as livestock systems in Neguev settlement. For the analysis only data of the farms which have been in the sample since January were used. From the other farms and other crops not enough data are available.

### 6.1 Palmheart

In the group of farms that has been investigated since January, three farms cultivate palmheart; 4, 8 and 9. On farm 4 the crop is cultivated on highly fertile soils (group 4&5). The other two farms cultivate their palmheart on poorer soils (group 1). The cultivation started in '90, '87 respectively and on farm 9 in '87, '89 and '90.

Palmheart is a perennial crop that starts to be productive after one year. After four years the highest production level is reached and this level can be achieved for 10 years more. Therefore farm 4 can not be compared with the two other farms because the crops are on different production levels.

Table 6.1 Labour and other inputs per activity per ha. and yields per ha. of palmheart. Neguev settlement. Costa Rica, 1991.

Farm number	labour(hours)			Inputs(col.)		
	4	8	9	4	8	9
<b>Activities</b>						
Sowing	9.4	32.0	9.2	0	1168	1859
Maintenance	163.3	177.9	135.6	1045	1496	0
Removing suckers	9.8	38.5	16.4	0	0	0
Removing leaves	52.8	32.8	10.8	0	0	0
Fertilize	24.0	4.1	25.4	12284	5324	8674
Fumigate	57.1	38.5	97.4	5673	2251	6533
Harvesting	17.8	84.0	118.6	0	0	0
<b>Total</b>	<b>334.2</b>	<b>407.8</b>	<b>413.5</b>	<b>19002</b>	<b>10239</b>	<b>17067</b>
<b>Outputs</b>						
				4	8	9
Yield(units)				535	4359	4494
Yield(col.)				13699	114377	109259
Inputs				19002	10239	17067
Hired labour				25909	0	1210
Gross margin				-31213	104138	90983
Gross margin per family hour				-260	255	227

The operation 'maintenance' in table 6.1 is an aggregation of several operations. In appendix 4 one can find the subdivision of the operation. In the table 'maintenance' consists of weeding (limpiar), cutting weeds (chapear), removing weeds around the palmheart trunks (rodajear), putting the leaves in the middle of the rows (acordenar) and just maintenance (mantenimiento).

Notwithstanding the higher yield of farm 9, may be as a result of higher input use, farm 8 has a better gross margin. The differences in margins are small and can be the result of price differences. Important to notice is that in spite of the poorer soils the farmers earn a reasonable income per hour in comparison with, for example, day labourers who earn about €100 per hour.

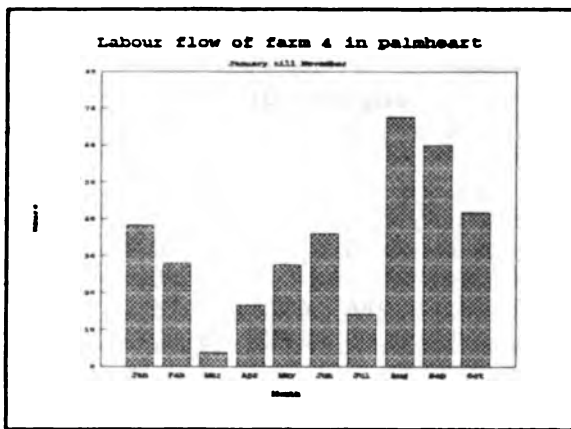


Figure 6.1 Labour flow of farm 4 in palmheart/ha.

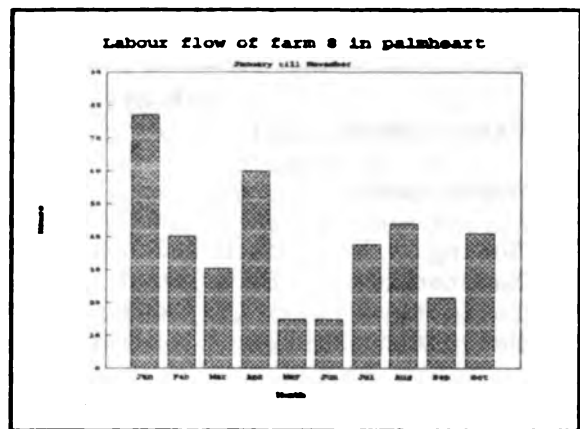


Figure 6.2 Labour flow of farm 8 in palmheart/ha.

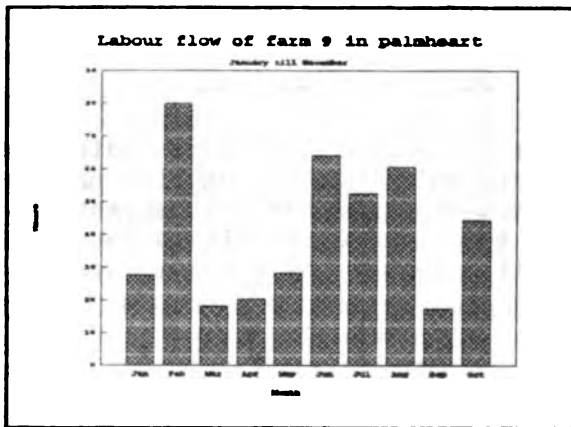


Figure 6.3 Labour flow of farm 9 in palmheart/ha.

In the above and next figures one can see that there is not a specific seasonal labour flow pattern or large fluctuations. Furthermore maintenance operations can be delayed for some time if necessary. This makes it possible to combine palmheart with annual crops.



6.2 Cassava

On four farms that have been investigated since January, cassava was cultivated, on farm 1, 2, 4 and 6 respectively. In three cases, on the farms 1, 4 and 6 the cultivation was on fertile soils (group 5) but on farm 2 the crop was cultivated on poorer soil (group 1).

Cassava is an annual crop that takes about 9 to 10 month before it can be harvested. It is possible to leave the roots in the ground for some time before harvesting them, but humidity can reduce the quality. The market for cassava fluctuated a lot the last two years as a result of fluctuating supply. This year the price was very low, 300-400 colones per 46 kilos, last year it was higher than thousand colones.

Table 6.2 Labour and other inputs per activity per ha. and yields per ha. of cassava. Neguev settlement. Costa Rica, 1991.

Farm number	labour(hours)				Inputs(col.)			
	1	2	4	6	1	2	4	6
<b>Operation</b>								
Sowing	34.0	168.6	110.7	0.0	0	0	0	0
Maintenance	81.1	100.0	32.1	105.7	0	0	0	0
Fumigate	6.1	34.3	46.4	38.2	682	2286	4205	2916
Harvesting	32.4	11.4	103.6	107.7	0	0	2232	8182
<b>Total</b>	<b>153.5</b>	<b>314.3</b>	<b>292.8</b>	<b>251.4</b>	<b>682</b>	<b>2286</b>	<b>6437</b>	<b>11098</b>
					Outputs			
					1	2	4	6
Yield(kilos)					680	0	4929	3318
Yield(col.)					7318	0	45984	31818
Inputs					682	2286	6437	11098
Hired labour					5645	8571	18875	4364
Gross margin					990-10757	20627	16356	
Gross margin per family hour					11	-47	254	78

Table 6.2 presents a distorted picture and only gives an indication of the cassava production. Farm 1 harvested only 0.26 ha. up till november and the yield needs to be upwardly adjusted. Farm 2 has not harvested at all. To get a full data range of farm 4, two succeeding cultivations had to be integrated. Of farm 6 the hours, required to sow the cassava, were not collected.

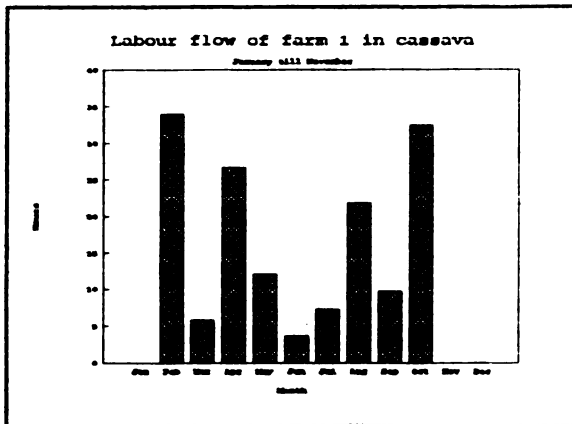


Figure 6.4 Labour flow of farm 1 in cassava/ha.

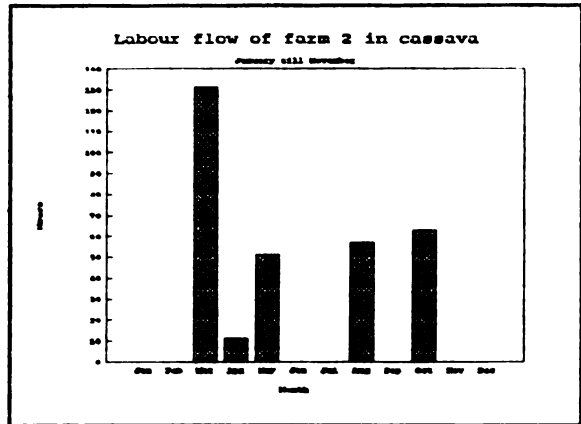


Figure 6.5 Labour flow of farm 2 in cassava/ha.

Although the presented pictures do not give a complete picture it can be clearly seen that there are two labour peaks in the cassava cultivation. One in the beginning of the cultivation for sowing (including field preparation) and one in the end for harvesting. In both periods many hired labour is used. Figure 6.4 seems an exception to this pattern but the extra peak in April is due to a second sowing period.

Almost always cassava is combined with maize in a intercropping system. The first four month the crops are cultivated together. Maize is treated later.

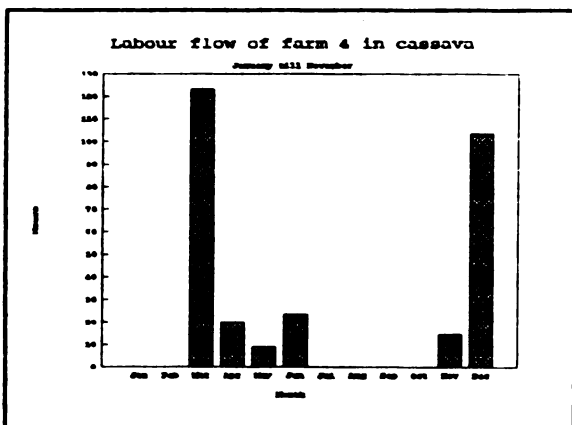


Figure 6.6 Labour flow of farm 4 in cassava/ha.

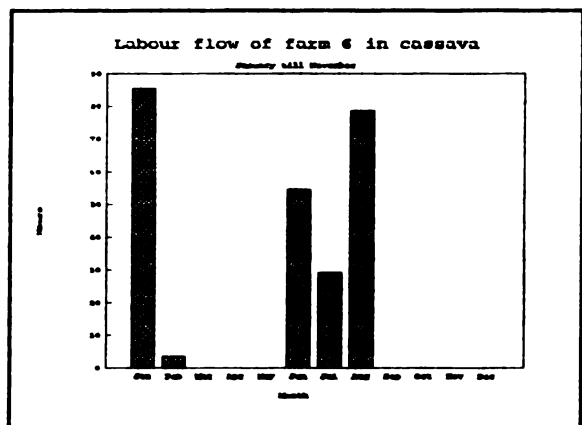


Figure 6.7 Labour flow of farm 6 in cassava/ha.

### 6.3 Pumpkin

Three farms in the sample cultivated pumpkin, 1, 4 and 6, all on fertile soils. There were found two specific periods for pumpkin cultivation one starting in January, the other starting in July. Farmer 6 cultivated pumpkin in both periods. Pumpkin was also cultivated in the second period on farm 4. Pumpkin takes about four month to grow.

Table 6.3 Labour and other inputs per activity per ha. and yields per ha. of pumpkin. Neguev settlement. Costa Rica, 1991.

Farm number	labour(hours)				1	Inputs(col.)		
	1	4	6.1	6.2		4	6.1	6.2
Operation								
Sowing	14.4	28.0	5.9	40.5	1370	1200	11679	0
Maintenance	20.6	3.2	20.4	13.2	0	0	0	0
Fertilize	0.0	0.0	15.3	27.3	0	530	1589	4836
Fumigate	13.0	16.8	31.4	32.2	919	2158	2856	3183
Harvesting	45.2	0.0	95.6	48.8	0	0	730	0
Total	93.2	48.0	168.6	162.0	2289	3888	16863	8019
					Outputs			
					1	4	6.1	6.2
Yield(kilos)					6849	0	7554	1653
Yield(col.)					68493	0	83576	21488
Inputs					2289	3888	16863	8019
Hired labour					4418	8571	2920	165
Gross margin					61786	-12459	63794	13303
Gross margin per family hour					1043	-318	458	83

Again some lack of data obscures the picture. Farmer 4 hasn't yet harvested and farmer 6 harvested his second pumpkin but could not sell it all. The effective yield of farmer 6 was higher but not measured. At last some fertilizer data of farm 1 are probably missing. Notwithstanding the lack of data and thereby created differences, one can say that pumpkin was a profitable crop this year.

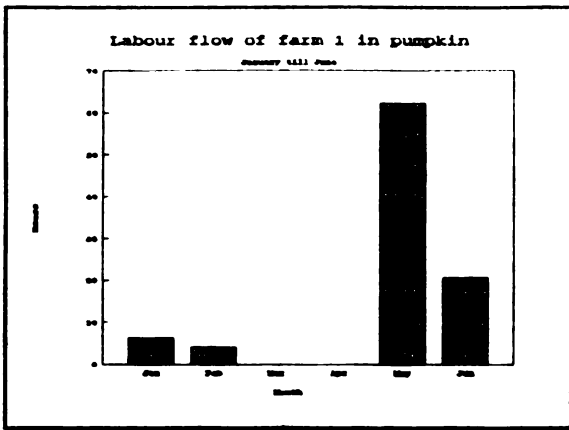


Figure 6.8 Labour flow of farm 1 in pumpkin/ha.

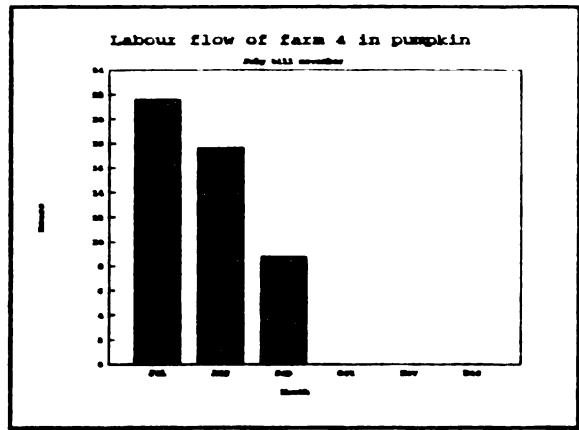


Figure 6.9 Labour flow of farm 4 in pumpkin/ha.

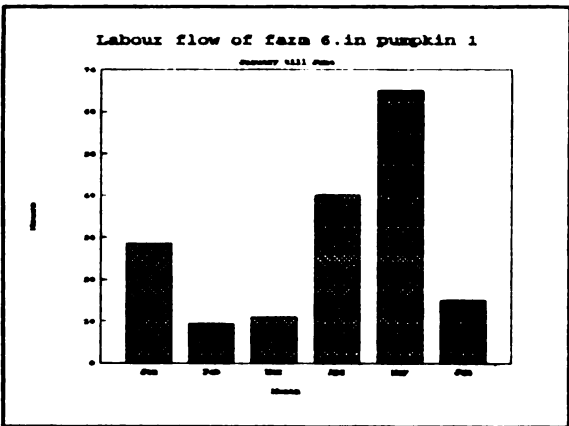


Figure 6.10 Labour flow of farm 6 in pumpkin1/ha.

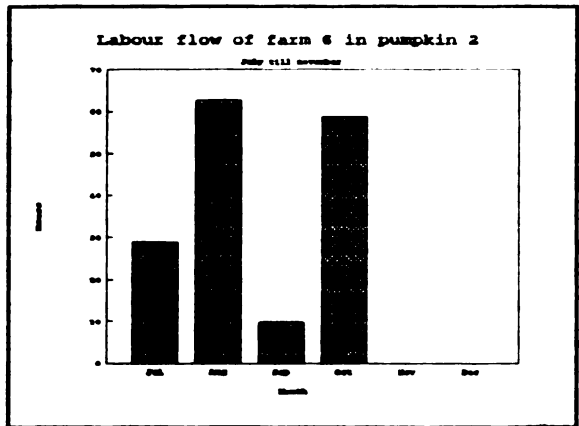


Figure 6.11 Labour flow of farm 6 in pumpkin2/ha.

Hardly anything can be said about the labour flow of pumpkin besides the fact that the crop doesn't require much labour and that most labour is required during the sowing- and harvesting period.

## 6.4

'Summer' Maize

There are two periods per year in which maize cultivation is possible. The first period starts in January and is called, 'summer' maize, and the second starts in July and is called, 'winter', maize.

Maize is only cultivated on the fertile soils of the Neguev settlement (group 5). In the sample, farms 1, 2, 4 and 6 had maize in January. On farm 6 the maize was cultivated in combination with pumpkin but did not yield anything and will not be treated here. 'Summer' maize is often cultivated in an intercropping system with cassava, this was also the case on farms 1, 2 and 4.

Table 6.4 Labour and other inputs per activity per ha. and yields per ha. of 'summer' maize. Neguev settlement. Costa Rica, 1991.

Farm number	labour(hours)			Inputs(col.)		
	1	2	4	1	2	4
Operation						
Sowing	46.7	23.3	24.6	623	1111	1053
Maintenance	17.1	85.6	14.4	841	0	0
Doblar	10.9	13.3	19.7	0	0	0
Fertilize	16.5	15.6	18.6	3714	583	3986
Fumigate	28.4	94.4	44.2	3112	11181	2571
Harvesting	60.8	0.0	53.7	0	0	0
Total	180.4	232.2	175.1	8291	12875	7610
				Outputs		
				1	2	4
Yield(bags)				93	80	102
Yield(col.)				43813	36400	47702
Inputs				8291	12875	7610
Hired labour				4315	0	12249
Gross margin				31208	23525	27844
Gross margin per family hour				231	101	844

Contrary to the results of Finnema the gross margins do not vary considerable although the data base is the same. After various checks no explanation could be found for the differences between his and the results in table 6.4.

Roughly one can separate three ways of maize cultivation in table 6.4; one with balanced input and labour use (1), one with many inputs and much labour but no hired labour (2) and one with balanced input use but much hired labour (4).



Figure 6.12 Labour flow of farm 1 in summer maize/ha.



Figure 6.13 Labour flow of farm 2 in summer maize/ha.

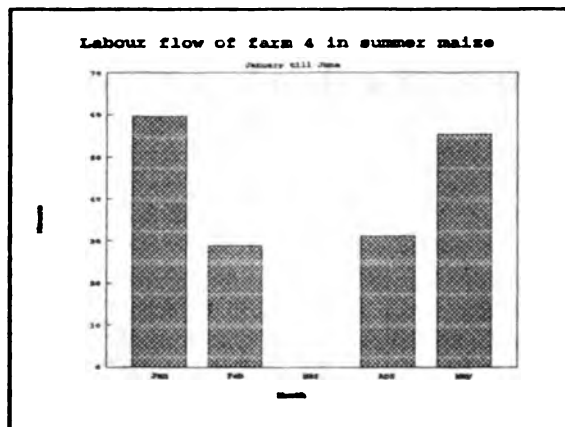


Figure 6.14 Labour flow of farm 4 in summer maize/ha.

Besides the labour peaks in the sowing and harvesting periods it is interesting to compare this labour flow with the labour flow of cassava. When the land preparation and sowing in the maize is finished the sowing of cassava starts. Maintenance, fertilization and fumigation of both crops is combined in the first five months and therefore the costs for each crop are difficult to allocate. The maize is harvested in May and the cassava in October, just before or after the 'winter' maize is harvested.

6.5 'Winter' maize

'Winter' maize is also cultivated on the fertile soils but on smaller plots. An explanation can be that other crops, mainly cassava, occupy the land and the labour. Furthermore the climatic conditions are said to be less favorable. Farmer 2 started the cultivation September, the others started in June or July.

Table 6.5 Labour and other inputs per activity per ha. and yields per ha. of 'winter' maize. Neguev settlement. Costa Rica, 1991.

Farm number	labour(hours)				Inputs(col.)			
	1	2	4	6	1	2	4	6
Operation								
Sowing	43.4	44.0	69.2	73.1	0	0	0	0
Maintenance	21.7	46.6	0.0	3.9	0	0	0	0
Doblar	13.0	0.0	12.0	0.0	0	0	0	0
Fertilize	0.0	0.0	30.8	35.4	0	0	8009	8707
Fumigate	32.6	11.1	18.0	61.8	2991	1111	0	7428
Harvesting	3.5	0.0	19.7	168.0	0	0	0	3077
Total	114.4	102.2	149.6	341.0	2991	1111	8009	19211
					Outputs			
					1	2	4	6
Yield(cobs)					696	0	4274	18615
Yield(col.)					3130	0	12821	63692
Inputs					2991	1111	8009	19211
Hired labour					0	3333	6094	14292
Gross margin					140	-4444	-1283	30189
Gross margin per family hour					1	-65	-16	153

On farm 1 only a part of the yield was sold the rest was used as alimentionation for the farm animals. The physical yield of the alimentionation is unknown. It's striking that he used far less inputs than in the 'summer' maize. The pictures of farms 2 and 4 are distorted because the harvesting had not yet started or was just started. Farm 6 gives a complete insight in the 'winter' maize production. The numbers of farm 6 indicate that 'winter' maize is less profitable than 'summer' maize.

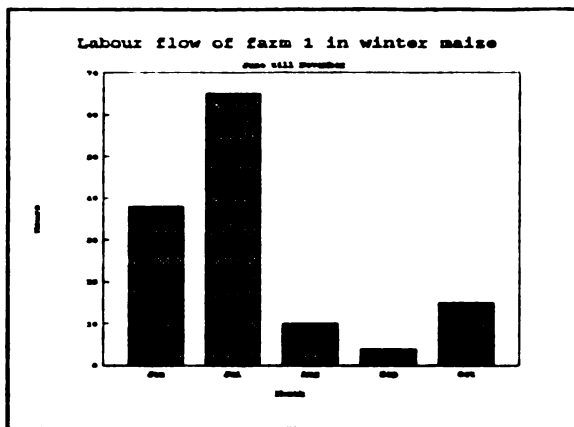


Figure 6.15 Labour flow of farm 1 in winter maize/ha.



Figure 6.16 Labour flow of farm 2 in winter maize/ha

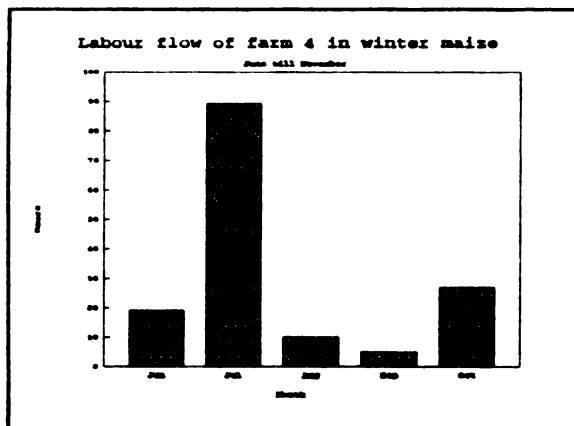


Figure 6.17 Labour flow of farm 4 in winter maize/ha.



Figure 6.18 Labour flow of farm 6 in winter maize/ha

If one ignores the shifts in the figures presented above caused by the starting points in time, the picture resembles the labour flow of 'summer' maize.



This paragraph analyzes the profitability of the livestock activities in the Neguev settlement. In chapter 3 three livestock systems were distinguished; small scale milk system, bigger scale milk-nursing system and development-fattening system.

It's not possible to present an economic analysis of the small scale milk system. Weekly data of this livestock system hardly exist because this system doesn't require a lot of labour or other inputs. This system is important to the farmer though, since it produces calves and afterwards milk during some months. Another important aspect is that the farmer can cope with liquidity problems by selling a cow.

An economic analysis of the bigger scale-nursing system and the development-fattening system is presented underneath. For the analyses data from July'90 till December'91 are used. Although six sample farms had one of these livestock systems only one farm with a development-fattening system and three farms with a bigger scale-nursing system are analyzed because too many data of the other two farms are missing.

To give a value to the livestock on the farm an average of the buying and selling prices faced by the farmer during 1991 were used. Although even now it remained difficult to give a value to a cow because of age, weight and quality differences. The following analysis presents at least an indication of the profitability of livestock farming.

In the analysis six age/sex categories were distinguished, calves, heifers, cows, bull calves younger than one year, bull calves older than one year and bulls. Table 6.6 gives an overview and the estimate value of the different categories.

Table 6.6 Livestock categories and their estimated values

category	description	estimated value (col.)
1	calf	17.000
2	heifer	22.000
3	cow	35.000
4	bull calf < 1 yr.	23.000
5	bull calf > 1 yr.	35.000
6	bull	45.000

Note: The estimated values were only used when the buying price or the selling price was not known.

In the following tables and supplementary data on income from livestock one can see that farm 3, 5 and 13 have a 'bigger scale milk-nursing system'. Farm 11 has a 'development-fattening system'. To recalculate the gross margin of farms 3, 5, 11, 13, presented in chapter 5, the returns of the livestock activities from July'90 till November'91 were enumerated and divided by four. One fourth of the returns was allocated to the gross margin during the period of investigation. This questionable way of allocating the income was applied because in practice it appeared to be impossible to calculate the in- or decrease of the livestock value just for the last four month.

Table 6.7 Inventory and trade of livestock of farm 3.

livestock number in:	Categories						total value (*€1000)
	1	2	3	4	5	6	
July'90	2	10	18	0	0	1	911
July'91	12	2	28	0	0	1	1279
Oct.'91	12	2	28	0	0	1	1279
sold between:							
July'90/'91	0	0	4	0	0	0	92
July'91/Oct.'91	0	0	0	0	0	0	0
bought between:							
July'90/'91	0	0	0	0	0	0	0
July'91/Oct.'91	0	0	0	0	0	0	0

Note: 12 calves were born between July'90/June'91.

Period: July'90 - June'91

Increase in value of livestock:	1.279.000	-/-	911.000	=	368.000
Sold value -/- bought value :	92.000	-/-	0	=	92.000
Return on livestock :	368.000	+	92.000	=	460.000

Period: July'91 - October'91

Increase in value of livestock:	1.279.000	-/-	1.279.000	=	0
Sold value -/- bought value :	0	-/-	0	=	0
Return on livestock :	0	+	0	=	0

Table 6.8 Inventory and trade of livestock of farm 5.

livestock number in:	Categories						total value (*¢1000)
	1	2	3	4	5	6	
July'90	8	5	11	0	0	1	676
July'91	3	8	10	3	0	1	717
Oct.'91	7	8	10	0	1	1	759
<b>sold between:</b>							
July'90/'91	0	0	6	0	0	0	195
July'91/Oct.'91	0	0	1	3	2	0	176
<b>bought between:</b>							
July'90/'91	0	0	0	0	0	0	0
July'91/Oct.'91	4	0	1	0	0	0	118

Note: three calves and three bullcalves were born between July'90/June'91.

Period: July'90 - June'91

Increase in value of livestock:	717.000	-/-	676.000	=	41.000
Sold value -/- bought value:	195.000	-/-	0	=	195.000
Return on livestock:	41.000	+	195.000	=	236.000

Period: July'91 - October'91

Increase in value of livestock:	759.000	-/-	717.000	=	42.000
Sold value -/- bought value:	176.000	-/-	118.000	=	58.000
Return on livestock:	42.000	+	58.000	=	100.000

Table 6.9 Inventory and trade of livestock of farm 11.

livestock number in:	Categories						total value (*¢1000)
	1	2	3	4	5	6	
July'90	2	0	2	9	15	15	1578
July'91	3	0	2	15	15	10	1538
Oct.'91	2	0	2	27	15	0	1424
sold between:							
July'90/'91	0	0	0	0	0	30	1380
July'91/Oct.'91	0	0	0	0	0	10	460
bought between:							
July'90/'91	0	0	0	30	0	0	563
July'91/Oct.'91	0	0	0	12	0	0	346

Note: one calf and one bullcalf were born between July'90/June'91.

Period: July'90 - June'91

Increase in value of livestock: 1.538.000 -/- 1.578.200 = -40.200

Sold value -/- bought value: 1.380.000 -/- 562.500 = 817.500

Return on livestock: -40.200 + 817.500 = 777.300

Period: July'91 - October'91

Increase in value of livestock: 1.432.600 -/- 1.538.000 = -105.400

Sold value -/- bought value: 1.380.000 -/- 562.500 = 817.500

Return on livestock: -105.400 + 817.500 = 712.100

Table 6.10 Inventory and trade of livestock of farm 13.

	Categories						total value (*¢1000)
	1	2	3	4	5	6	
livestock number in:							
July'90	4	12	9	1	3	1	830
July'91	7	12	6	2	4	1	933
Oct.'91	7	12	6	2	4	1	878
sold between:							
July'90/'91	0	0	5	0	0	1	195
July'91/Oct.'91	0	0	2	0	0	0	55
bought between:							
July'90/'91	0	0	2	0	0	1	190
July'91/Oct.'91	0	0	0	0	0	0	0

Note: seven calves and two bullcalves were born between Jul'90/'91 but four died this same period.

Period: July'90 - June'91  
 Increase in value of livestock: 933.000 -/- 830.000 = 103.000  
 Sold value -/- bought value: 195.000 -/- 190.000 = 5.000  
 Return on livestock: 103.000 + 5.000 = 108.000

Period: July'91 - October'91  
 Increase in value of livestock: 878.000 -/- 933.000 = -55.000  
 Sold value -/- bought value: 55.000 -/- 0 = 55.000  
 Return on livestock: -55.000 + 55.000 = 0

Besides the fact that the tables and calculations presented above are based on estimations, one also has to keep in mind that the costs of pasture and interest are not included. Notwithstanding these distortions, livestock systems (at least the bigger ones) seem to be quite profitable. It is striking that all bigger scale livestock farmers live in a two storeyed house which are not very often seen in the Neguev settlement.

## 7 CONCLUSIONS

In farming system analysis a research period of nine months is insufficient to give a complete comprehensive picture of the many subsystems of the farms and the relations between them. A longer research period is indispensable to increase the perception of the way the farmers are managing their farms.

The problems encountered in the selection of the sample farms underline the fact that the Neguev settlement has already been copiously investigated. Therefore it is a good intention to relocate the research area to Río Jiménez. Another good reason for a new research area, not in a settlement, is that representativeness will be largely extended.

Considering the sample farms it seems possible to classify the farms in the Neguev settlement in three farming systems. The first type has relatively fertile soils and cultivates mainly annual crops (maize, cassava and pumpkin). The second type is located on the poorer soils and cultivates mainly perennial crops (palmheart, pineapple). On the third farm type, on the poorer as well as the fertile soils, livestock activities are an important source of income. The farmers on the second farm type work more off farm than farmers in the first type do. The farmers of the last type work more off farm than farmers of the first and second type do. Type one consists of the farms 1, 2, 4 and 6, type two contains the farms 7, 8, 9, 10 and 12 and the third type the farms 3, 5, 11 and 13. This classification can not be emphasized with gross margin differences, possibly because the farms have not been investigated long enough yet.

For the Neguev settlement, and probably the Atlantic Zone, it can be concluded that labour is the most scarce production factor. About the labour flow it can be stated that the farms with mainly perennials have a more constant input of family labour than the farms with mainly annuals and that the farms with an important livestock component require less on farm work.

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## PERSONAL EXPERIENCES AND OTHER ACTIVITIES

Besides study purposes we think a practical period, especially in a developing country, can also contribute to personal development. Therefore we consider it important to supplement this report with a chapter which deals with personal experiences and other activities which were beyond the scope of our investigations.

In the following paragraph we begin with a report about a trip to a banana plantation followed by a paragraph which deals with our experiences on price data collection. The last paragraph contains some general lines of thought on various subjects.

### Bananas, bananas and even more bananas

In August 1991 we paid a visit to one of the many banana plantations in the Atlantic Zone. On this trip we were guided by Jorge Williams who is in charge of one banana 'finca' of Univan. Before this job he was managing the banana plantation of the MAG in Guápiles.

Costa Rica is one of the biggest banana producing countries, but yet relatively small in comparison with Ecuador. The quality of the bananas produced in Costa Rica, however is much better because bananas are cultivated on plantations in stead of small farms. Furthermore there is high potential to increase the cultivated area.

On this plantation one hectare produces about 2700 boxes (cajas) of 18 kilos each. Roughly there are three qualities of bananas of which only the first two are exported. The price (probably f.o.b) of these qualities were \$5.29 and \$4.29 per box respectively. The costs consisting of labour, pesticides, herbicides, fungicides, nematocide and fertilizers sum up to about \$4. The small margin between costs and benefits indicates the importance of first quality production. The quality classification depends largely on the size, maturity and damages of the bananas. It's our impression that the management of the farm is a very important factor to achieve a profitable production.

The production of bananas can be seen as a integrated part in the economy of the Zone. In many ways one can say there is a competition between these plantations and the smaller farms in the region. Besides the fact that agricultural policies made for the atlantic zone pay much attention to the banana plantation, because of export 'dollars', the two parties compete with each other for labour. Eventually this competition and the rising labour wages can be an decisive factor in whether or not small farms have a 'profitable' future in the Atlantic zone.

Furthermore it was interesting to learn under which names the different fruit companies sell there products. As far as we know the four bigger companies on the market are; the standard fruit company, the united fruit company, univan and bandeco. They sell under the names; dole, delmonte, turbana and chiquita. The first two companies are American the third is an Columbian and bandeco is Costarican.



### Price data collection

We not only collected data on crop- and farm level but also added some data to an already existing price file of several crops. Both data collections will be used in the linear program model of R. Schipper. The price file contains information about three different markets; the export market, the Cenada and the feria in San José. Data on the first two markets were already available in Guápiles and only had to be typed in but for the feria prices we had to go to San José to the department of agriculture and livestock (MAG). Normally this job could have been done quickly but we faced some minor problems that made it more time consuming. First the weekly data had to be recalculated to monthly data, once the portable computer broke down, third we had to leave the building because there were some earthquakes and at last the data temporarily disappeared. In November we unfortunately could not spare enough time to finish the job.

### Personal experiences

For many reasons it's hard to say if Costa Rica is a third world country or not. We came, for example, to CR by bus from Cancun, Mexico, and saw a lot more poverty in the countries we went through. But within the country the differences between the center and the periphery or industrial and agricultural provinces is striking. To us CR was far more developed than we expected and the language was the main obstacle we were confronted with in our work and daily life, even after the Spanish course we took in Antigua, Guatemala.

Gratefully the farmers and other people we work with were very helpful and never bothered to say things twice (but never slowly). The weekly interviews and the relations with the farmers went very well and we were able to obtain a lot of information. This however confronted us with moral conflict. Some farmers were facing big difficulties and were sometimes asking for advice where on the other hand the project aims at higher goals. Not only because of this matter of conscience but also to thank the farmers and to say good by we held a meeting before we left. Besides a present the farmers obtained an extraction of the information used in this report. In appendix 6 an example is shown. It is clear to us that this information will not help them to improve their farm but maybe it motivates them to keep records of their activities. At least we are sure they enjoyed the meeting and we were glad we could do something back.

Besides experience in the field we learned a lot about computer use during this practical period. In the many hours on the machines we managed to master software like Lotus, dBase and WP. Although it can be questioned if this is something one should learn during a practical period, in the tropics, we think it's very useful experience.

Naturally there were more things we learned during the last six months, for example about development projects in general and the Programa Zona Atlántica more specifically, about the Costa Rican people and many other valuable experiences. Although we were aware the project is the target of criticism and we were not always entirely positive about it, we think our practical period in CR was a success just like our cooperation.

## **ACKNOWLEDGEMENTS**

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Last but not least we are grateful for the support and friendship of the other students and the Dutch/German staff.

## APPENDICES



**Appendix 2 STOCKTAKING INTERVIEW**

**Programme CATIE/UAW/MAG**

**Estudio de la relacion de tierra-cultivos-ganado y de sistemas de finca en 'Neguev'.**

**Encuesta agosto 1991.**

**Inventario de cultivos (pasto y bosque), tierras, mano de obra, ganado y maquinaria.**

**Encuestador:  
Numero de finca:**

**Fecha:**

**Informacion general**

<b>Nombre de productor</b>	
<b>Edad</b>	
<b>Educacion</b>	
<b>Origen</b>	

**Cultivos (pasto & bosque)**

**¿ Cual cultivos tiene Ud.?**

**Parcela con:**

<b>Maiz</b>	
<b>Palmito</b>	
<b>Yuca</b>	
<b>Cacao</b>	
<b>Platano</b>	
<b>Pina</b>	
<b>Frijoles</b>	
<b>Pasto</b>	

**Ha.:**


**Otros y combinaciones:**


**Ha.:**


Informacion por parcela con cultivo(s):

Cultivo(s):

( En caso de Anuales y Perennes ( no pasto ) )

Anuales	Edad	
	Cosecha	
Perenne	Edad	
	Cosechas por ano	
	Cosecha por vez	
	Usos antes	

Tipo de tierra	negra	
	bermeja	
	cafe	
	colorada	
	muy roja	
	suampos	
	otro	

( En caso de PASTO )

Cuantos parcelas:	
Calidad:	Ha.:

Cauntos arboles:
Caulles arboles:

Caundo y cauntos capital invertido:

**Mano de obra**

<b>Familia</b>		
<b>Edad</b>	<b>Vive en casa</b>	<b>Actividad a finca/fuerra</b>
<b>Trabajar con peones:</b>		
<b>En cualles cultivos</b>		
	<b>actividades</b>	
<b>Trabajar a fuerra:</b>		
<b>Cuantos horas en un mes</b>		
<b>A donde</b>		

**Ganado**

<b>ategoria</b>	<b>Numero</b>	<b>Edad</b>	<b>Kg</b>	<b>Leche</b>
<b>Hembras</b>				
<b>Vacas</b>				
<b>Vacas en lactacion</b>				
<b>Machos</b>				
<b>Toros reprod.</b>				
<b>Bueyes</b>				

**Informacion de ano pasado:**

	<b>Categoria</b>	<b>Edad</b>	<b>Precio</b>
<b>Vendido</b>			
<b>Comprado</b>			
<b>Muerte natural</b>			

	<b>numero</b>
<b>Cabello</b>	
<b>Yuguas</b>	
<b>Mulas</b>	
<b>Pollos/gallos/gallinas</b>	
<b>Patos/gansos</b>	
<b>Peces</b>	
<b>Otros</b>	



**Maquinaria**

	<b>Numero</b>	<b>Edad</b>	<b>Valor</b>
<b>Bombas de espalda</b>			
<b>manual</b>			
<b>motor</b>			
<b>motosierras</b>			
<b>vehiculos</b>			
<b>chapulines</b>			
<b>arados y/o rastros</b>			
<b>machetes</b>			
<b>cuchillo</b>			
<b>macanas</b>			
<b>motos</b>			

### Appendix 3 Guideline for data processing

The following guideline can be considered as a manual to proceed weekly field data into Pepe V tables. Software needed are the programs DbaseIII or IV and LOTUS 2.2 .

The data processing in the Dbase file 'FINCAS' was done in the following way:

- line 1: Enter the date of the interview. First the month, then the day and year. For example 08-06-1991, will give 19910806 in the print and indicates the sixth of august.
- line 2: On the next line the farmnumber must be filled in. The farmnumber corresponds with the parcel number on the ICTO (soil & parcel) map.
- line 3-5: This line can be used to enter a number for the different plots on the parcel. Although the program PEPE doesn't use this information it can be used to work at a even more detailed level then the farm/crop level.
- line 6: As mentioned above the computer processing works at farm/crop level. To make a distinction between the activities possible the following abbreviation codes must be filled in. When it is desired a number can be added to the code to distinct two or more of the same crops on the same field.

Activities:	Animales	- ANI,
	Arachis	- ARA,
	Ayote	- AYO,
	Bamboe	- BAM,
	Cacao	- CAO,
	Carbon	- CAR,
	Chamol	- CHA,
	Chile	- CHI,
	Coco	- COC,
	Culantro	- CUL,
	Forestal	- FOR,
	Frijoles	- FRI,
	Ganado	- GAN,
	Guabana	- GUA,
	Maiz	- MAI,
	Mantenimiento	- MAN,
	Maracuya	- MAR,
	Ñame	- YAM,
	Ñampi	- NAM,
	Palmito	- PAL,
	Papaya	- PAP,
	Pasto	- PAS,
	Piña	- PIN,
	Platano	- PLA,
	Tequisque	- TEQ,
	Trabajar a fuera	- TAF,
	Yuca	- YUC,

line 7&8: Line 7 is reserved to write down the operations that took place. Line 8 is the corresponding code. This three number code has to be typed with a blank before it. During the survey in the field the farmers mention a lot of expressions. Sometimes these expressions indicate the same operations. With the following terms we think we encompass most of these operations. In the next paragraph the translation of the spanish expressions is taken down. In order to make the process as uncomplicated as possible we tried to classify the operations. Often inputs and outputs are closely linked to the certain operations. Where possible we arranged this conveniently. This methodical classification reappears in the codes. Notice that the codes in the 600 range are specifically used to indicate yield or other revenues. In order that this guideline becomes an easy referenced manual lines 15 & 16, the inputs and outputs, are arranged next to the operations they are linked to.

Operations:

Input and outputs:

preparation of the field:

100 preparar terreno  
105 sembrar  
110 resembrar  
115 arrancar  
120 sacar&picar semilla  
125 alistar semilla  
130 collectar semilla  
135 embolzar

150 bolsas plastico  
155 semilla  
160 alquilar chapulin  
165 postes

maintenance of the crop:

200 chapear  
205 limpear  
210 deshijar  
215 deshojar & ordenar  
220 palear  
225 acordenar  
230 rodajear  
235 podar y desramar  
240 amarrar & pegar & postear  
245 quebrar cacao

250 alambre & mecate  
255 grapas

other operations:

300 aplicar fertilisante

350 fertilisante  
351 nutran (kg)  
352 15-3-25-6 (kg)  
353 aborno organico (kg)  
354 10-30-10 (kg)  
355 calcium (kg)  
356 foliar (li)  
357 12-24-12 (kg)  
358 urea (kg)  
359 gallinasa (sa)  
360 multiminerales (li)  
370 pesticidas  
insecticidas  
fungicidas  
371 roundup (li)  
372 koside (uni)  
373 kasagrin (li)  
374 atrazina (li)  
375 radex (li)  
376 benlate (kg)  
377 ati la (li)  
378 gramoxone (li)  
379 karmix (kg)  
380 2,4 d (li)  
381 tamaron (li)  
382 hysapak (kg)  
383 agromethyl (li)  
384 counter (kg/li)  
385 fusilade (li)  
386 gramuron (li)  
387 jardan (li)  
388 aliete (li)  
389 cycosin (li)  
390 pega (li)  
391 diazinon (li)  
392 metolosate (li)  
393 decis (li)  
394 tordan 472 (li)

305 aplicar pesticidas  
insecticidas  
fungicidas

315 espartar

320 doblar

325 apuntalar

330 cercar y mantenimiento de cerca

livestock:

400 cuidar	450 medicina/vacuna
405 ordeñar	451 baytical
410 relocalizar	452 verdosal
415 vacunar	453 torsagan
	454 oxytetracyclina
	455 ripercol
	456 triple
	457 acrilan 50
	458 fluvina
	459 fertigan
	460 hierro
	461 emuna la
	462 servegan
	463 ivonec
	470 alimentacion
	471 miel y sal
	472 concentrada
	473 alimentacion de maiz
	481 herduras y claves

forestry and charcoal:

500 cortar madera & picar lena	550 motosierra
505 hechar & preparar carbon	555 madera

yields and products:

600 ingresos de cultivos	601 ayote	(kg)
ingresos de taf	602 palmito	(uni)
	603 palmito (bolsas)	(uni)
	604 frijoles	(kg)
	605 racimos platano	(uni)
	606 cacao	(kg)
	607 coco	(uni)
	608 yuca	(kg)
	609 maiz	(kg)
	610 elote de maiz	(uni)
	611 piña	(uni)
	612 maracuyá	(uni)
	613 culantro	(uni)
	614 guanabana	(uni)
	615 bambu	(uni)
	630 leche	(li)
	631 queso	(kg)
	640 ganado	(uni)
	641 ternero/a y hembra	(uni)
	642 novillo/a	(uni)
	643 toro	(uni)
	644 vaca	(uni)
	645 cerdo/a	(uni)
	650 carbon	(sac)
	690 trabajar a fuera	(hora)
	691 alquilar el carro	.

mantenimiento:

700 mantemiento	750 piedras
710 comprar gasolina	751 cemento
	752 bomba y cosas para bomba
	753 manchette
	754 arena
	760 gasolina

off farm work:

800 transportar	850 transporte
805 processar palmito	855 impuesto
810 pagar impuesto	

- line 9: In the surveys we separated two kinds of labour. The first type of labour is supplied by the farmer and his family and is called "familiar". The other work is delivered by non-family members and has to be filled in as "Peon". On line 9 one of these two terms is used.
- line 10: Also the labour type is codified. Family labour has number 1 and non-family labour number 2.
- line 11: Usually the farmers use three different duration measurements, hours, jornales (6 hours) and days (8 hours). On this line it is not needful to adjust the duration measurements, they can be filled in right away.
- line 12: In order to equate the difference the following codes must be used: hours - 1,  
jornales - 2,  
days - 3.
- line 13: "Peon" labour is very often paid for in contrary to family labour. The wage per hour or the total amount paid must be filled in on this line.
- line 14: If on line 13 the wage rate per hour is used the code to be filled in is 1. In the other case when a value was entered code 2 must be used.
- line 15: For reasons of convenience we arranged the in- and output next to the activities. On this line one of these in- or outputs can be entered. Of course additions and alterations can be made on this line.
- line 16: In contrast to the previous line the accurate code must be used here.
- line 17: This line is reserved for the quantity of the in- and outputs. To prevent converting mistakes the quantity of an in- or output as mentioned by the farmer can be used without change. Experience learns that the quantities given in the next line are sufficient to cover the possibilities. Some of the quantities are however not unequivocal. As it is virtually impossible to compare the different quantities, computer recalculation will fail to appear.
- line 18: To leave open the feasibility of recalculation by hand this line reserved to fill in one of the following codes:  
1 - onza                    4 - gallon   10 - unity  
2 - kilo                    5 - saco  
3 - liter                    6 - quintal  
We advise to use one unity per product or input because Pepe V doesn't recalculate the differences.

- line 19: The sensibility of the in- and output part is situated in this price and value line. In common with previous lines both prices and values can be entered.
- line 20: Eventually it must be specified whether it is a price or value.
- line 21: It is most conceivable that there remain some unutilized observations. This memo line especially reserved to that use. It must be kept in mind that this information will not appear on the print or regular screen layout.

After each weekly supplementation we sorted the file in the following order: 'PARCELA', 'CULTIVO', 'FECHA'. The next program requires this order.

To divide the Dbase file into 13 'farm' files with a wk1 (LOTUS) extension we used the program 'BASE4' written by Leopoldo Gomez. The next step is to fill in the 'PEPECREA' file for each farm. This file consists of 4 parts, 'ENTRADAL', 'BASE7', 'BASE2' and 'BASE4' and serves as total farm data input for Pepe V. 'ENTRADAL' contains general information of the farm and farmer. In 'BASE7' the labour supply situation has to be filled in. 'BASE2' shows the different crops and their area and 'BASE4' is the transformed Dbase file.

After these steps the actual agregation is very simple. One only has to start the Pepe V program and to import the file made with 'PEPECREA' and the program calculates the numbers for every crop. In between Pepe V creates automatically a separated file for each crop.

## Appendix 4

### DATA OUTPUT OF THE PEPE V PROGRAM

This appendix contains only the most important data output of the Pepe v program. The information is presented per farm, of the farms that have been investigated since January '91 more extended data is given. This means; complete output of the important crops, some graphics and a summary table of all economic activities on the farm. For the farms that have been interviewed since July '91 only the summary table is given.

To avoid misinterpretations it should be kept in mind that the program Pepe V has limitatons. The most important problem is the fact that it does not distinguish the different quantity units. This and other imperfections can easily be adjusted but this requires intensive consultation of L. Gomez, the assistant of J. Arze, and thus time. Till now most problemes were solved by adjusting the Dbase file.

In 'cuadro' one the program calculates three different income numbers; the value added, the gross margin and the net margin. The first is the value of the outputs less the costs of inputs (except hired labour). The second is the value of the outputs less the costs of all inputs (including hired labour) and corresponds with the gross margin used in this report. The net margin is the gross margin less the costs of family labour. Since family labour has no direct price it was fixed at ¢100 per hour, the price of hired labour labour since July '91.

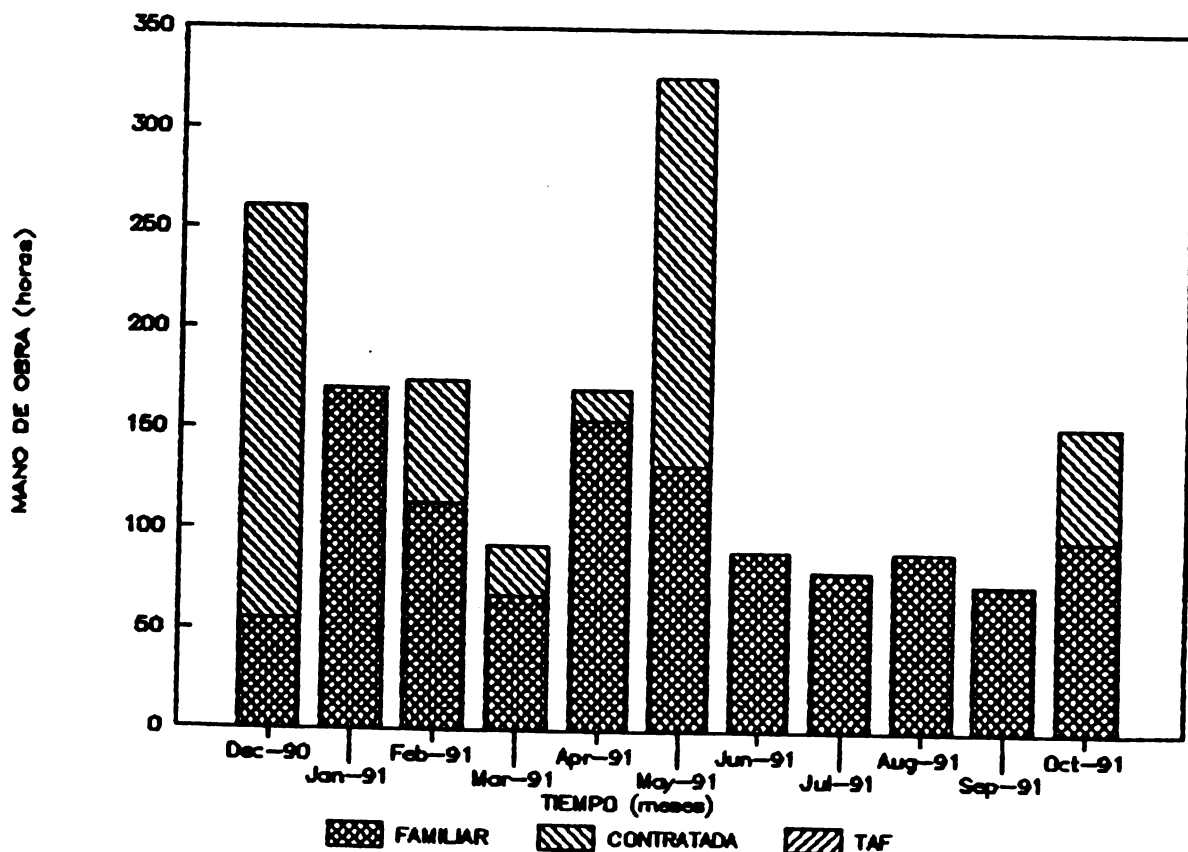
The summary table of almost each farm contains an activity called 'mantemiento'. Labour and other inputs which could not be allocated to a certain crop are allocated to this activity. For instance, when a farmer repaired his house or made a toilet, the spent hours and the made costs are allocated to the activity 'mantemiento'. Per definition the gross margin of mantemiento is negative.



DATA OUTPUT OF FARM 1

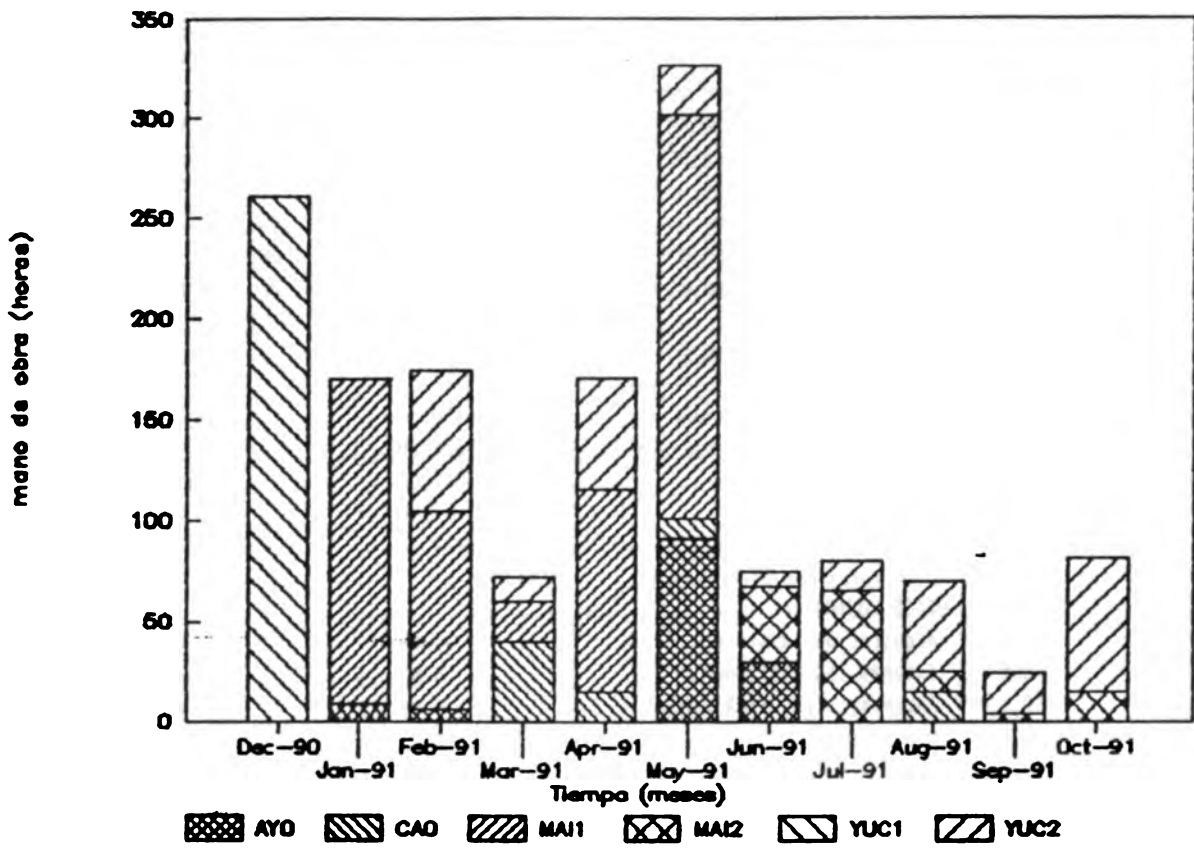
Summary of the economic activities of farm 1

AGROECOSISTEMA	AREA	ING. BRUTO	INSUMOS	MOC	Gross Margin	MOF (h)	RET. MOF
Ayote	1.46	100000.00	3342.00	6450.00	90208.00	86.50	1042.87
Cacao	1.25	0.00	1034.00	2200.05	-3234.05	65.00	-49.75
Frijoles	0.35	0.00	0.00	0.00	0.00	45.00	0.00
Maize	3.21	140640.00	26612.86	13850.00	100177.14	434.00	230.82
Maize	1.15	3600.00	3439.38	0.00	160.62	131.50	1.22
Nampi	0.10	10000.00	0.00	0.00	10000.00	21.00	476.19
Platano	0.20	0.00	1002.69	1000.00	-2002.69	52.50	-38.15
Naue	0.10	0.00	2000.00	0.00	-2000.00	30.00	-66.67
Yuca	1.26	26161.5	1458.0168	15260	9443.4832	55	171.6996
Yuca	2.06	15074.5	1404.9918	11630	2039.5082	187.5	10.87737
<b>TOTALES</b>	<b>11.14</b>	<b>295476.00</b>	<b>40293.94</b>	<b>50390.05</b>	<b>204792.01</b>	<b>1108.00</b>	<b>184.83</b>



Family labour, hired labour and off farm work

## Uso de MO por agroecosistema



# Ayote

## CUADRO 1. RESUMEN DE COSTOS Y BENEFICIOS.

Agricultor : farm 1  
 Area finca : 19.89 ha  
 Agroecosistema: Ayote  
 Area Agroec. : 1.46 ha

RUBRO	POR PARCELA		POR HECTAREA	
	Kg	Económico	Kg	Económico
<b>INGRESOS</b>				
<b>PRODUCCION:</b>				
Producción vendida	10000.00	100000.00	6849.32	68493.15
Consumo flia.	0.00	0.00	0.00	0.00
Otros	0.00	0.00	0.00	0.00
<b>INGRESO BRUTO</b>	<b>10000.00</b>	<b>100000.00</b>	<b>6849.32</b>	<b>68493.15</b>
<b>COSTOS</b>				
<b>COSTOS DE OPERACION</b>				
Mano de obra Contratada		6450.00		4417.81
Mano de obra Familiar		8650.00		5924.66
Insumos		3342.00		2289.04
Otros		0.00		0.00
<b>Total Costos de Operación</b>		<b>18442.00</b>		<b>12631.51</b>
<b>OTROS COSTOS</b>				
Alquiler de la tierra		0.00		0.00
Interés (5% Cost.Oper.)		0.00		0.00
Administración (10% C.OP.)		0.00		0.00
<b>Total Otros Costos</b>		<b>0.00</b>		<b>0.00</b>
<b>COSTOS TOTALES</b>		<b>18442.00</b>		<b>12631.51</b>
<b>GANANCIA &amp; PERDIDA</b>				
Value added		96658.0		66204.11
Gross margin		90208.00		61786.30
<b>Net margin</b>		<b>81558.00</b>		<b>55861.64</b>
<b>INDICES DE EFICIENCIA</b>				
Beneficio total/(NOC+INSUMOS)		10.21		10.21
Beneficio total/Costo Total		5.42		5.42
Retorno neto al capital efectivo en insumos		25.40		25.40
Retorno a Mano de Obra		710.72		710.72
Retorno a M.O. Familiar		1042.87		1042.87
Retorno neto a tierra		81558.00		55861.64

Cuadro 2. Flujo mensual de mano de obra (horas/ha).

	FAMILIAR	CONTRATADA	TOTAL
Dec-90	0.00	0.00	0.00
Jan-91	6.16	0.00	6.16
Feb-91	0.00	4.11	4.11
Mar-91	0.00	0.00	0.00
Apr-91	0.00	0.00	0.00
May-91	32.53	29.79	62.33
Jun-91	20.55	0.00	20.55
Jul-91	0.00	0.00	0.00
Aug-91	0.00	0.00	0.00
Sep-91	0.00	0.00	0.00
Oct-91	0.00	0.00	0.00
<b>TOTALES</b>	<b>59.25</b>	<b>33.90</b>	<b>93.15</b>

Cuadro 3. Flujo mensual de costos de insumos y MD contratada (\$/ha).

	Insumos	MD contratada	TOTAL
Dec-90	0.00	0.00	0.00
Jan-91	1921.92	0.00	1921.92
Feb-91	0.00	1438.36	1438.36
Mar-91	0.00	0.00	0.00
Apr-91	0.00	0.00	0.00
May-91	367.13	2979.45	3346.58
Jun-91	0.00	0.00	0.00
Jul-91	0.00	0.00	0.00
Aug-91	0.00	0.00	0.00
Sep-91	0.00	0.00	0.00
Oct-91	0.00	0.00	0.00
<b>TOTALES</b>	<b>2289.04</b>	<b>4417.81</b>	<b>6706.85</b>

Cuadro 6. Flujo mensual de mano de obra por parcela (horas/parcela).

	FAMILIAR	CONTRATADA	TOTAL
Dec-90	0.00	0.00	0.00
Jan-91	9.00	0.00	9.00
Feb-91	0.00	6.00	6.00
Mar-91	0.00	0.00	0.00
Apr-91	0.00	0.00	0.00
May-91	47.50	43.50	91.00
Jun-91	30.00	0.00	30.00
Jul-91	0.00	0.00	0.00
Aug-91	0.00	0.00	0.00
Sep-91	0.00	0.00	0.00
Oct-91	0.00	0.00	0.00

**Ayote**

**Cuadro 4. Mano de obra por actividad (horas/ha).**

ACTIVIDAD	FAMILIAR	CONTRATADA	TOTAL MOC (Z)	
Preparar el Terreno	10.27	4.11	14.38	28.57%
Limpiar	20.55	0.00	20.55	0.00%
Aplicar Pesticidas	13.01	0.00	13.01	0.00%
Cosechar	15.41	29.79	45.21	65.91%
<b>TOTALES</b>	<b>59.25</b>	<b>33.90</b>	<b>93.15</b>	<b>0.94</b>

**Cuadro 5. Costos de insumos y MOC por actividad (\$/ha).**

ACTIVIDAD	INSUMOS	MOC	TOTAL INSUMOS (Z)	
Preparar el Terreno	1369.86	1438.36	2808.22	48.78%
Limpiar	0.00	0.00	0.00	ERR
Aplicar Pesticidas	919.18	0.00	919.18	100.00%
Cosechar	0.00	2979.45	2979.45	0.00%
<b>TOTALES</b>	<b>2289.04</b>	<b>4417.81</b>	<b>6706.85</b>	<b>ERR</b>

**Cuadro 8. Mano de obra por actividad (horas/parcela).**

ACTIVIDAD	FAMILIAR	CONTRATADA	TOTAL MOC (Z)	
Preparar el Terreno	15.00	6.00	21.00	28.57%
Limpiar	30.00	0.00	30.00	0.00%
Aplicar Pesticidas	19.00	0.00	19.00	0.00%
Cosechar	22.50	43.50	66.00	65.91%
<b>TOTALES</b>	<b>86.50</b>	<b>49.50</b>	<b>136.00</b>	<b>0.94</b>

**Cuadro 9. Costos de insumos y MOC por actividad (\$/parcela).**

ACTIVIDAD	INSUMOS	MOC	TOTAL INSUMOS (Z)	
Preparar el Terreno	2000.00	2100.00	4100.00	48.78%
Limpiar	0.00	0.00	0.00	ERR
Aplicar Pesticidas	1342.00	0.00	1342.00	100.00%
Cosechar	0.00	4350.00	4350.00	0.00%
<b>TOTALES</b>	<b>3342.00</b>	<b>6450.00</b>	<b>9792.00</b>	<b>ERR</b>

Cuadro 7. Flujo mensual de costos de insumos y MO contratada (\$/parcela)

	Insumos	MO contratada	TOTAL
Dec-90	0.00	0.00	0.00
Jan-91	2806.00	0.00	2806.00
Feb-91	0.00	2100.00	2100.00
Mar-91	0.00	0.00	0.00
Apr-91	0.00	0.00	0.00
May-91	536.00	4350.00	4886.00
Jun-91	0.00	0.00	0.00
Jul-91	0.00	0.00	0.00
Aug-91	0.00	0.00	0.00
Sep-91	0.00	0.00	0.00
Oct-91	0.00	0.00	0.00
<b>TOTALES</b>	<b>3342.00</b>	<b>6450.00</b>	<b>9792.00</b>

Cuadro 19. Flujo mensual acumulado de ingresos y egresos (¢).

	INGRESOS	EGRESOS	DIFERENCIA
Dec-90	0.00	0.00	0.00
Jan-91	0.00	2806.00	-2806.00
Feb-91	0.00	2100.00	-2100.00
Mar-91	0.00	0.00	0.00
Apr-91	0.00	0.00	0.00
May-91	98000.00	4886.00	93114.00
Jun-91	2000.00	0.00	2000.00
Jul-91	0.00	0.00	0.00
Aug-91	0.00	0.00	0.00
Sep-91	0.00	0.00	0.00
Oct-91	0.00	0.00	0.00
<b>TOTALES</b>	<b>100000.00</b>	<b>9792.00</b>	<b>90208.00</b>

CUADRO 1. RESUMEN DE COSTOS Y BENEFICIOS.

Agricultor : Farm 1  
 Area finca : 19.89 ha  
 Agroecosistema: Maize 1  
 Area Agroec. : 3.21 ha

RUBRO	POR PARCELA		POR HECTAREA	
	Kg	Económico	Kg	Económico
<b>INGRESOS</b>				
<b>PRODUCCION:</b>				
Producción vendida	300.00	140640.00	93.46	43813.08
Consumo Flia.	0.00	0.00	0.00	0.00
Otros	0.00	0.00	0.00	0.00
<b>INGRESO BRUTO</b>	<b>300.00</b>	<b>140640.00</b>	<b>93.46</b>	<b>43813.08</b>
<b>COSTOS</b>				
<b>COSTOS DE OPERACION</b>				
Mano de obra Contratada		13850.00		4314.64
Mano de obra Familiar		43400.00		13520.25
Insumos		26612.86		8290.61
Otros		0.00		0.00
<b>Total Costos de Operación</b>		<b>83862.86</b>		<b>26125.50</b>
<b>OTROS COSTOS</b>				
Alquiler de la tierra		0.00		0.00
Interés (5% Cost.Oper.)		0.00		0.00
Administración (10% C.OP.)		0.00		0.00
<b>Total Otros Costos</b>		<b>0.00</b>		<b>0.00</b>
<b>COSTOS TOTALES</b>		<b>83862.86</b>		<b>26125.50</b>
<b>GANANCIA &amp; PERDIDA</b>				
Value added		114027.14		35522.47
Gross margin		100177.14		31207.83
<b>Net margin</b>		<b>56777.14</b>		<b>17687.58</b>
<b>INDICES DE EFICIENCIA</b>				
Beneficio total/(MOC+INSUMOS)		3.48		3.48
Beneficio total/Costo Total		1.68		1.68
Retorno neto al capital efectivo en insumos		3.13		3.13
Retorno a Mano de Obra		196.94		196.94
Retorno a M.O. Familiar		230.82		230.82
Retorno neto a tierra		56777.14		17687.58

Cuadro 4. Mano de obra por actividad (horas/ha).

ACTIVIDAD	FAMILIAR	CONTRATADA	TOTAL MOC (Z)	
Preparar el Terreno	0.00	0.00	0.00	ERR
Sembrar	46.73	0.00	46.73	0.00Z
Limpiar	17.13	0.00	17.13	0.00Z
Aplicar Fertilisante	14.95	1.56	16.51	9.43Z
Aplicar Pesticidas	28.35	0.00	28.35	0.00Z
Doblar Malz	10.90	0.00	10.90	0.00Z
Cosechar	17.13	43.61	60.75	71.79Z
<b>TOTALES</b>	<b>135.20</b>	<b>45.17</b>	<b>180.37</b>	<b>ERR</b>

Cuadro 5. Costos de insumos y MOC por actividad (\$/ha).

ACTIVIDAD	INSUMOS	MOC	TOTAL INSUMOS (Z)	
Preparar el Terreno	623.05	0.00	623.05	100.00Z
Sembrar	0.00	0.00	0.00	ERR
Limpiar	841.12	0.00	841.12	100.00Z
Aplicar Fertilisante	3713.97	124.61	3838.58	96.75Z
Aplicar Pesticidas	3112.46	0.00	3112.46	100.00Z
Doblar Malz	0.00	0.00	0.00	ERR
Cosechar	0.00	4190.03	4190.03	0.00Z
<b>TOTALES</b>	<b>8290.61</b>	<b>4314.64</b>	<b>12605.25</b>	<b>ERR</b>

Cuadro 8. Mano de obra por actividad (horas/parcela).

ACTIVIDAD	FAMILIAR	CONTRATADA	TOTAL MOC (Z)	
Preparar el Terreno	0.00	0.00	0.00	ERR
Sembrar	150.00	0.00	150.00	0.00Z
Limpiar	55.00	0.00	55.00	0.00Z
Aplicar Fertilisante	48.00	5.00	53.00	9.43Z
Aplicar Pesticidas	91.00	0.00	91.00	0.00Z
Doblar Malz	35.00	0.00	35.00	0.00Z
Cosechar	55.00	140.00	195.00	71.79Z
<b>TOTALES</b>	<b>434.00</b>	<b>145.00</b>	<b>579.00</b>	<b>ERR</b>



## Maize 1

	FAMILIAR	CONTRATADA	TOTAL
Dec-90	0.00	0.00	0.00
Jan-91	161.00	0.00	161.00
Feb-91	93.00	5.00	98.00
Mar-91	20.00	0.00	20.00
Apr-91	100.00	0.00	100.00
May-91	60.00	140.00	200.00
Jun-91	0.00	0.00	0.00
Jul-91	0.00	0.00	0.00
Aug-91	0.00	0.00	0.00
Sep-91	0.00	0.00	0.00
Oct-91	0.00	0.00	0.00
<b>TOTALES</b>	<b>434.00</b>	<b>145.00</b>	<b>579.00</b>

## Cuadro 7. Flujo mensual de costos de insumos y MO contratada (\$/parcela)

	Insumos	MO contratada	TOTAL
Dec-90	0.00	0.00	0.00
Jan-91	5022.99	0.00	5022.99
Feb-91	11758.87	400.00	12158.87
Mar-91	3931.00	0.00	3931.00
Apr-91	5900.00	0.00	5900.00
May-91	0.00	13450.00	13450.00
Jun-91	0.00	0.00	0.00
Jul-91	0.00	0.00	0.00
Aug-91	0.00	0.00	0.00
Sep-91	0.00	0.00	0.00
Oct-91	0.00	0.00	0.00
<b>TOTALES</b>	<b>26612.86</b>	<b>13850.00</b>	<b>40462.86</b>

## Cuadro 19. Flujo mensual acumulado de ingresos y egresos (¢).

	INGRESOS	EGRESOS	DIFERENCIA
Dec-90	0.00	0.00	0.00
Jan-91	0.00	5022.99	-5022.99
Feb-91	0.00	12158.87	-12158.87
Mar-91	0.00	3931.00	-3931.00
Apr-91	0.00	5900.00	-5900.00
May-91	140640.00	13450.00	127190.00
Jun-91	0.00	0.00	0.00
Jul-91	0.00	0.00	0.00
Aug-91	0.00	0.00	0.00
Sep-91	0.00	0.00	0.00
Oct-91	0.00	0.00	0.00

# Maize 1

Cuadro 9. Costos de insumos y MOC por actividad (\$/parcela).

ACTIVIDAD	INSUMOS	MOC	TOTAL INSUMOS	(%)
Preparar el Terreno	2000.00	0.00	2000.00	100.00%
Sembrar	0.00	0.00	0.00	ERR
Limpiar	2700.00	0.00	2700.00	100.00%
Aplicar Fertilisante	11921.85	400.00	12321.85	96.75%
Aplicar Pesticidas	9991.01	0.00	9991.01	100.00%
Doblar Malz	0.00	0.00	0.00	ERR
Cosechar	0.00	13450.00	13450.00	0.00%
<b>TOTALES</b>	<b>26612.86</b>	<b>13850.00</b>	<b>40462.86</b>	<b>ERR</b>

Cuadro 2. Flujo mensual de mano de obra (horas/ha).

	FAMILIAR	CONTRATADA	TOTAL
Dec-90	0.00	0.00	0.00
Jan-91	50.16	0.00	50.16
Feb-91	28.97	1.56	30.53
Mar-91	6.23	0.00	6.23
Apr-91	31.15	0.00	31.15
May-91	18.69	43.61	62.31
Jun-91	0.00	0.00	0.00
Jul-91	0.00	0.00	0.00
Aug-91	0.00	0.00	0.00
Sep-91	0.00	0.00	0.00
Oct-91	0.00	0.00	0.00
<b>TOTALES</b>	<b>135.20</b>	<b>45.17</b>	<b>180.37</b>

Cuadro 3. Flujo mensual de costos de insumos y MU contratada (\$/ha).

	Insumos	MU contratada	TOTAL
Dec-90	0.00	0.00	0.00
Jan-91	1564.79	0.00	1564.79
Feb-91	3663.20	124.61	3787.81
Mar-91	1224.61	0.00	1224.61
Apr-91	1838.01	0.00	1838.01
May-91	0.00	4190.03	4190.03
Jun-91	0.00	0.00	0.00
Jul-91	0.00	0.00	0.00
Aug-91	0.00	0.00	0.00
Sep-91	0.00	0.00	0.00
Oct-91	0.00	0.00	0.00
<b>TOTALES</b>	<b>8290.61</b>	<b>4314.64</b>	<b>12605.25</b>

CUADRO 1. RESUMEN DE COSTOS Y BENEFICIOS.

Agricultor : Farm 1  
 Area finca : 19.89 ha  
 Agroecosistema: Maize 2  
 Area Agroec. : 1.15 ha

RUBRO	POR PARCELA		POR HECTAREA	
	Kg	Económico	Kg	Económico
<b>INGRESOS</b>				
<b>PRODUCCION:</b>				
Producción vendida	800.00	3600.00	695.65	3130.43
Consumo Flia.	0.00	0.00	0.00	0.00
Otros	0.00	0.00	0.00	0.00
<b>INGRESO BRUTO</b>	<b>800.00</b>	<b>3600.00</b>	<b>695.65</b>	<b>3130.43</b>
<b>COSTOS</b>				
<b>COSTOS DE OPERACION</b>				
Mano de obra Contratada		0.00		0.00
Mano de obra Familiar		13150.00		11434.78
Insumos		3439.38		2990.77
Otros		0.00		0.00
<b>Total Costos de Operación</b>		<b>16589.38</b>		<b>14425.55</b>
<b>OTROS COSTOS</b>				
Alquiler de la tierra		0.00		0.00
Interés (5% Cost.Oper.)		0.00		0.00
Administración (10% C.OP.)		0.00		0.00
<b>Total Otros Costos</b>		<b>0.00</b>		<b>0.00</b>
<b>COSTOS TOTALES</b>		<b>16589.38</b>		<b>14425.55</b>
<b>GANANCIA ó PERDIDA</b>				
Value added		160.62		139.67
Gross margin		160.62		139.67
<b>Net margin</b>		<b>-12989.38</b>		<b>-11295.11</b>
<b>INDICES DE EFICIENCIA</b>				
Beneficio total/(MOC+INSUMOS)		1.05		1.05
Beneficio total/Costo total		0.22		0.22
Retorno neto al capital efectivo en insumos		-2.78		-2.78
Retorno a Mano de Obra		1.22		1.22
Retorno a M.O. Familiar		1.22		1.22
Retorno neto a tierra		-12989.38		-11295.11

maize2

Cuadro 4. Mano de obra por actividad (horas/ha).

ACTIVIDAD	FAMILIAR	CONTRATADA	TOTAL MOC (Z)	
Preparar el Terreno	13.04	0.00	13.04	0.00Z
Sembrar	30.43	0.00	30.43	0.00Z
Limpiar	21.74	0.00	21.74	0.00Z
Aplicar Pesticidas	32.61	0.00	32.61	0.00Z
Doblar Malz	13.04	0.00	13.04	0.00Z
Cosechar	3.48	0.00	3.48	0.00Z
<b>TOTALES</b>	<b>114.35</b>	<b>0.00</b>	<b>114.35</b>	<b>0.00</b>

Cuadro 5. Costos de insumos y MOC por actividad (\$/ha).

ACTIVIDAD	INSUMOS	MOC	TOTAL INSUMOS (Z)	
Preparar el Terreno	0.00	0.00	0.00	ERR
Sembrar	0.00	0.00	0.00	ERR
Limpiar	0.00	0.00	0.00	ERR
Aplicar Pesticidas	2990.77	0.00	2990.77	100.00Z
Doblar Malz	0.00	0.00	0.00	ERR
Cosechar	0.00	0.00	0.00	ERR
<b>TOTALES</b>	<b>2990.77</b>	<b>0.00</b>	<b>2990.77</b>	<b>ERR</b>

Cuadro 8. Mano de obra por actividad (horas/parcela).

ACTIVIDAD	FAMILIAR	CONTRATADA	TOTAL MOC (Z)	
Preparar el Terreno	15.00	0.00	15.00	0.00Z
Sembrar	35.00	0.00	35.00	0.00Z
Limpiar	25.00	0.00	25.00	0.00Z
Aplicar Pesticidas	37.50	0.00	37.50	0.00Z
Doblar Malz	15.00	0.00	15.00	0.00Z
Cosechar	4.00	0.00	4.00	0.00Z
<b>TOTALES</b>	<b>131.50</b>	<b>0.00</b>	<b>131.50</b>	<b>0.00</b>

maize 2

Cuadro 9. Costos de insumos y MDC por actividad (\$/parcela).

ACTIVIDAD	INSUMOS	MDC	TOTAL INSUMOS (1)	
Preparar el terreno	0.00	0.00	0.00	ERR
Sembrar	0.00	0.00	0.00	ERR
Limpiar	0.00	0.00	0.00	ERR
Aplicar Pesticidas	3439.38	0.00	3439.38	100.00%
Doblar Maíz	0.00	0.00	0.00	ERR
Cosechar	0.00	0.00	0.00	ERR
<b>TOTALES</b>	<b>3439.38</b>	<b>0.00</b>	<b>3439.38</b>	<b>ERR</b>

Cuadro 2. Flujo mensual de mano de obra (horas/ha).

	FAMILIAR	CONTRATADA	TOTAL
Dec-90	0.00	0.00	0.00
Jan-91	0.00	0.00	0.00
Feb-91	0.00	0.00	0.00
Mar-91	0.00	0.00	0.00
Apr-91	0.00	0.00	0.00
May-91	0.00	0.00	0.00
Jun-91	32.61	0.00	32.61
Jul-91	56.52	0.00	56.52
Aug-91	8.70	0.00	8.70
Sep-91	3.48	0.00	3.48
Oct-91	13.04	0.00	13.04
<b>TOTALES</b>	<b>114.35</b>	<b>0.00</b>	<b>114.35</b>

Cuadro 3. Flujo mensual de costos de insumos y MO contratada (\$/ha).

	Insumos	MO contratada	TOTAL
Dec-90	0.00	0.00	0.00
Jan-91	0.00	0.00	0.00
Feb-91	0.00	0.00	0.00
Mar-91	0.00	0.00	0.00
Apr-91	0.00	0.00	0.00
May-91	0.00	0.00	0.00
Jun-91	2272.07	0.00	2272.07
Jul-91	718.70	0.00	718.70
Aug-91	0.00	0.00	0.00
Sep-91	0.00	0.00	0.00
Oct-91	0.00	0.00	0.00
<b>TOTALES</b>	<b>2990.77</b>	<b>0.00</b>	<b>2990.77</b>

Cuadro 6. Flujo mensual de mano de obra por parcela (horas/parcela).

	FAMILIAR	CONTRATADA	TOTAL
Dec-90	0.00	0.00	0.00
Jan-91	0.00	0.00	0.00
Feb-91	0.00	0.00	0.00
Mar-91	0.00	0.00	0.00
Apr-91	0.00	0.00	0.00
May-91	0.00	0.00	0.00
Jun-91	37.50	0.00	37.50
Jul-91	65.00	0.00	65.00
Aug-91	10.00	0.00	10.00
Sep-91	4.00	0.00	4.00
Oct-91	15.00	0.00	15.00
<b>TOTALES</b>	<b>131.50</b>	<b>0.00</b>	<b>131.50</b>

Cuadro 7. Flujo mensual de costos de insumos y NO contratada (\$/parcela)

	Insumos	NO contratada	TOTAL
Dec-90	0.00	0.00	0.00
Jan-91	0.00	0.00	0.00
Feb-91	0.00	0.00	0.00
Mar-91	0.00	0.00	0.00
Apr-91	0.00	0.00	0.00
May-91	0.00	0.00	0.00
Jun-91	2612.88	0.00	2612.88
Jul-91	826.50	0.00	826.50
Aug-91	0.00	0.00	0.00
Sep-91	0.00	0.00	0.00
Oct-91	0.00	0.00	0.00
<b>TOTALES</b>	<b>3439.38</b>	<b>0.00</b>	<b>3439.38</b>

Cuadro 19. Flujo mensual acumulado de ingresos y egresos (¢).

	INGRESOS	EGRESOS	DIFERENCIA
Dec-90	0.00	0.00	0.00
Jan-91	0.00	0.00	0.00
Feb-91	0.00	0.00	0.00
Mar-91	0.00	0.00	0.00
Apr-91	0.00	0.00	0.00
May-91	0.00	0.00	0.00
Jun-91	0.00	2612.88	-2612.88
Jul-91	0.00	826.50	-826.50
Aug-91	0.00	0.00	0.00
Sep-91	3600.00	0.00	3600.00
Oct-91	0.00	0.00	0.00

**CUADRO 1. RESUMEN DE COSTOS Y BENEFICIOS.**

Agricultor : Farm 1  
 Area finca : 19.89 ha  
 Agroecosistema: Yuca  
 Area Agroec. : 2.06 ha

RUBRO	POR PARCELA		POR HECTAREA	
	Kg	Económico	Kg	Económico
<b>INGRESOS</b>				
<b>PRODUCCION:</b>				
Producción vendida	1400.00	15074.50	679.61	7317.72
Consumo Flia.	0.00	0.00	0.00	0.00
Otros	0.00	0.00	0.00	0.00
<b>INGRESO BRUTO</b>	<b>1400.00</b>	<b>15074.50</b>	<b>679.61</b>	<b>7317.72</b>
<b>COSTOS</b>				
<b>COSTOS DE OPERACION</b>				
Mano de obra Contratada		11630.00		5645.63
Mano de obra Familiar		18750.00		9101.94
Insumos		1404.99		682.03
Otros		0.00		0.00
<b>Total Costos de Operación</b>		<b>31784.99</b>		<b>15429.61</b>
<b>OTROS COSTOS</b>				
Alquiler de la tierra		0.00		0.00
Interés (5% Cost.Oper.)		0.00		0.00
Administración (10% C.OP.)		0.00		0.00
<b>Total Otros Costos</b>		<b>0.00</b>		<b>0.00</b>
<b>COSTOS TOTALES</b>		<b>31784.99</b>		<b>15429.61</b>
<b>GANANCIA ó PERDIDA</b>				
Value added		13669.51		6635.69
Gross margin		2039.51		990.05
<b>Net margin</b>		<b>-16710.49</b>		<b>-8111.89</b>
<b>INDICES DE EFICIENCIA</b>				
Beneficio total/(MOC+INSUMOS)		1.16		1.16
Beneficio total/Costo Total		0.47		0.47
Retorno neto al capital efectivo en insumos		-10.89		-10.89
Retorno a Mano de Obra		43.23		43.23
Retorno a M.O. Familiar		10.88		10.88
Retorno neto a tierra		-16710.49		-8111.89

YUCA  
Cuadro 2. Flujo mensual de mano de obra (horas/ha).

	FAMILIAR	CONTRATADA	TOTAL
Dec-90	0.00	0.00	0.00
Jan-91	0.00	0.00	0.00
Feb-91	9.71	24.27	33.98
Mar-91	0.00	5.83	5.83
Apr-91	26.70	0.00	26.70
May-91	7.28	4.85	12.14
Jun-91	3.64	0.00	3.64
Jul-91	7.28	0.00	7.28
Aug-91	21.84	0.00	21.84
Sep-91	9.71	0.00	9.71
Oct-91	4.85	27.52	32.38
<b>TOTALES</b>	<b>91.02</b>	<b>62.48</b>	<b>153.50</b>

Cuadro 3. Flujo mensual de costos de insumos y MD contratada (\$/ha).

	Insumos	MD contratada	TOTAL
Dec-90	0.00	0.00	0.00
Jan-91	0.00	0.00	0.00
Feb-91	0.00	1941.75	1941.75
Mar-91	0.00	466.02	466.02
Apr-91	0.00	0.00	0.00
May-91	0.00	485.44	485.44
Jun-91	485.43	0.00	485.43
Jul-91	0.00	0.00	0.00
Aug-91	196.60	0.00	196.60
Sep-91	0.00	0.00	0.00
Oct-91	0.00	2752.43	2752.43
<b>TOTALES</b>	<b>682.03</b>	<b>5645.63</b>	<b>6327.67</b>

Cuadro 6. Flujo mensual de mano de obra por parcela (horas/parcela).

	FAMILIAR	CONTRATADA	TOTAL
Dec-90	0.00	0.00	0.00
Jan-91	0.00	0.00	0.00
Feb-91	20.00	50.00	70.00
Mar-91	0.00	12.00	12.00
Apr-91	55.00	0.00	55.00
May-91	15.00	10.00	25.00
Jun-91	7.50	0.00	7.50
Jul-91	15.00	0.00	15.00
Aug-91	45.00	0.00	45.00
Sep-91	20.00	0.00	20.00
Oct-91	10.00	56.70	66.70



Cuadro 4. Mano de obra por actividad (horas/ha).

ACTIVIDAD	FAMILIAR	CONTRATADA	TOTAL MOC (Z)	
Sembrar	9.71	24.27	33.98	71.43%
Chapear	19.42	0.00	19.42	0.00%
Limpiar	50.97	10.68	61.65	17.32%
Aplicar Pesticidas	6.07	0.00	6.07	0.00%
Cosechar	4.85	27.52	32.38	85.01%
<b>TOTALES</b>	<b>91.02</b>	<b>62.48</b>	<b>153.50</b>	<b>1.74</b>

Cuadro 5. Costos de insumos y MOC por actividad (\$/ha).

ACTIVIDAD	INSUMOS	MOC	TOTAL INSUMOS (Z)	
Sembrar	0.00	1941.75	1941.75	0.00%
Chapear	0.00	0.00	0.00	ERR
Limpiar	0.00	951.46	951.46	0.00%
Aplicar Pesticidas	682.03	0.00	682.03	100.00%
Cosechar	0.00	2752.43	2752.43	0.00%
<b>TOTALES</b>	<b>682.03</b>	<b>5645.63</b>	<b>6327.67</b>	<b>ERR</b>

Cuadro 8. Mano de obra por actividad (horas/parcela).

ACTIVIDAD	FAMILIAR	CONTRATADA	TOTAL MOC (Z)	
Sembrar	20.00	50.00	70.00	71.43%
Chapear	40.00	0.00	40.00	0.00%
Limpiar	105.00	22.00	127.00	17.32%
Aplicar Pesticidas	12.50	0.00	12.50	0.00%
Cosechar	10.00	56.70	66.70	85.01%
<b>TOTALES</b>	<b>187.50</b>	<b>128.70</b>	<b>316.20</b>	<b>1.74</b>

Cuadro 9. Costos de insumos y MOC por actividad (\$/parcela).

ACTIVIDAD	INSUMOS	MOC	TOTAL INSUMOS (Z)	
Sembrar	0.00	4000.00	4000.00	0.00%
Chapear	0.00	0.00	0.00	ERR
Limpiar	0.00	1960.00	1960.00	0.00%
Aplicar Pesticidas	1404.99	0.00	1404.99	100.00%
Cosechar	0.00	5670.00	5670.00	0.00%
<b>TOTALES</b>	<b>1404.99</b>	<b>11630.00</b>	<b>13034.99</b>	<b>ERR</b>

# Yuca

Cuadro 7. Flujo mensual de costos de insumos y MD contratada (\$/parcela)

	Insumos	MD contratada	TOTAL
Dec-90	0.00	0.00	0.00
Jan-91	0.00	0.00	0.00
Feb-91	0.00	4000.00	4000.00
Mar-91	0.00	960.00	960.00
Apr-91	0.00	0.00	0.00
May-91	0.00	1000.00	1000.00
Jun-91	999.99	0.00	999.99
Jul-91	0.00	0.00	0.00
Aug-91	405.00	0.00	405.00
Sep-91	0.00	0.00	0.00
Oct-91	0.00	5670.00	5670.00
<b>TOTALES</b>	<b>1404.99</b>	<b>11630.00</b>	<b>13034.99</b>

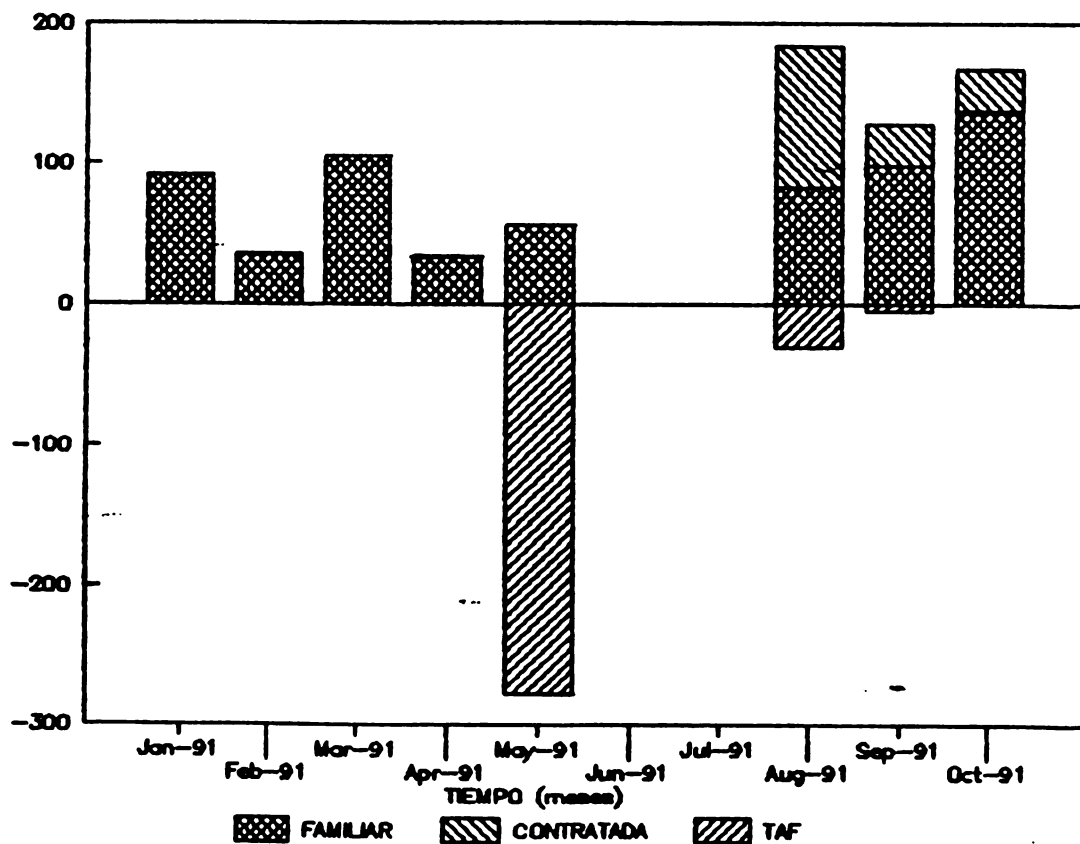
Cuadro 19. Flujo mensual acumulado de ingresos y egresos (€).

	INGRESOS	EGRESOS	DIFERENCIA
Dec-90	0.00	0.00	0.00
Jan-91	0.00	0.00	0.00
Feb-91	0.00	4000.00	-4000.00
Mar-91	0.00	960.00	-960.00
Apr-91	0.00	0.00	0.00
May-91	0.00	1000.00	-1000.00
Jun-91	0.00	999.99	-999.99
Jul-91	0.00	0.00	0.00
Aug-91	0.00	405.00	-405.00
Sep-91	0.00	0.00	0.00
Oct-91	15074.50	5670.00	9404.50
<b>TOTALES</b>	<b>15074.50</b>	<b>13034.99</b>	<b>2039.51</b>

## Data output of farm 2

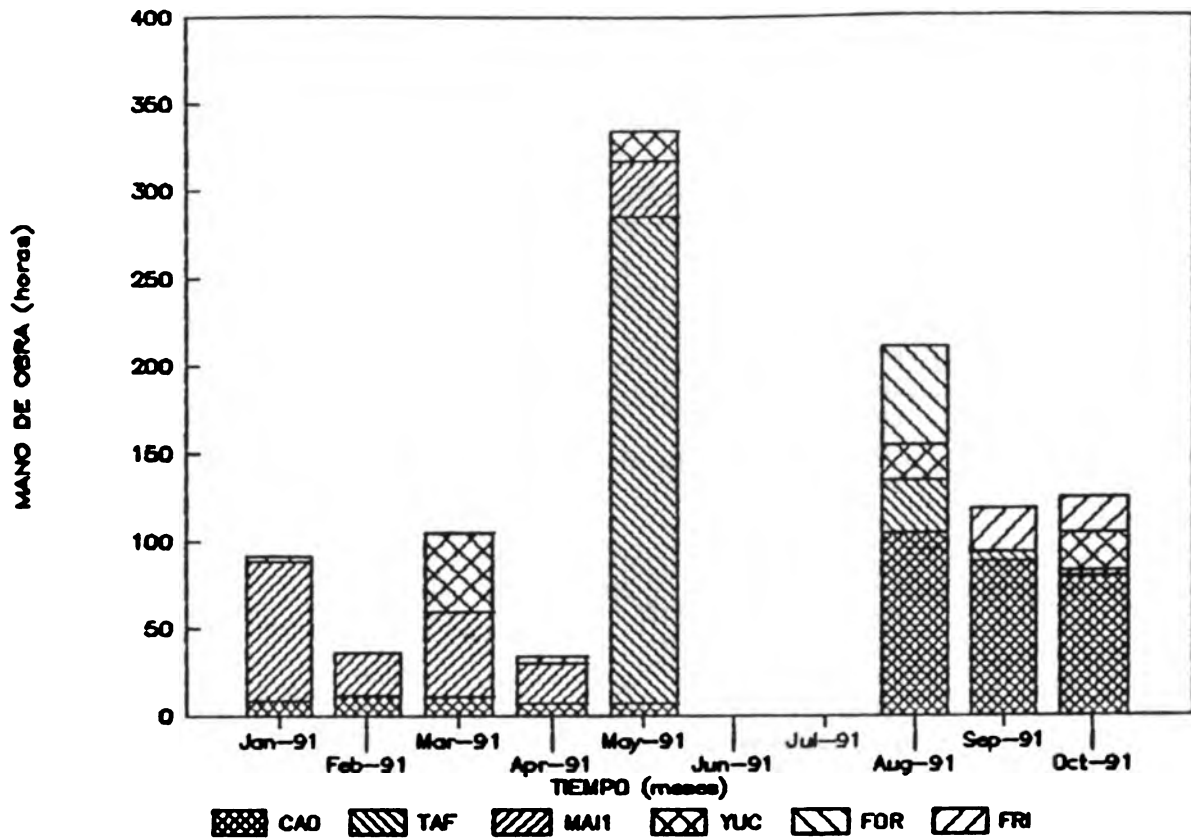
### Summary of the economic activities of farm 2

AGROECOSISTEMA	AREA	ING. BRUTO	INSUMOS	MOC	Gr. margin	MOF (h)	RET. MOF
Animales	1.00	0.00	4095.00	0.00	-4095.00	0.00	ERR
Cacao	1.52	21532.50	1575.00	8500.00	11457.50	231.50	49.49
Forestal	1.52	0.00	10000.00	0.00	-10000.00	56.00	-178.57
Frijoles	0.10	0.00	606.00	2500.00	-3106.00	23.00	-135.04
Maiz	0.90	32760.00	11587.78	0.00	21172.22	209.00	101.30
Maiz	0.45	0.00	500.00	1500.00	-2000.00	31.00	-64.52
Mantenimiento	1.00	0.00	90.00	500.00	-590.00	10.00	-59.00
Trabajar afuera	1.00	44399.88	0.00	0.00	44399.88	313.00	141.85
Yuca	0.35	0	800	3000	-3800	80	-47.5
<b>TOTALES</b>	<b>7.84</b>	<b>98692.38</b>	<b>29253.78</b>	<b>16000.00</b>	<b>53438.60</b>	<b>953.50</b>	<b>56.04</b>



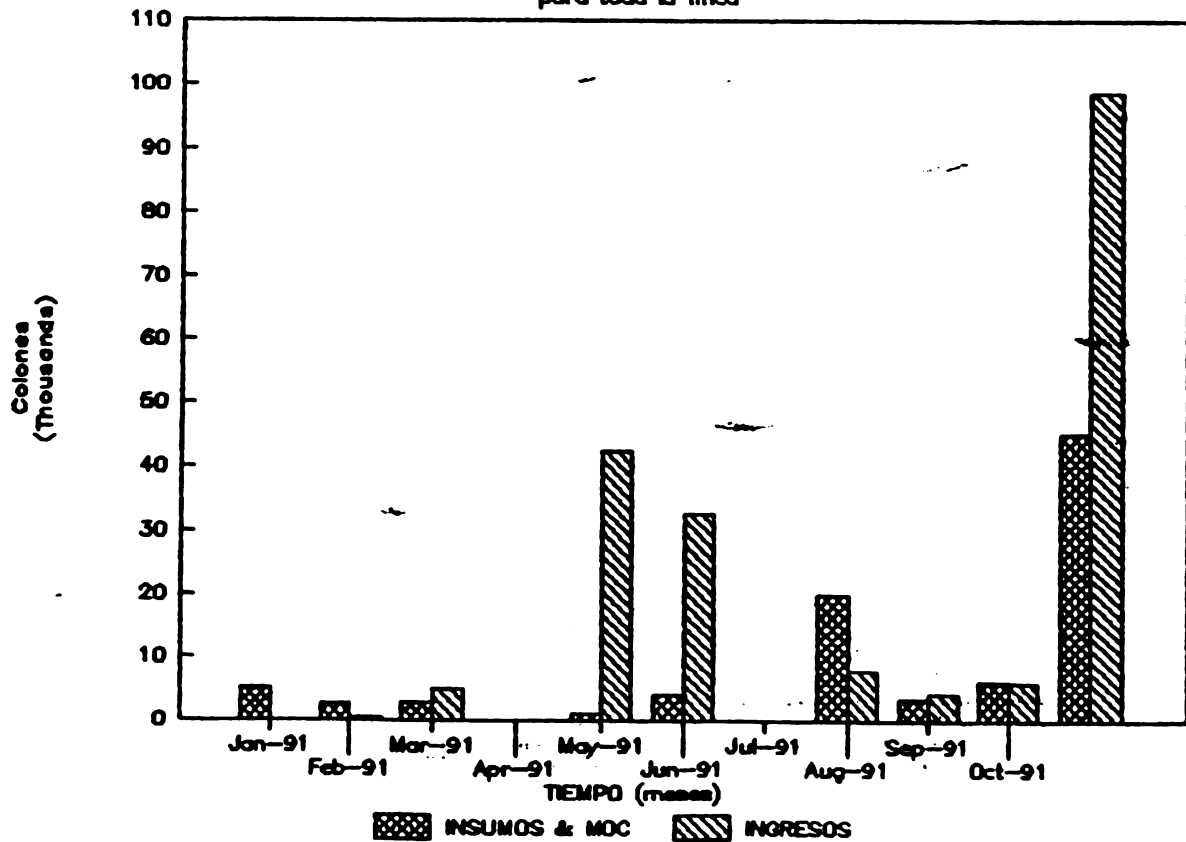
Family labour, hired labour and off farm work per month.

## Uso de MO mensual por agroecosistema



## Flujo de costos e ingresos por mes

para toda la finca



CUADRO 1. RESUMEN DE COSTOS Y BENEFICIOS.

Agricultor : Farm 2

Area finca : 16.20 ha

Agroecosistema: Maiz 2

Area Agroec. : 0.45 ha

RUBRO	POR PARCELA		POR HECTAREA	
	Kg	Económico	Kg	Económico
<b>INGRESOS</b>				
<b>PRODUCCION:</b>				
Producción vendida	0.00	0.00	0.00	0.00
Consumo Flia.	0.00	0.00	0.00	0.00
Otros	0.00	0.00	0.00	0.00
<b>INGRESO BRUTO</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>COSTOS</b>				
<b>COSTOS DE OPERACION</b>				
Mano de obra Contratada		1500.00		3333.33
Mano de obra Familiar		3100.00		6888.89
Insumos		500.00		1111.12
Otros		0.00		0.00
<b>Total Costos de Operación</b>		<b>5100.00</b>		<b>11333.34</b>
<b>OTROS COSTOS</b>				
Alquiler de la tierra		0.00		0.00
Interés (5% Cost.Oper.)		0.00		0.00
Administración (10% C.OP.)		0.00		0.00
<b>Total Otros Costos</b>		<b>0.00</b>		<b>0.00</b>
<b>COSTOS TOTALES</b>		<b>5100.00</b>		<b>11333.34</b>
<b>GANANCIA ó PERDIDA</b>				
Value added		-500		-1111.12
Gross margin		-2000.00		-4444.45
<b>Net margin</b>		<b>-5100.00</b>		<b>-11333.34</b>
<b>INDICES DE EFICIENCIA</b>				
Beneficio total/(MOC+INSUMOS)		0.00		0.00
Beneficio total/Costo Total		0.00		0.00
Retorno neto al capital efectivo en insumos		-9.20		-9.20
Retorno a Mano de Obra		-10.87		-10.87
Retorno a M.O. Familiar		-64.52		-64.52
Retorno neto a tierra		-5100.00		-11333.34

maize 2

Cuadro 4. Mano de obra por actividad (horas/ha).

ACTIVIDAD	FAMILIAR	CONTRATADA	TOTAL MOC (Z)	
Sembrar	44.44	0.00	44.44	0.00Z
Chapear	13.33	11.11	24.44	45.45Z
Limpiar	0.00	22.22	22.22	100.00Z
Aplicar Pesticidas	11.11	0.00	11.11	0.00Z
<b>TOTALES</b>	<b>68.89</b>	<b>33.33</b>	<b>102.22</b>	<b>1.45</b>

Cuadro 5. Costos de insumos y MOC por actividad (\$/ha).

ACTIVIDAD	INSUMOS	MOC	TOTAL INSUMOS (Z)	
Sembrar	0.00	0.00	0.00	ERR
Chapear	0.00	1111.11	1111.11	0.00Z
Limpiar	0.00	2222.22	2222.22	0.00Z
Aplicar Pesticidas	1111.12	0.00	1111.12	100.00Z
<b>TOTALES</b>	<b>1111.12</b>	<b>3333.33</b>	<b>4444.45</b>	<b>ERR</b>

Cuadro 8. Mano de obra por actividad (horas/parcela).

ACTIVIDAD	FAMILIAR	CONTRATADA	TOTAL MOC (Z)	
Sembrar	20.00	0.00	20.00	0.00Z
Chapear	6.00	5.00	11.00	45.45Z
Limpiar	0.00	10.00	10.00	100.00Z
Aplicar Pesticidas	5.00	0.00	5.00	0.00Z
<b>TOTALES</b>	<b>31.00</b>	<b>15.00</b>	<b>46.00</b>	<b>1.45</b>

Cuadro 9. Costos de insumos y MOC por actividad (\$/parcela).

ACTIVIDAD	INSUMOS	MOC	TOTAL INSUMOS (Z)	
Sembrar	0.00	0.00	0.00	ERR
Chapear	0.00	500.00	500.00	0.00Z
Limpiar	0.00	1000.00	1000.00	0.00Z
Aplicar Pesticidas	500.00	0.00	500.00	100.00Z
<b>TOTALES</b>	<b>500.00</b>	<b>1500.00</b>	<b>2000.00</b>	<b>ERR</b>

maize 2

Cuadro 2. Flujo mensual de mano de obra (horas/ha).

	FAMILIAR	CONTRATADA	TOTAL
Jan-91	0.00	0.00	0.00
Feb-91	0.00	0.00	0.00
Mar-91	0.00	0.00	0.00
Apr-91	0.00	0.00	0.00
May-91	0.00	0.00	0.00
Jun-91	0.00	0.00	0.00
Jul-91	0.00	0.00	0.00
Aug-91	0.00	0.00	0.00
Sep-91	0.00	33.33	33.33
Oct-91	68.89	0.00	68.89
TOTALES	68.89	33.33	102.22

Cuadro 3. Flujo mensual de costos de insumos y MO contratada (\$/ha).

	Insumos	MO contratada	TOTAL
Jan-91	0.00	0.00	0.00
Feb-91	0.00	0.00	0.00
Mar-91	0.00	0.00	0.00
Apr-91	0.00	0.00	0.00
May-91	0.00	0.00	0.00
Jun-91	0.00	0.00	0.00
Jul-91	0.00	0.00	0.00
Aug-91	0.00	0.00	0.00
Sep-91	0.00	3333.33	3333.33
Oct-91	1111.12	0.00	1111.12
TOTALES	1111.12	3333.33	4444.45

Cuadro 6. Flujo mensual de mano de obra por parcela (horas/parcela).

	FAMILIAR	CONTRATADA	TOTAL
Jan-91	0.00	0.00	0.00
Feb-91	0.00	0.00	0.00
Mar-91	0.00	0.00	0.00
Apr-91	0.00	0.00	0.00
May-91	0.00	0.00	0.00
Jun-91	0.00	0.00	0.00
Jul-91	0.00	0.00	0.00
Aug-91	0.00	0.00	0.00
Sep-91	0.00	15.00	15.00
Oct-91	31.00	0.00	31.00
TOTALES	31.00	15.00	46.00

maize 2

Cuadro 7. Flujo mensual de costos de insumos y MO contratada (\$/parcela)

	Insumos	MO contratada	TOTAL
Jan-91	0.00	0.00	0.00
Feb-91	0.00	0.00	0.00
Mar-91	0.00	0.00	0.00
Apr-91	0.00	0.00	0.00
May-91	0.00	0.00	0.00
Jun-91	0.00	0.00	0.00
Jul-91	0.00	0.00	0.00
Aug-91	0.00	0.00	0.00
Sep-91	0.00	1500.00	1500.00
Oct-91	500.00	0.00	500.00
TOTALES	500.00	1500.00	2000.00

Cuadro 19. Flujo mensual acumulado de ingresos y egresos (€).

	INGRESOS	EGRESOS	DIFERENCIA
Jan-91	0.00	0.00	0.00
Feb-91	0.00	0.00	0.00
Mar-91	0.00	0.00	0.00
Apr-91	0.00	0.00	0.00
May-91	0.00	0.00	0.00
Jun-91	0.00	0.00	0.00
Jul-91	0.00	0.00	0.00
Aug-91	0.00	0.00	0.00
Sep-91	0.00	1500.00	-1500.00
Oct-91	0.00	500.00	-500.00
TOTALES	0.00	2000.00	-2000.00



CUADRO 1. RESUMEN DE COSTOS Y BENEFICIOS.

Agricultor : Farm 2

Area finca : 16.20 ha

Agroecosistema: Maiz 1

Area Agroec. : 0.90 ha

RUBRO	POR PARCELA		POR HECTAREA	
	Kg	Económico	Kg	Económico
<b>INGRESOS</b>				
<b>PRODUCCION:</b>				
Producción vendida	72.00	32760.00	80.00	36400.00
Consumo Flia.	0.00	0.00	0.00	0.00
Otros	0.00	0.00	0.00	0.00
<b>INGRESO BRUTO</b>	<b>72.00</b>	<b>32760.00</b>	<b>80.00</b>	<b>36400.00</b>
<b>COSTOS</b>				
<b>COSTOS DE OPERACION</b>				
Mano de obra Contratada		0.00		0.00
Mano de obra Familiar		20900.00		23222.22
Insumos		11587.78		12875.31
Otros		0.00		0.00
<b>Total Costos de Operación</b>		<b>32487.78</b>		<b>36097.53</b>
<b>OTROS COSTOS</b>				
Alquiler de la tierra		0.00		0.00
Interés (5% Cost.Oper.)		0.00		0.00
Administración (10% C.OP.)		0.00		0.00
<b>Total Otros Costos</b>		<b>0.00</b>		<b>0.00</b>
<b>COSTOS TOTALES</b>		<b>32487.78</b>		<b>36097.53</b>
<b>GANANCIA ó PERDIDA</b>				
Value added		21172.22		23524.69
Gross margin		21172.22		23524.69
Net margin		272.22		302.47
<b>INDICES DE EFICIENCIA</b>				
Beneficio total/(MOC+INSUMOS)		2.83		2.83
Beneficio total/Costo Total		1.01		1.01
Retorno neto al capital efectivo en insumos		1.02		1.02
Retorno a Mano de Ubra		101.30		101.30
Retorno a M.O. Familiar		101.30		101.30
Retorno neto a tierra		272.22		302.47

**CUADRO 1. RESUMEN DE COSTOS Y BENEFICIOS.**

Agricultor : farm 6  
 Area finca : 17.16 ha  
 Agroecosistema: Maiz 2  
 Area Agroec. : 1.30 ha

RUBRO	POR PARCELA		POR HECTAREA	
	Kg	Económico	Kg	Económico
<b>INGRESOS</b>				
<b>PRODUCCION:</b>				
Producción vendida	24200.00	82800.00	18615.38	63692.31
Consumo Flia.	0.00	0.00	0.00	0.00
Otros	0.00	0.00	0.00	0.00
<b>INGRESO BRUTO</b>	<b>24200.00</b>	<b>82800.00</b>	<b>18615.38</b>	<b>63692.31</b>
<b>COSTOS</b>				
<b>COSTOS DE OPERACION</b>				
Mano de obra Contratada		18580.00		14292.31
Mano de obra Familiar		25600.00		19692.31
Insumos		24974.88		19211.45
Otros		0.00		0.00
<b>Total Costos de Operación</b>		<b>69154.88</b>		<b>53196.06</b>
<b>OTROS COSTOS</b>				
Alquiler de la tierra		0.00		0.00
Interés (5% Cost.Oper.)		0.00		0.00
Administración (10% C.OP.)		0.00		0.00
<b>Total Otros Costos</b>		<b>0.00</b>		<b>0.00</b>
<b>COSTOS TOTALES</b>		<b>69154.88</b>		<b>53196.06</b>
<b>GANANCIA ó PERDIDA</b>				
Value added		57825.12		44480.86
Gross margin		39245.12		30188.55
Net margin		13645.12		10496.24
<b>INDICES DE EFICIENCIA</b>				
Beneficio total/(MOC+INSUMOS)		1.90		1.90
Beneficio total/Costo Total		1.20		1.20
Retorno neto al capital efectivo en insumos		1.55		1.55
Retorno a Mano de Obra		130.44		130.44
Retorno a M.O. Familiar		153.30		153.30
Retorno neto a tierra		13645.12		10496.24

CUADRO 1. RESUMEN DE COSTOS Y BENEFICIOS.

Agricultor : farm 6  
 Area finca : 17.16 ha  
 Agroecosistema: Maiz 2  
 Area Agroec. : 1.30 ha

RUBRO	POR PARCELA		POR HECTAREA	
	Kg	Económico	Kg	Económico
<b>INGRESOS</b>				
<b>PRODUCCION:</b>				
Producción vendida	24200.00	82800.00	18615.38	63692.31
Consumo Flia.	0.00	0.00	0.00	0.00
Otros	0.00	0.00	0.00	0.00
<b>INGRESO BRUTO</b>	<b>24200.00</b>	<b>82800.00</b>	<b>18615.38</b>	<b>63692.31</b>
<b>COSTOS</b>				
<b>COSTOS DE OPERACION</b>				
Mano de obra Contratada		18580.00		14292.31
Mano de obra Familiar		25600.00		19692.31
Insumos		24974.88		19211.45
Otros		0.00		0.00
<b>Total Costos de Operación</b>		<b>69154.88</b>		<b>53196.06</b>
<b>OTROS COSTOS</b>				
Alquiler de la tierra		0.00		0.00
Interés (5% Cost.Oper.)		0.00		0.00
Administración (10% C.OP.)		0.00		0.00
<b>Total Otros Costos</b>		<b>0.00</b>		<b>0.00</b>
<b>COSTOS TOTALES</b>		<b>69154.88</b>		<b>53196.06</b>
<b>GANANCIA &amp; PERDIDA</b>				
Value added		57825.12		44480.86
Gross margin		39245.12		30188.55
Net margin		13645.12		10496.24
<b>INDICES DE EFICIENCIA</b>				
Beneficio total/(MOC+INSUMOS)		1.90		1.90
Beneficio total/Costo Total		1.20		1.20
Retorno neto al capital efectivo en insumos		1.55		1.55
Retorno a Mano de Obra		130.44		130.44
Retorno a M.O. Familiar		153.30		153.30
Retorno neto a tierra		13645.12		10496.24

ayote2

Cuadro 7. Flujo mensual de costos de insumos y MO contratada (\$/parcela)

	Insumos	MO contratada	TOTAL
Jan-91	0.00	0.00	0.00
Feb-91	0.00	0.00	0.00
Mar-91	0.00	0.00	0.00
Apr-91	0.00	0.00	0.00
May-91	0.00	0.00	0.00
Jun-91	0.00	0.00	0.00
Jul-91	2520.00	0.00	2520.00
Aug-91	6382.66	0.00	6382.66
Sep-91	300.00	0.00	300.00
Oct-91	500.00	200.00	700.00
<b>TOTALES</b>	<b>9702.66</b>	<b>200.00</b>	<b>9902.66</b>

Cuadro 19. Flujo mensual acumulado de ingresos y egresos (¢).

	INGRESOS	EGRESOS	DIFERENCIA
Jan-91	0.00	0.00	0.00
Feb-91	0.00	0.00	0.00
Mar-91	0.00	0.00	0.00
Apr-91	0.00	0.00	0.00
May-91	0.00	0.00	0.00
Jun-91	0.00	0.00	0.00
Jul-91	0.00	2520.00	-2520.00
Aug-91	0.00	6382.66	-6382.66
Sep-91	0.00	300.00	-300.00
Oct-91	26000.00	700.00	25300.00
<b>TOTALES</b>	<b>26000.00</b>	<b>9902.66</b>	<b>16097.34</b>

ayote 2

Cuadro 2. Flujo mensual de mano de obra (horas/ha).

	FAMILIAK	CONTRATADA	TOTAL
Jan-91	0.00	0.00	0.00
Feb-91	0.00	0.00	0.00
Mar-91	0.00	0.00	0.00
Apr-91	0.00	0.00	0.00
May-91	0.00	0.00	0.00
Jun-91	0.00	0.00	0.00
Jul-91	28.93	0.00	28.93
Aug-91	62.81	0.00	62.81
Sep-91	9.92	0.00	9.92
Oct-91	58.68	1.65	60.33
TOTALES	160.33	1.65	161.98

Cuadro 3. Flujo mensual de costos de insumos y MD contratada (\$/ha).

	Insumos	MD contratada	TOTAL
Jan-91	0.00	0.00	0.00
Feb-91	0.00	0.00	0.00
Mar-91	0.00	0.00	0.00
Apr-91	0.00	0.00	0.00
May-91	0.00	0.00	0.00
Jun-91	0.00	0.00	0.00
Jul-91	2082.64	0.00	2082.64
Aug-91	5274.93	0.00	5274.93
Sep-91	247.93	0.00	247.93
Oct-91	413.22	165.29	578.51
TOTALES	8018.73	165.29	8184.02

Cuadro 6. Flujo mensual de mano de obra por parcela (horas/parcela).

	FAMILIAR	CONTRATADA	TOTAL
Jan-91	0.00	0.00	0.00
Feb-91	0.00	0.00	0.00
Mar-91	0.00	0.00	0.00
Apr-91	0.00	0.00	0.00
May-91	0.00	0.00	0.00
Jun-91	0.00	0.00	0.00
Jul-91	35.00	0.00	35.00
Aug-91	76.00	0.00	76.00
Sep-91	12.00	0.00	12.00
Oct-91	71.00	2.00	73.00

ayote 2

Cuadro 4. Mano de obra por actividad (horas/ha).

ACTIVIDAD	FAMILIAR	CONTRATADA	TOTAL MOC (%)	
Preparar el Terreno	15.70	0.00	15.70	0.00%
Sembrar	24.79	0.00	24.79	0.00%
Limpiar	13.22	0.00	13.22	0.00%
Aplicar Fertilisante	27.27	0.00	27.27	0.00%
Aplicar Pesticidas	32.23	0.00	32.23	0.00%
Cosechar	47.11	1.65	48.76	3.39%
<b>TOTALES</b>	<b>160.33</b>	<b>1.65</b>	<b>161.98</b>	<b>0.03</b>

Cuadro 5. Costos de insumos y MOC por actividad (\$/ha).

ACTIVIDAD	INSUMOS	MOC	TOTAL INSUMOS (%)	
Preparar el Terreno	0.00	0.00	0.00	ERR
Sembrar	0.00	0.00	0.00	ERR
Limpiar	0.00	0.00	0.00	ERR
Aplicar Fertilisante	4835.91	0.00	4835.91	100.00%
Aplicar Pesticidas	3182.82	0.00	3182.82	100.00%
Cosechar	0.00	165.29	165.29	0.00%
<b>TOTALES</b>	<b>8018.73</b>	<b>165.29</b>	<b>8184.02</b>	<b>ERR</b>

Cuadro 8. Mano de obra por actividad (horas/parcela).

ACTIVIDAD	FAMILIAR	CONTRATADA	TOTAL MOC (%)	
Preparar el Terreno	19.00	0.00	19.00	0.00%
Sembrar	30.00	0.00	30.00	0.00%
Limpiar	16.00	0.00	16.00	0.00%
Aplicar Fertilisante	33.00	0.00	33.00	0.00%
Aplicar Pesticidas	39.00	0.00	39.00	0.00%
Cosechar	57.00	2.00	59.00	3.39%
<b>TOTALES</b>	<b>194.00</b>	<b>2.00</b>	<b>196.00</b>	<b>0.03</b>

Cuadro 9. Costos de insumos y MOC por actividad (\$/parcela).

ACTIVIDAD	INSUMOS	MOC	TOTAL INSUMOS (%)	
Preparar el Terreno	0.00	0.00	0.00	ERR
Sembrar	0.00	0.00	0.00	ERR
Limpiar	0.00	0.00	0.00	ERR
Aplicar Fertilisante	5851.45	0.00	5851.45	100.00%
Aplicar Pesticidas	3851.21	0.00	3851.21	100.00%
Cosechar	0.00	200.00	200.00	0.00%

CUADRO 1. RESUMEN DE COSTOS Y BENEFICIOS.

Agricultor : Farm 6

Area finca : 17.16 ha

Agroecosistema: Ayote 2

Area Agroec. : 1.21 ha

RUBRO	POR PARCELA		POR HECTAREA	
	Kg	Económico	Kg	Económico
<b>INGRESOS</b>				
<b>PRODUCCION:</b>				
Producción vendida	2000.00	26000.00	1652.89	21487.60
Consumo Flia.	0.00	0.00	0.00	0.00
Otros	0.00	0.00	0.00	0.00
<b>INGRESO BRUTO</b>	<b>2000.00</b>	<b>26000.00</b>	<b>1652.89</b>	<b>21487.60</b>
<b>COSTOS</b>				
<b>COSTOS DE OPERACION</b>				
Mano de obra Contratada		200.00		165.29
Mano de obra Familiar		19400.00		16033.06
Insumos		9702.66		8018.73
Otros		0.00		0.00
<b>Total Costos de Operación</b>		<b>29302.66</b>		<b>24217.08</b>
<b>OTROS COSTOS</b>				
Alquiler de la tierra		0.00		0.00
Interés (5% Cost. Oper.)		0.00		0.00
Administración (10% C.O.P.)		0.00		0.00
<b>Total Otros Costos</b>		<b>0.00</b>		<b>0.00</b>
<b>COSTOS TOTALES</b>		<b>29302.66</b>		<b>24217.08</b>
<b>GANANCIA ó PERDIDA</b>				
Value added		16297.34		13468.87
Gross margin		16097.34		13303.58
<b>Net margin</b>		<b>-3302.66</b>		<b>-2729.47</b>
<b>INDICES DE EFICIENCIA</b>				
Beneficio total/(MOC+INSUMOS)		2.63		2.63
Beneficio total/Costo Total		0.89		0.89
Retorno neto al capital efectivo en insumos		0.66		0.66
Retorno a Mano de Obra		83.15		83.15
Retorno a M.O. Familiar		82.98		82.98
Retorno neto a tierra		-3302.66		-2729.47

ayote 1

Cuadro 6. Flujo mensual de mano de obra por parcela (horas/parcela).

	FAMILIAR	CONTRATADA	TOTAL
Jan-91	39.00	0.00	39.00
Feb-91	13.00	0.00	13.00
Mar-91	15.00	0.00	15.00
Apr-91	20.00	35.00	55.00
May-91	84.00	5.00	89.00
Jun-91	20.00	0.00	20.00
Jul-91	0.00	0.00	0.00
Aug-91	0.00	0.00	0.00
Sep-91	0.00	0.00	0.00
Oct-91	0.00	0.00	0.00
<b>TOTALES</b>	<b>191.00</b>	<b>40.00</b>	<b>231.00</b>

Cuadro 7. Flujo mensual de costos de insumos y MO contratada (\$/parcela)

	Insumos	MO contratada	TOTAL
Jan-91	19638.03	0.00	19638.03
Feb-91	937.00	0.00	937.00
Mar-91	1527.75	0.00	1527.75
Apr-91	0.00	3500.00	3500.00
May-91	1000.00	500.00	1500.00
Jun-91	0.00	0.00	0.00
Jul-91	0.00	0.00	0.00
Aug-91	0.00	0.00	0.00
Sep-91	0.00	0.00	0.00
Oct-91	0.00	0.00	0.00
<b>TOTALES</b>	<b>23102.78</b>	<b>4000.00</b>	<b>27102.78</b>

Cuadro 19. Flujo mensual acumulado de ingresos y egresos (€).

	INGRESOS	EGRESOS	DIFERENCIA
Jan-91	0.00	19638.03	-19638.03
Feb-91	0.00	937.00	-937.00
Mar-91	0.00	1527.75	-1527.75
Apr-91	24500.00	3500.00	21000.00
May-91	90000.00	1500.00	88500.00
Jun-91	0.00	0.00	0.00
Jul-91	0.00	0.00	0.00
Aug-91	0.00	0.00	0.00
Sep-91	0.00	0.00	0.00
Oct-91	0.00	0.00	0.00



ayote 1

Cuadro 9. Costos de insumos y MDC por actividad (\$/parcela).

ACTIVIDAD	INSUMOS	MDC	TOTAL INSUMOS (X)	
Preparar el Terreno	13000.00	0.00	13000.00	100.00%
Sembrar	3000.00	0.00	3000.00	100.00%
Chapear	0.00	500.00	500.00	0.00%
Aplicar Fertilisante	2189.75	0.00	2189.75	100.00%
Aplicar Pesticidas	3913.03	0.00	3913.03	100.00%
Cosechar	0.00	3500.00	3500.00	0.00%
Transportar	1000.00	0.00	1000.00	100.00%
<b>TOTALES</b>	<b>23102.78</b>	<b>4000.00</b>	<b>27102.78</b>	<b>5.00</b>

Cuadro 2. Flujo mensual de mano de obra (horas/ha).

	FAMILIAR	CONTRATADA	TOTAL
Jan-91	28.47	0.00	28.47
Feb-91	9.49	0.00	9.49
Mar-91	10.95	0.00	10.95
Apr-91	14.60	25.55	40.15
May-91	61.31	3.65	64.96
Jun-91	14.60	0.00	14.60
Jul-91	0.00	0.00	0.00
Aug-91	0.00	0.00	0.00
Sep-91	0.00	0.00	0.00
Oct-91	0.00	0.00	0.00
<b>TOTALES</b>	<b>139.42</b>	<b>29.20</b>	<b>168.61</b>

Cuadro 3. Flujo mensual de costos de insumos y MO contratada (\$/ha).

	Insumos	MO contratada	TOTAL
Jan-91	14334.33	0.00	14334.33
Feb-91	683.94	0.00	683.94
Mar-91	1115.15	0.00	1115.15
Apr-91	0.00	2554.74	2554.74
May-91	729.93	364.96	1094.89
Jun-91	0.00	0.00	0.00
Jul-91	0.00	0.00	0.00
Aug-91	0.00	0.00	0.00
Sep-91	0.00	0.00	0.00
Oct-91	0.00	0.00	0.00
<b>TOTALES</b>	<b>16863.34</b>	<b>2919.71</b>	<b>19783.05</b>

ayote 1

Cuadro 4. Mano de obra por actividad (horas/ha).

ACTIVIDAD	FAMILIAR	CONTRATADA	TOTAL MOC (%)	
Preparar el Terreno	3.65	0.00	3.65	0.00%
Sembrar	2.19	0.00	2.19	0.00%
Chapear	16.79	3.65	20.44	17.86%
Aplicar Fertilisante	15.33	0.00	15.33	0.00%
Aplicar Pesticidas	31.39	0.00	31.39	0.00%
Cosechar	65.69	25.55	91.24	28.00%
Transportar	4.38	0.00	4.38	0.00%
<b>TOTALES</b>	<b>139.42</b>	<b>29.20</b>	<b>168.61</b>	<b>0.46</b>

Cuadro 5. Costos de insumos y MOC por actividad (%/ha).

ACTIVIDAD	INSUMOS	MOC	TOTAL INSUMOS (%)	
Preparar el Terreno	9489.05	0.00	9489.05	100.00%
Sembrar	2189.78	0.00	2189.78	100.00%
Chapear	0.00	364.96	364.96	0.00%
Aplicar Fertilisante	1598.36	0.00	1598.36	100.00%
Aplicar Pesticidas	2856.23	0.00	2856.23	100.00%
Cosechar	0.00	2554.74	2554.74	0.00%
Transportar	729.93	0.00	729.93	100.00%
<b>TOTALES</b>	<b>16863.34</b>	<b>2919.71</b>	<b>19783.05</b>	<b>5.00</b>

Cuadro 8. Mano de obra por actividad (horas/parcela).

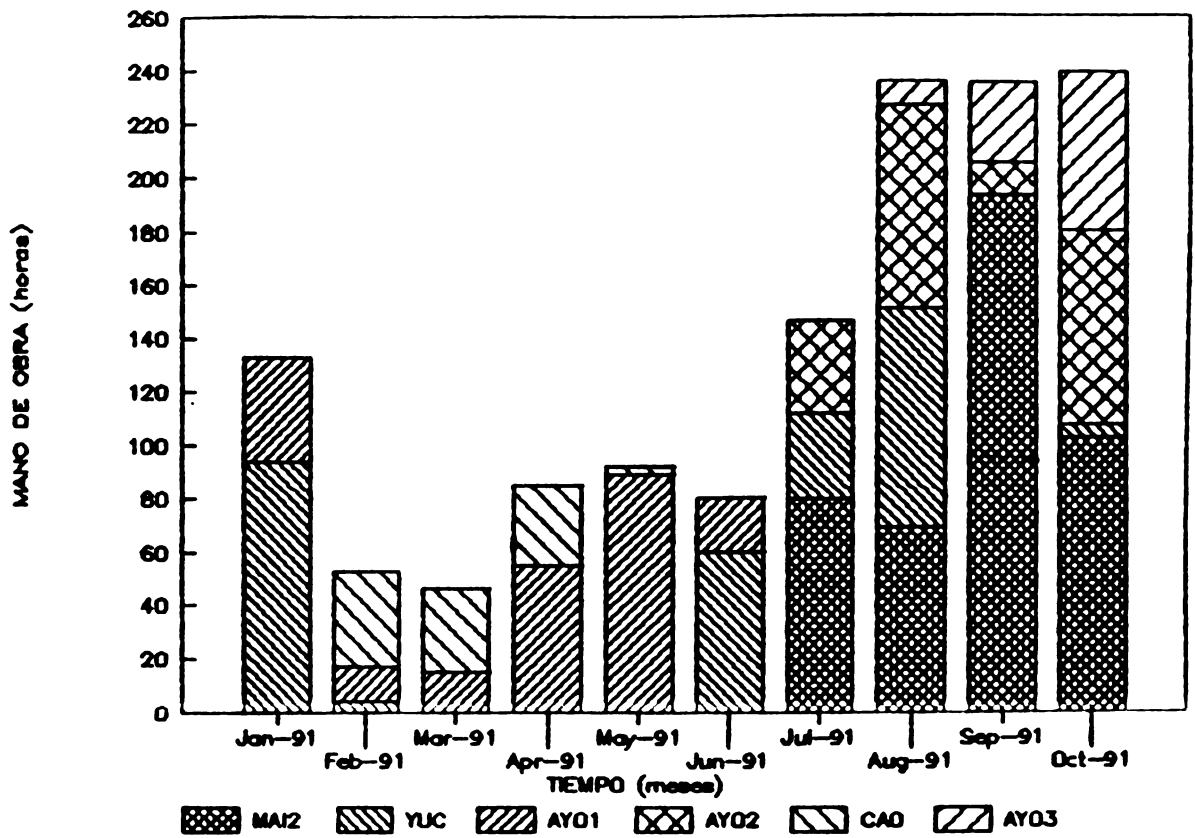
ACTIVIDAD	FAMILIAR	CONTRATADA	TOTAL MOC (%)	
Preparar el Terreno	5.00	0.00	5.00	0.00%
Sembrar	3.00	0.00	3.00	0.00%
Chapear	23.00	5.00	28.00	17.86%
Aplicar Fertilisante	21.00	0.00	21.00	0.00%
Aplicar Pesticidas	43.00	0.00	43.00	0.00%
Cosechar	90.00	35.00	125.00	28.00%
Transportar	6.00	0.00	6.00	0.00%
<b>TOTALES</b>	<b>191.00</b>	<b>40.00</b>	<b>231.00</b>	<b>0.46</b>

CUADRO 1. RESUMEN DE COSTOS Y BENEFICIOS.

Agricultor : farm 6  
 Area finca : 17.16 ha  
 Agroecosistema: Ayote].  
 Area Agroec. : 1.37 ha

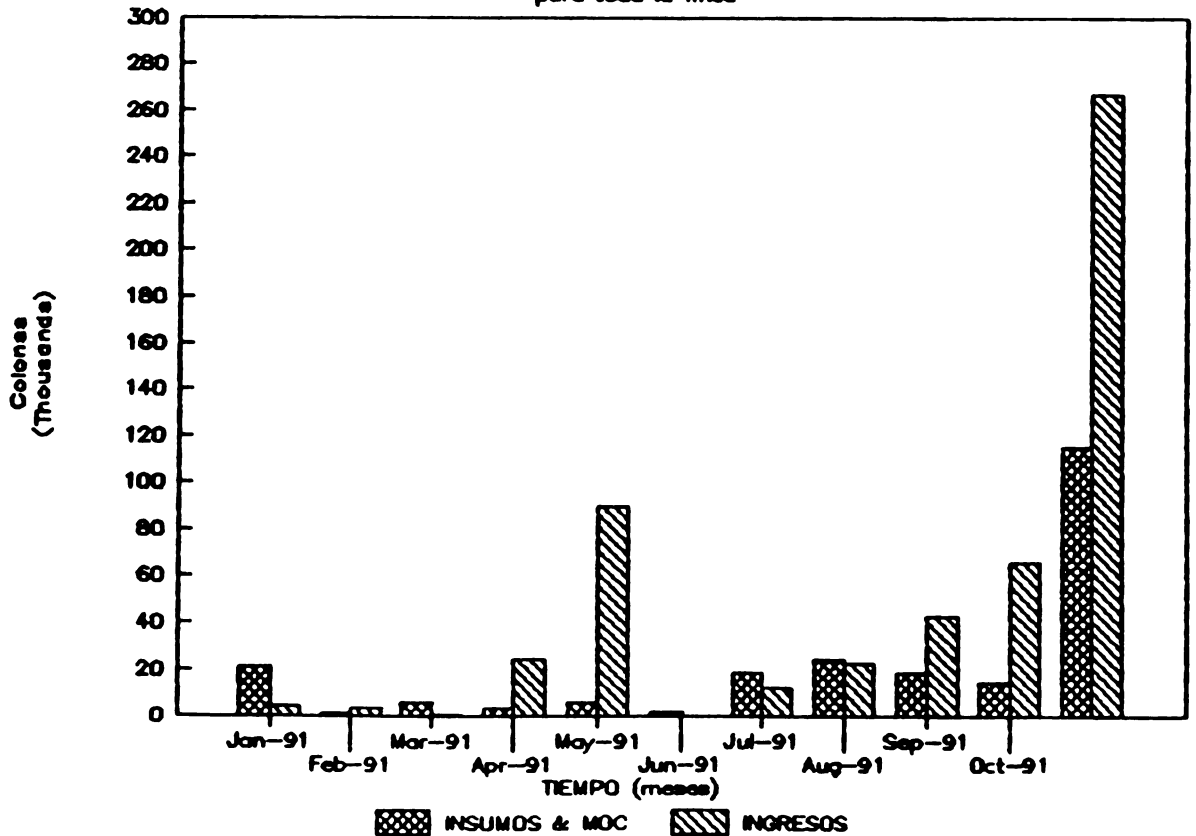
RUBRO	POR PARCELA		POR HECTAREA	
	Kg	Económico	Kg	Económico
<b>INGRESOS</b>				
<b>PRODUCCION:</b>				
Producción vendida	10350.00	114500.00	7554.74	83576.64
Consumo Flia.	0.00	0.00	0.00	0.00
Otros	0.00	0.00	0.00	0.00
<b>INGRESO BRUTO</b>	<b>10350.00</b>	<b>114500.00</b>	<b>7554.74</b>	<b>83576.64</b>
<b>COSTOS</b>				
<b>COSTOS DE OPERACION</b>				
Mano de obra Contratada		4000.00		2919.71
Mano de obra Familiar		19100.00		13941.61
Insumos		23102.78		16863.34
Otros		0.00		0.00
<b>Total Costos de Operación</b>		<b>46202.78</b>		<b>33724.66</b>
<b>OTROS COSTOS</b>				
Alquiler de la tierra		0.00		0.00
Interés (5% Cost.Oper.)		0.00		0.00
Administración (10% C.OP.)		0.00		0.00
<b>Total Otros Costos</b>		<b>0.00</b>		<b>0.00</b>
<b>COSTOS TOTALES</b>		<b>46202.78</b>		<b>33724.66</b>
<b>GANANCIA ó PERDIDA</b>				
Value added		91397.22		66713.3
Gross margin		87397.22		63793.59
<b>Net margin</b>		<b>68297.22</b>		<b>49851.98</b>
<b>INDICES DE EFICIENCIA</b>				
Beneficio total/(MOC+INSUMOS)		4.22		4.22
Beneficio total/Costo Total		2.48		2.48
Retorno neto al capital efectivo en insumos		3.96		3.96
Retorno a Mano de Obra		395.66		395.66
Retorno a M.O. Familiar		457.58		457.58
Retorno neto a tierra		68297.22		49851.98

## Uso de MO mensual por agroecosistema



## Flujo de costos e ingresos por mes

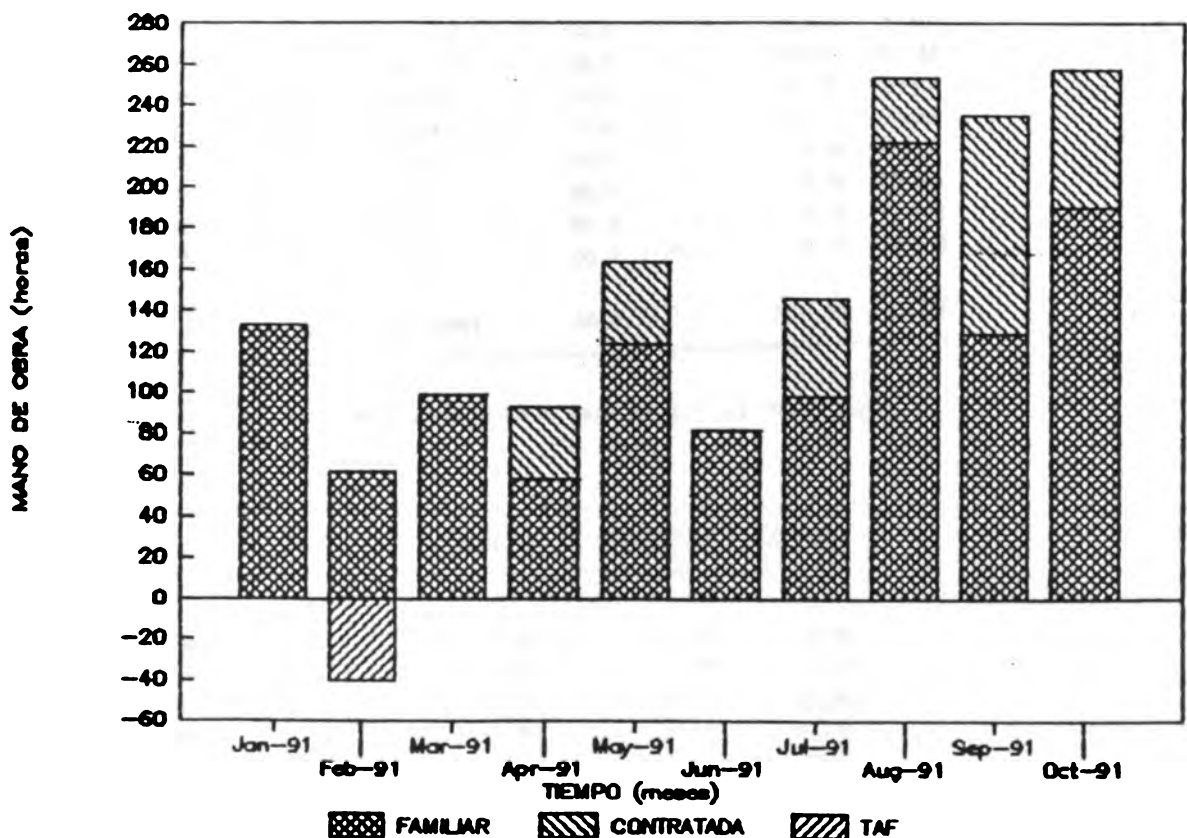
para toda la finca



## Data output of farm 6

### Summary of the economic activities of farm 6

AGROECOSISTEMA	AREA	ING. BRUTO	INSUMOS	MOC	Gr. margin	MOF (h)	RET. MOF
Ayote	1.37	114500.00	23102.78	4000.00	87397.22	191.00	457.58
Ayote	1.21	26000.00	9702.66	200.00	16097.34	194.00	82.98
Ayote	0.65	0.00	1974.25	400.00	-2374.25	94.00	-25.26
Cacao	0.69	0.00	1551.00	0.00	-1551.00	100.00	-15.51
Chile	0.85	0.00	4036.19	400.00	-4436.19	38.00	-116.74
Culantro	1.00	760.00	0.00	0.00	760.00	8.00	95.00
Frijoles	1.00	0.00	1961.00	0.00	-1961.00	24.00	-81.71
Maiz	0.52	0.00	0.00	500.00	-500.00	7.50	-66.67
Maiz	1.3	82800	24974.8827	18580	39245.1173	256	153.3012
Mantenimiento	1	0	148.0005	540	-688.0005	43	-16.0000
Papaya	1	0	2450.0002	400	-2850.0002	0	ERR
Trabajar afuera	1	7880	0	0	7880	40	197
Yuca	1.1	35000	12208.009	4799.98	17992.011	230.5	78.05644
<b>TOTALES</b>	<b>12.69</b>	<b>266940.00</b>	<b>82108.77</b>	<b>29819.98</b>	<b>155011.25</b>	<b>1226.00</b>	<b>126.44</b>



Family labour, hired labour and off farm work per month.

## Yuca 2

Cuadro 7. Flujo mensual de costos de insumos y MU contratada (\$/parcela).

	Insumos	MU contratada	TOTAL
Jan-91	0.00	0.00	0.00
Feb-91	0.00	0.00	0.00
Mar-91	959.10	8240.00	9199.10
Apr-91	2250.00	1080.00	3330.00
May-91	0.00	900.00	900.00
Jun-91	0.00	1040.00	1040.00
Jul-91	0.00	0.00	0.00
Aug-91	0.00	0.00	0.00
Sep-91	0.00	0.00	0.00
Oct-91	0.00	0.00	0.00
<b>TOTALES</b>	<b>3209.10</b>	<b>11260.00</b>	<b>14469.10</b>

Cuadro 19. Flujo mensual acumulado de ingresos y egresos (¢).

	INGRESOS	EGRESOS	DIFERENCIA
Jan-91	0.00	0.00	0.00
Feb-91	0.00	0.00	0.00
Mar-91	0.00	9199.10	-9199.10
Apr-91	0.00	3330.00	-3330.00
May-91	0.00	900.00	-900.00
Jun-91	0.00	1040.00	-1040.00
Jul-91	0.00	0.00	0.00
Aug-91	0.00	0.00	0.00
Sep-91	0.00	0.00	0.00
Oct-91	0.00	0.00	0.00
<b>TOTALES</b>	<b>0.00</b>	<b>14469.10</b>	<b>-14469.10</b>

yuca 1

Cuadro 2. Flujo mensual de mano de obra (horas/ha).

	FAMILIAR	CONTRATADA	TOTAL
Jan-91	0.00	0.00	0.00
Feb-91	7.14	7.14	14.29
Mar-91	22.32	81.25	103.57
Apr-91	0.00	0.00	0.00
May-91	0.00	0.00	0.00
Jun-91	0.00	0.00	0.00
Jul-91	0.00	0.00	0.00
Aug-91	0.00	0.00	0.00
Sep-91	0.00	0.00	0.00
Oct-91	0.00	0.00	0.00
TOTALES	29.46	88.39	117.86

Cuadro 3. Flujo mensual de costos de insumos y MO contratada (\$/ha).

	Insumos	MO contratada	TOTAL
Jan-91	0.00	0.00	0.00
Feb-91	1339.30	571.43	1910.73
Mar-91	2232.14	8249.94	10482.08
Apr-91	0.00	0.00	0.00
May-91	0.00	0.00	0.00
Jun-91	0.00	0.00	0.00
Jul-91	0.00	0.00	0.00
Aug-91	0.00	0.00	0.00
Sep-91	0.00	0.00	0.00
Oct-91	0.00	0.00	0.00
TOTALES	3571.44	8821.37	12392.81

Cuadro 6. Flujo mensual de mano de obra por parcela (horas/parcela).

	FAMILIAR	CONTRATADA	TOTAL
Jan-91	0.00	0.00	0.00
Feb-91	8.00	8.00	16.00
Mar-91	25.00	91.00	116.00
Apr-91	0.00	0.00	0.00
May-91	0.00	0.00	0.00
Jun-91	0.00	0.00	0.00
Jul-91	0.00	0.00	0.00
Aug-91	0.00	0.00	0.00
Sep-91	0.00	0.00	0.00
Oct-91	0.00	0.00	0.00

yuca 1

Cuadro 4. Mano de obra por actividad (horas/ha).

ACTIVIDAD	FAMILIAR	CONTRATADA	TOTAL MOC (Z)	
Aplicar Pesticidas	7.14	7.14	14.29	50.00%
Cosechar	16.96	81.25	98.21	82.73%
Transportar	5.36	0.00	5.36	0.00%
TOTALES	29.46	88.39	117.86	1.33

Cuadro 5. Costos de insumos y MOC por actividad (\$/ha).

ACTIVIDAD	INSUMOS	MOC	TOTAL INSUMOS (Z)	
Aplicar Pesticidas	1339.30	571.43	1910.73	70.09%
Cosechar	0.00	8249.94	8249.94	0.00%
Transportar	2232.14	0.00	2232.14	100.00%
TOTALES	3571.44	8821.37	12392.81	1.70

Cuadro 8. Mano de obra por actividad (horas/parcela).

ACTIVIDAD	FAMILIAR	CONTRATADA	TOTAL MOC (Z)	
Aplicar Pesticidas	8.00	8.00	16.00	50.00%
Cosechar	19.00	91.00	110.00	82.73%
Transportar	6.00	0.00	6.00	0.00%
TOTALES	33.00	99.00	132.00	1.33

Cuadro 9. Costos de insumos y MOC por actividad (\$/parcela).

ACTIVIDAD	INSUMOS	MOC	TOTAL INSUMOS (Z)	
Aplicar Pesticidas	1500.02	640.00	2140.02	70.09%
Cosechar	0.00	9239.93	9239.93	0.00%
Transportar	2500.00	0.00	2500.00	100.00%
TOTALES	4000.02	9879.93	13879.95	1.70



CUADRO 1. RESUMEN DE COSTOS Y BENEFICIOS.

Agricultor : Farm 4  
 Area finca : 14.96 ha  
 Agroecosistema: Yuca 1  
 Area Agroec. : 1.12 ha

RUBRO	POR PARCELA		POR HECTAREA	
	Kg	Económico	Kg	Económico
<b>INGRESOS</b>				
<b>PRODUCCION:</b>				
Producción vendida	5520.00	51501.60	4928.57	45983.57
Consumo Flia.	0.00	0.00	0.00	0.00
Otros	0.00	0.00	0.00	0.00
<b>INGRESO BRUTO</b>	<b>5520.00</b>	<b>51501.60</b>	<b>4928.57</b>	<b>45983.57</b>
<b>COSTOS</b>				
<b>COSTOS DE OPERACION</b>				
Mano de obra Contratada		9879.93		8821.37
Mano de obra Familiar		3300.00		2946.43
Insumos		4000.02		3571.44
Otros		0.00		0.00
<b>Total Costos de Operación</b>		<b>17179.95</b>		<b>15339.24</b>
<b>OTROS COSTOS</b>				
Alquiler de la tierra		0.00		0.00
Interés (5% Cost.Oper.)		0.00		0.00
Administración (10% C.OP.)		0.00		0.00
<b>Total Otros Costos</b>		<b>0.00</b>		<b>0.00</b>
<b>COSTOS TOTALES</b>		<b>17179.95</b>		<b>15339.24</b>
<b>GANANCIA &amp; PERDIDA</b>				
Value added		47501.58		42412.13
Gross margin		37621.65		33590.76
Net margin		34321.65		30644.33
<b>INDICES DE EFICIENCIA</b>				
Beneficio total/(MOC+INSUMOS)		3.71		3.71
Beneficio total/Costo Total		3.00		3.00
Retorno neto al capital efectivo en insumos		9.58		9.58
Retorno a Mano de Obra		359.86		359.86
Retorno a M.O. Familiar		1140.05		1140.05
Retorno neto a tierra		34321.65		30644.33

maize 2

Cuadro 7. Flujo mensual de costos de insumos y MO contratada (\$/parcela)

	Insumos	MO contratada	TOTAL
Jan-91	0.00	0.00	0.00
Feb-91	0.00	0.00	0.00
Mar-91	0.00	0.00	0.00
Apr-91	0.00	0.00	0.00
May-91	0.00	0.00	0.00
Jun-91	0.00	800.00	800.00
Jul-91	8085.60	4530.00	12615.60
Aug-91	1285.20	0.00	1285.20
Sep-91	0.00	0.00	0.00
Oct-91	0.00	1800.00	1800.00
<b>TOTALES</b>	<b>9370.80</b>	<b>7130.00</b>	<b>16500.80</b>

Cuadro 19. Flujo mensual acumulado de ingresos y egresos (€).

	INGRESOS	EGRESOS	DIFERENCIA
Jan-91	0.00	0.00	0.00
Feb-91	0.00	0.00	0.00
Mar-91	0.00	0.00	0.00
Apr-91	0.00	0.00	0.00
May-91	0.00	0.00	0.00
Jun-91	0.00	800.00	-800.00
Jul-91	0.00	12615.60	-12615.60
Aug-91	0.00	1285.20	-1285.20
Sep-91	0.00	0.00	0.00
Oct-91	15000.00	1800.00	13200.00
<b>TOTALES</b>	<b>15000.00</b>	<b>16500.80</b>	<b>-1500.80</b>

maize 2

Cuadro 2. Flujo mensual de mano de obra (horas/ha).

	FAMILIAR	CONTRATADA	TOTAL
Jan-91	0.00	0.00	0.00
Feb-91	0.00	0.00	0.00
Mar-91	0.00	0.00	0.00
Apr-91	0.00	0.00	0.00
May-91	0.00	0.00	0.00
Jun-91	10.26	8.55	18.80
Jul-91	44.44	44.44	88.89
Aug-91	10.26	0.00	10.26
Sep-91	5.13	0.00	5.13
Oct-91	11.11	15.38	26.50
TOTALES	81.20	68.38	149.57

Cuadro 3. Flujo mensual de costos de insumos y MD contratada (\$/ha).

	Insumos	MD contratada	TOTAL
Jan-91	0.00	0.00	0.00
Feb-91	0.00	0.00	0.00
Mar-91	0.00	0.00	0.00
Apr-91	0.00	0.00	0.00
May-91	0.00	0.00	0.00
Jun-91	0.00	683.76	683.76
Jul-91	6910.77	3871.79	10782.56
Aug-91	1098.46	0.00	1098.46
Sep-91	0.00	0.00	0.00
Oct-91	0.00	1538.46	1538.46
TOTALES	8009.23	6094.02	14103.25

Cuadro 6. Flujo mensual de mano de obra por parcela (horas/parcela).

	FAMILIAR	CONTRATADA	TOTAL
Jan-91	0.00	0.00	0.00
Feb-91	0.00	0.00	0.00
Mar-91	0.00	0.00	0.00
Apr-91	0.00	0.00	0.00
May-91	0.00	0.00	0.00
Jun-91	12.00	10.00	22.00
Jul-91	52.00	52.00	104.00
Aug-91	12.00	0.00	12.00
Sep-91	6.00	0.00	6.00
Oct-91	13.00	18.00	31.00

Cuadro 4. Mano de obra por actividad (horas/ha).

ACTIVIDAD	FAMILIAR	CONTRATADA	TOTAL MOC (2)	
Sembrar	16.24	52.99	69.23	76.54%
Aplicar Fertilizante	30.77	0.00	30.77	0.00%
Aplicar Pesticidas	17.95	0.00	17.95	0.00%
Doblar Malz	11.97	0.00	11.97	0.00%
Cosechar	4.27	15.38	19.66	78.26%
<b>TOTALES</b>	<b>81.20</b>	<b>68.38</b>	<b>149.57</b>	<b>1.55</b>

Cuadro 5. Costos de insumos y MOC por actividad (\$/ha).

ACTIVIDAD	INSUMOS	MOC	TOTAL INSUMOS (2)	
Sembrar	0.00	4555.56	4555.56	0.00%
Aplicar Fertilizante	8009.23	0.00	8009.23	100.00%
Aplicar Pesticidas	0.00	0.00	0.00	ERR
Doblar Malz	0.00	0.00	0.00	ERR
Cosechar	0.00	1538.46	1538.46	0.00%
<b>TOTALES</b>	<b>8009.23</b>	<b>6094.02</b>	<b>14103.25</b>	<b>ERR</b>

Cuadro 6. Mano de obra por actividad (horas/parcela).

ACTIVIDAD	FAMILIAR	CONTRATADA	TOTAL MOC (2)	
Sembrar	19.00	62.00	81.00	76.54%
Aplicar Fertilizante	36.00	0.00	36.00	0.00%
Aplicar Pesticidas	21.00	0.00	21.00	0.00%
Doblar Malz	14.00	0.00	14.00	0.00%
Cosechar	5.00	18.00	23.00	78.26%
<b>TOTALES</b>	<b>95.00</b>	<b>80.00</b>	<b>175.00</b>	<b>1.55</b>

Cuadro 9. Costos de insumos y MOC por actividad (\$/parcela).

ACTIVIDAD	INSUMOS	MOC	TOTAL INSUMOS (2)	
Sembrar	0.00	5330.00	5330.00	0.00%
Aplicar Fertilizante	9370.80	0.00	9370.80	100.00%
Aplicar Pesticidas	0.00	0.00	0.00	ERR
Doblar Malz	0.00	0.00	0.00	ERR
Cosechar	0.00	1800.00	1800.00	0.00%

CUADRO 1. RESUMEN DE COSTOS Y BENEFICIOS.

Agricultor : Farm 4  
 Area finca : 14.96 ha  
 Agroecosistema: Maize 2  
 Area Agroec. : 1.17 ha

RUBRO	POR PARCELA		POR HECTAREA	
	Kg	Económico	Kg	Económico
<b>INGRESOS</b>				
<b>PRODUCCION:</b>				
Producción vendida	5000.00	15000.00	4273.50	12820.51
Consumo Flia.	0.00	0.00	0.00	0.00
Otros	0.00	0.00	0.00	0.00
<b>INGRESO BRUTO</b>	<b>5000.00</b>	<b>15000.00</b>	<b>4273.50</b>	<b>12820.51</b>
<b>COSTOS</b>				
<b>COSTOS DE OPERACION</b>				
Mano de obra Contratada		7130.00		6094.02
Mano de obra Familiar		9500.00		8119.66
Insumos		9370.80		8009.23
Otros		0.00		0.00
<b>Total Costos de Operación</b>		<b>26000.80</b>		<b>22222.91</b>
<b>OTROS COSTOS</b>				
Alquiler de la tierra		0.00		0.00
Interés (5% Cost.Oper.)		0.00		0.00
Administración (10% C.OP.)		0.00		0.00
<b>Total Otros Costos</b>		<b>0.00</b>		<b>0.00</b>
<b>COSTOS TOTALES</b>		<b>26000.80</b>		<b>22222.91</b>
<b>GANANCIA ó PERDIDA</b>				
Value added		5629.2		4811.28
Gross margin		-1500.80		-1282.74
<b>Net margin</b>		<b>-11000.80</b>		<b>-9402.39</b>
<b>INDICES DE EFICIENCIA</b>				
Beneficio total/(MOC+INSUMOS)		0.91		0.91
Beneficio total/Costo Total		0.58		0.58
Retorno neto al capital efectivo en insumos		-0.17		-0.17
Retorno a Mano de Obra		32.17		32.17
Retorno a M.O. Familiar		-15.80		-15.80
Retorno neto a tierra		-11000.80		-9402.39

maize 1

Cuadro 6. Flujo de MO por parcela (horas/parcela)

	FAMILIAR	CONTRATADA	TOTAL
Jan-91	0.00	170.00	170.00
Feb-91	33.00	49.00	82.00
Mar-91	0.00	0.00	0.00
Apr-91	37.00	52.00	89.00
May-91	24.00	134.00	158.00
Jun-91	0.00	0.00	0.00
Jul-91	0.00	0.00	0.00
Aug-91	0.00	0.00	0.00
Sep-91	0.00	0.00	0.00
Oct-91	0.00	0.00	0.00
<b>TOTALES</b>	<b>94.00</b>	<b>405.00</b>	<b>499.00</b>

Cuadro 7. Flujo mensual de costos de insumos y MO contratada (\$/parcela)

	Insumos	MO contratada	TOTAL
Jan-91	8514.49	13600.00	22114.49
Feb-91	9512.28	3920.00	13432.28
Mar-91	0.00	0.00	0.00
Apr-91	3660.89	4410.00	8070.89
May-91	0.00	12980.00	12980.00
Jun-91	0.00	0.00	0.00
Jul-91	0.00	0.00	0.00
Aug-91	0.00	0.00	0.00
Sep-91	0.00	0.00	0.00
Oct-91	0.00	0.00	0.00
<b>TOTALES</b>	<b>21687.67</b>	<b>34910.00</b>	<b>56597.67</b>

Cuadro 19. Flujo mensual acumulado de ingresos y egresos (€).

	INGRESOS	EGRESOS	DIFERENCIA
Jan-91	0.00	22114.49	-22114.49
Feb-91	0.00	13432.28	-13432.28
Mar-91	0.00	0.00	0.00
Apr-91	0.00	8070.89	-8070.89
May-91	135952.00	12980.00	122972.00
Jun-91	0.00	0.00	0.00
Jul-91	0.00	0.00	0.00
Aug-91	0.00	0.00	0.00
Sep-91	0.00	0.00	0.00
Oct-91	0.00	0.00	0.00
	<b>135952.00</b>	<b>56597.67</b>	<b>79354.33</b>

maize 1

Cuadro 9. Costos de insumos y MOC por actividad (\$/parcela).

ACTIVIDAD	INSUMOS	MOC	TOTAL	INSUMOS (%)
Sembrar	3000.38	5600.00	8600.38	34.89%
Limpiar	0.00	1680.00	1680.00	0.00%
Aplicar Fertilisante	11359.42	1600.00	12959.42	87.65%
Aplicar Pesticidas	7327.88	9360.00	16687.88	43.91%
Espartar Aves	0.00	380.00	380.00	0.00%
Doblar Malz	0.00	3310.00	3310.00	0.00%
Cosechar	0.00	12980.00	12980.00	0.00%
<b>TOTALES</b>	<b>21687.67</b>	<b>34910.00</b>	<b>56597.67</b>	<b>1.66</b>

Cuadro 2. Flujo mensual de mano de obra (horas/ha).

	FAMILIAR	CONTRATADA	TOTAL
Jan-91	0.00	59.65	59.65
Feb-91	11.58	17.19	28.77
Mar-91	0.00	0.00	0.00
Apr-91	12.98	18.25	31.23
May-91	8.42	47.02	55.44
Jun-91	0.00	0.00	0.00
Jul-91	0.00	0.00	0.00
Aug-91	0.00	0.00	0.00
Sep-91	0.00	0.00	0.00
Oct-91	0.00	0.00	0.00
<b>TOTALES</b>	<b>32.98</b>	<b>142.11</b>	<b>175.09</b>

Cuadro 3. Flujo mensual de costos de insumos y MO contratada (\$/ha).

	Insumos	MO contratada	TOTAL
Jan-91	2987.54	4771.93	7759.47
Feb-91	3337.64	1375.44	4713.08
Mar-91	0.00	0.00	0.00
Apr-91	1284.52	1547.37	2831.89
May-91	0.00	4554.39	4554.39
Jun-91	0.00	0.00	0.00
Jul-91	0.00	0.00	0.00
Aug-91	0.00	0.00	0.00
Sep-91	0.00	0.00	0.00
Oct-91	0.00	0.00	0.00
<b>TOTALES</b>	<b>7609.71</b>	<b>12249.12</b>	<b>19858.83</b>

maize 1

Cuadro 4. Mano de obra por actividad (horas/ha).

ACTIVIDAD	FAMILIAR	CONTRATADA	TOTAL MDC (2)	
Sembrar	0.00	24.56	24.56	100.00%
Limpiar	0.00	7.37	7.37	100.00%
Aplicar Fertilisante	11.58	7.02	18.60	37.74%
Aplicar Pesticidas	3.16	41.05	44.21	92.86%
Espartar Aves	5.61	1.40	7.02	20.00%
Doblar Malz	5.96	13.68	19.65	69.64%
Cosechar	6.67	47.02	53.68	87.58%
<b>TOTALES</b>	<b>32.98</b>	<b>142.11</b>	<b>175.09</b>	<b>5.08</b>

Cuadro 5. Costos de insumos y MDC por actividad (\$/ha).

ACTIVIDAD	INSUMOS	MDC	TOTAL INSUMOS (2)	
Sembrar	1052.76	1964.91	3017.68	34.89%
Limpiar	0.00	589.47	589.47	0.00%
Aplicar Fertilisante	3985.76	561.40	4547.17	87.65%
Aplicar Pesticidas	2571.18	3284.21	5855.39	43.91%
Espartar Aves	0.00	133.33	133.33	0.00%
Doblar Malz	0.00	1161.40	1161.40	0.00%
Cosechar	0.00	4554.39	4554.39	0.00%
<b>TOTALES</b>	<b>7609.71</b>	<b>12249.12</b>	<b>19858.83</b>	<b>1.66</b>

Cuadro 8. Mano de obra por actividad (horas/parcela).

ACTIVIDAD	FAMILIAR	CONTRATADA	TOTAL MDC (2)	
Sembrar	0.00	70.00	70.00	100.00%
Limpiar	0.00	21.00	21.00	100.00%
Aplicar Fertilisante	33.00	20.00	53.00	37.74%
Aplicar Pesticidas	9.00	117.00	126.00	92.86%
Espartar Aves	16.00	4.00	20.00	20.00%
Doblar Malz	17.00	39.00	56.00	69.64%
Cosechar	19.00	134.00	153.00	87.58%
<b>TOTALES</b>	<b>94.00</b>	<b>405.00</b>	<b>499.00</b>	<b>5.08</b>



CUADRO 1. RESUMEN DE COSTOS Y BENEFICIOS.

Agricultor : Farm 4

Area finca : 14.96 ha

Agroecosistema: Maize 1

Area Agroec. : 2.85 ha

RUBRO	POR PARCELA		POR HECTAREA	
	Kg	Económico	Kg	Económico
<b>INGRESOS</b>				
<b>PRODUCCION:</b>				
Producción vendida	290.00	135952.00	101.75	47702.46
Consumo Flia.	0.00	0.00	0.00	0.00
Otros	0.00	0.00	0.00	0.00
<b>INGRESO BRUTO</b>	<b>290.00</b>	<b>135952.00</b>	<b>101.75</b>	<b>47702.46</b>
<b>COSTOS</b>				
<b>COSTOS DE OPERACION</b>				
Mano de obra Contratada		34910.00		12249.12
Mano de obra Familiar		9400.00		3298.25
Insumos		21687.67		7609.71
Otros		0.00		0.00
<b>Total Costos de Operación</b>		<b>65997.67</b>		<b>23157.08</b>
<b>OTROS COSTOS</b>				
Alquiler de la tierra		0.00		0.00
Interés (5% Cost. Oper.)		0.00		0.00
Administración (10% C.O.P.)		0.00		0.00
<b>Total Otros Costos</b>		<b>0.00</b>		<b>0.00</b>
<b>COSTOS TOTALES</b>		<b>65997.67</b>		<b>23157.08</b>
<b>GANANCIA ó PERDIDA</b>				
Value added		114264.33		40092.75
Gross margin		79354.33		27843.62
<b>Net margin</b>		<b>69954.33</b>		<b>24545.38</b>
<b>INDICES DE EFICIENCIA</b>				
Beneficio total/(MOC+INSUMOS)		2.40		2.40
Beneficio total/Costo Total		2.06		2.06
Retorno neto al capital efectivo en insumos		4.23		4.23
Retorno a Mano de Obra		228.99		228.99
Retorno a M.O. Familiar		844.19		844.19
Retorno neto a tierra		69954.33		24545.38

ayote

Cuadro 7. Flujo mensual de costos de insumos y MU contratada (\$/parcela)

	Insumos	MU contratada	TOTAL
Jan-91	0.00	0.00	0.00
Feb-91	0.00	0.00	0.00
Mar-91	0.00	0.00	0.00
Apr-91	0.00	0.00	0.00
May-91	0.00	0.00	0.00
Jun-91	0.00	0.00	0.00
Jul-91	2400.00	0.00	2400.00
Aug-91	3061.00	700.00	3761.00
Sep-91	1799.00	400.00	2199.00
Oct-91	0.00	0.00	0.00
<b>TOTALES</b>	<b>7260.00</b>	<b>1100.00</b>	<b>8360.00</b>

Cuadro 19. Flujo mensual acumulado de ingresos y egresos (€).

	INGRESOS	EGRESOS	DIFERENCIA
Jan-91	0.00	0.00	0.00
Feb-91	0.00	0.00	0.00
Mar-91	0.00	0.00	0.00
Apr-91	0.00	0.00	0.00
May-91	0.00	0.00	0.00
Jun-91	0.00	0.00	0.00
Jul-91	0.00	2400.00	-2400.00
Aug-91	0.00	3761.00	-3761.00
Sep-91	0.00	2199.00	-2199.00
Oct-91	0.00	0.00	0.00
<b>TOTALES</b>	<b>0.00</b>	<b>8360.00</b>	<b>-8360.00</b>

ayote

Cuadro 2. Flujo mensual de mano de obra (horas/ha).

	FAMILIAR	CONTRATADA	TOTAL
Jan-91	0.00	0.00	0.00
Feb-91	0.00	0.00	0.00
Mar-91	0.00	0.00	0.00
Apr-91	0.00	0.00	0.00
May-91	0.00	0.00	0.00
Jun-91	0.00	0.00	0.00
Jul-91	21.60	0.00	21.60
Aug-91	12.00	5.60	17.60
Sep-91	5.60	3.20	8.80
Oct-91	0.00	0.00	0.00
<b>TOTALES</b>	<b>39.20</b>	<b>8.80</b>	<b>48.00</b>

Cuadro 3. Flujo mensual de costos de insumos y MD contratada (\$/ha).

	Insumos	MD contratada	TOTAL
Jan-91	0.00	0.00	0.00
Feb-91	0.00	0.00	0.00
Mar-91	0.00	0.00	0.00
Apr-91	0.00	0.00	0.00
May-91	0.00	0.00	0.00
Jun-91	0.00	0.00	0.00
Jul-91	1920.00	0.00	1920.00
Aug-91	2448.80	560.00	3008.80
Sep-91	1439.20	320.00	1759.20
Oct-91	0.00	0.00	0.00
<b>TOTALES</b>	<b>5808.00</b>	<b>880.00</b>	<b>6688.00</b>

Cuadro 6. Flujo mensual de mano de obra por parcela (horas/parcela).

	FAMILIAR	CONTRATADA	TOTAL
Jan-91	0.00	0.00	0.00
Feb-91	0.00	0.00	0.00
Mar-91	0.00	0.00	0.00
Apr-91	0.00	0.00	0.00
May-91	0.00	0.00	0.00
Jun-91	0.00	0.00	0.00
Jul-91	27.00	0.00	27.00
Aug-91	15.00	7.00	22.00
Sep-91	7.00	4.00	11.00
Oct-91	0.00	0.00	0.00

ayote

Cuadro 4. Mano de obra por actividad (horas/ha).

ACTIVIDAD	FAMILIAR	CONTRATADA	TOTAL MOC (Z)	
Preparar el Terreno	18.40	0.00	18.40	0.00Z
Sembrar	9.60	0.00	9.60	0.00Z
Aplicar Fertilisante	0.00	0.00	0.00	ERR
Aplicar Pesticidas	8.00	8.80	16.80	52.38Z
Cortar Madera	3.20	0.00	3.20	0.00Z
TOTALES	39.20	8.80	48.00	ERR

Cuadro 5. Costos de insumos y MOC por actividad (\$/ha).

ACTIVIDAD	INSUMOS	MOC	TOTAL INSUMOS (Z)	
Preparar el Terreno	0.00	0.00	0.00	ERR
Sembrar	1200.00	0.00	1200.00	100.00Z
Aplicar Fertilisante	529.60	0.00	529.60	100.00Z
Aplicar Pesticidas	2158.40	880.00	3038.40	71.04Z
Cortar Madera	1920.00	0.00	1920.00	100.00Z
TOTALES	5808.00	880.00	6688.00	ERR

Cuadro 8. Mano de obra por actividad (horas/parcela).

ACTIVIDAD	FAMILIAR	CONTRATADA	TOTAL MOC (Z)	
Preparar el Terreno	23.00	0.00	23.00	0.00Z
Sembrar	12.00	0.00	12.00	0.00Z
Aplicar Fertilisante	0.00	0.00	0.00	ERR
Aplicar Pesticidas	10.00	11.00	21.00	52.38Z
Cortar Madera	4.00	0.00	4.00	0.00Z
TOTALES	49.00	11.00	60.00	ERR

Cuadro 9. Costos de insumos y MOC por actividad (\$/parcela).

ACTIVIDAD	INSUMOS	MOC	TOTAL INSUMOS (Z)	
Preparar el Terreno	0.00	0.00	0.00	ERR
Sembrar	1500.00	0.00	1500.00	100.00Z
Aplicar Fertilisante	662.00	0.00	662.00	100.00Z
Aplicar Pesticidas	2698.00	1100.00	3798.00	71.04Z
Cortar Madera	2400.00	0.00	2400.00	100.00Z

CUADRO 1. RESUMEN DE COSTOS Y BENEFICIOS.

Agricultor : Farm 4

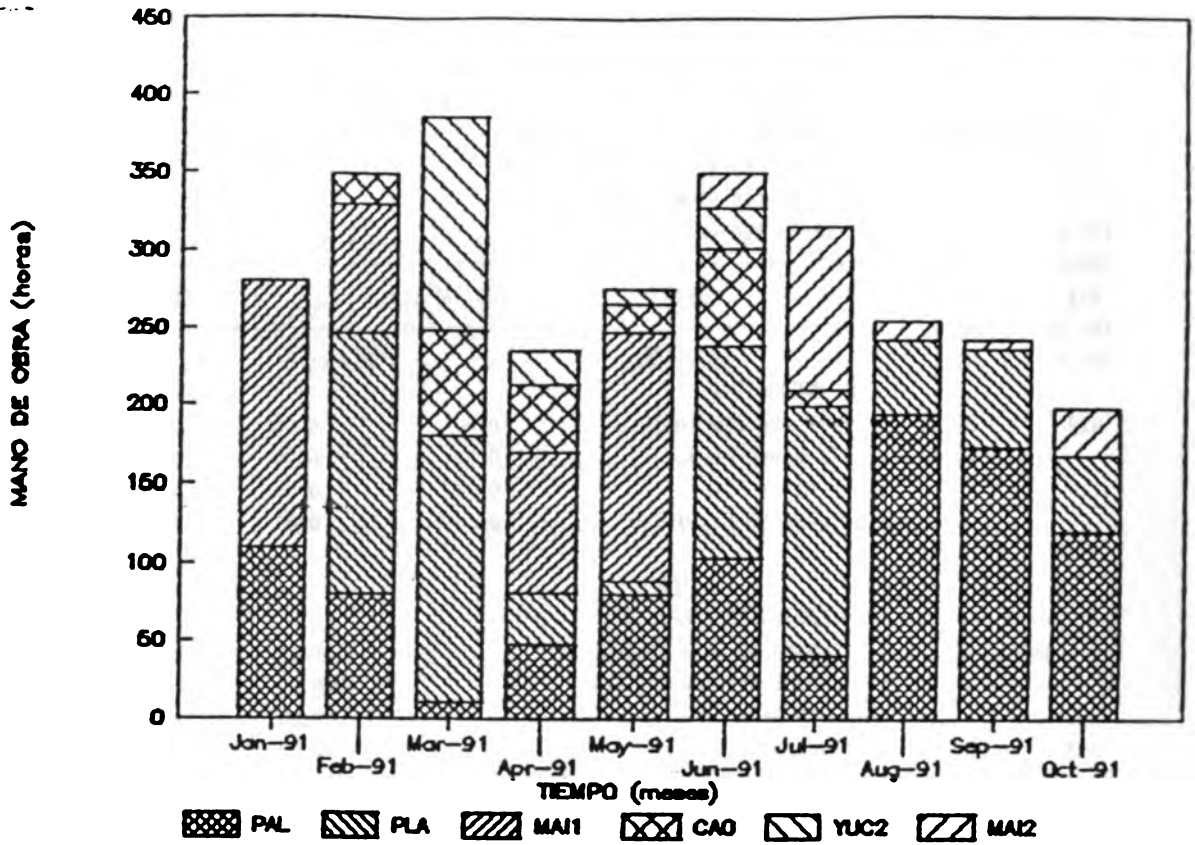
Area finca : 14.96 ha

Agroecosistema: Ayote

Area Agroec. : 1.25 ha

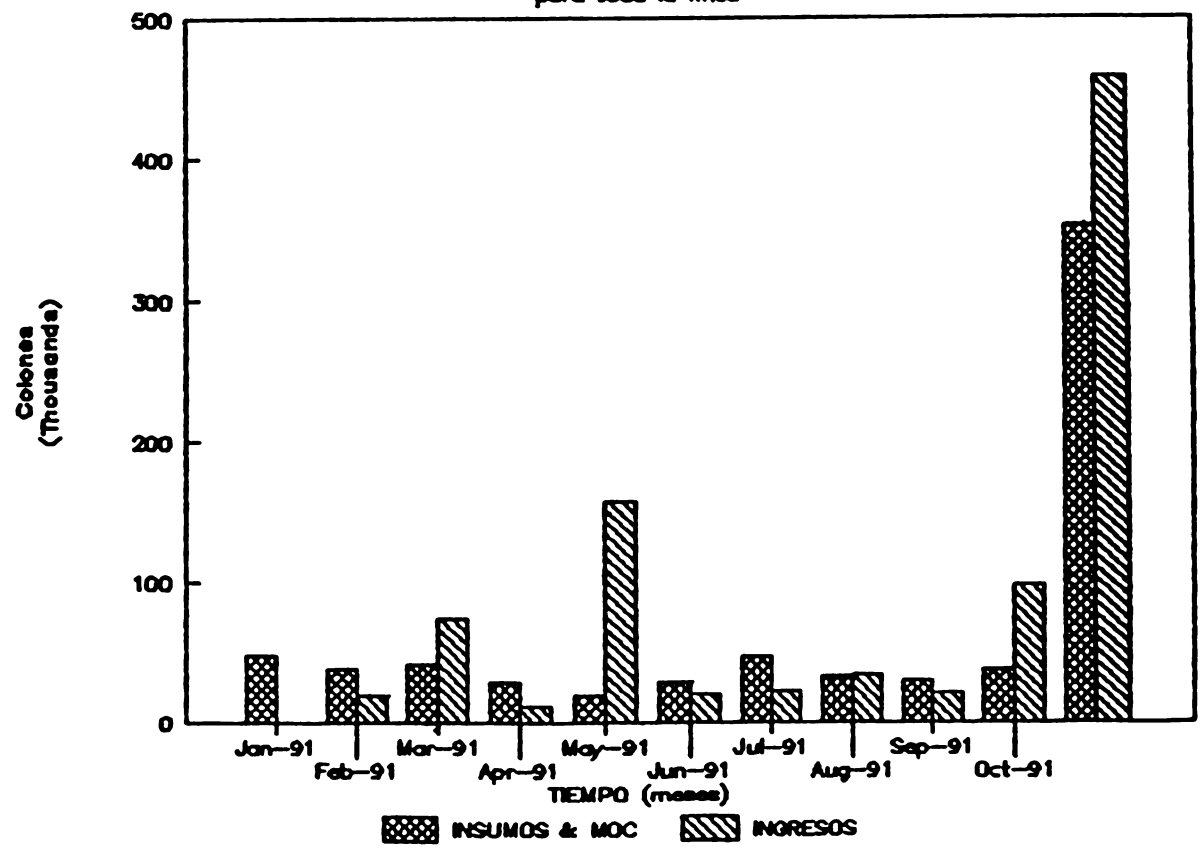
RUBRO	POR PARCELA		POR HECTAREA	
	Kg	Económico	Kg	Económico
<b>INGRESOS</b>				
<b>PRODUCCION:</b>				
Producción vendida	0.00	0.00	0.00	0.00
Consumo Flia.	0.00	0.00	0.00	0.00
Otros	0.00	0.00	0.00	0.00
<b>INGRESO BRUTO</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>COSTOS</b>				
<b>COSTOS DE OPERACION</b>				
Mano de obra Contratada		1100.00		880.00
Mano de obra Familiar		4900.00		3920.00
Insumos		7260.00		5808.00
Otros		0.00		0.00
<b>Total Costos de Operación</b>		<b>13260.00</b>		<b>10608.00</b>
<b>OTROS COSTOS</b>				
Alquiler de la tierra		0.00		0.00
Interés (5% Cost.Oper.)		0.00		0.00
Administración (10% C.OP.)		0.00		0.00
<b>Total Otros Costos</b>		<b>0.00</b>		<b>0.00</b>
<b>COSTOS TOTALES</b>		<b>13260.00</b>		<b>10608.00</b>
<b>GANANCIA ó PERDIDA</b>				
Value added		-7260.0		-5808.0
Gross margin		-8360.00		-6688.00
<b>Net margin</b>		<b>-13260.00</b>		<b>-10608.00</b>
<b>INDICES DE EFICIENCIA</b>				
Beneficio total/(MOC+INSUMOS)		0.00		0.00
Beneficio total/Costo Total		0.00		0.00
Retorno neto al capital efectivo en insumos		-0.83		-0.83
Retorno a Mano de Obra		-121.00		-121.00
Retorno a M.O. Familiar		-170.61		-170.61
Retorno neto a tierra		-13260.00		-10608.00

## Uso de MO mensual por agroecosistema



## Flujo de costos e ingresos por mes

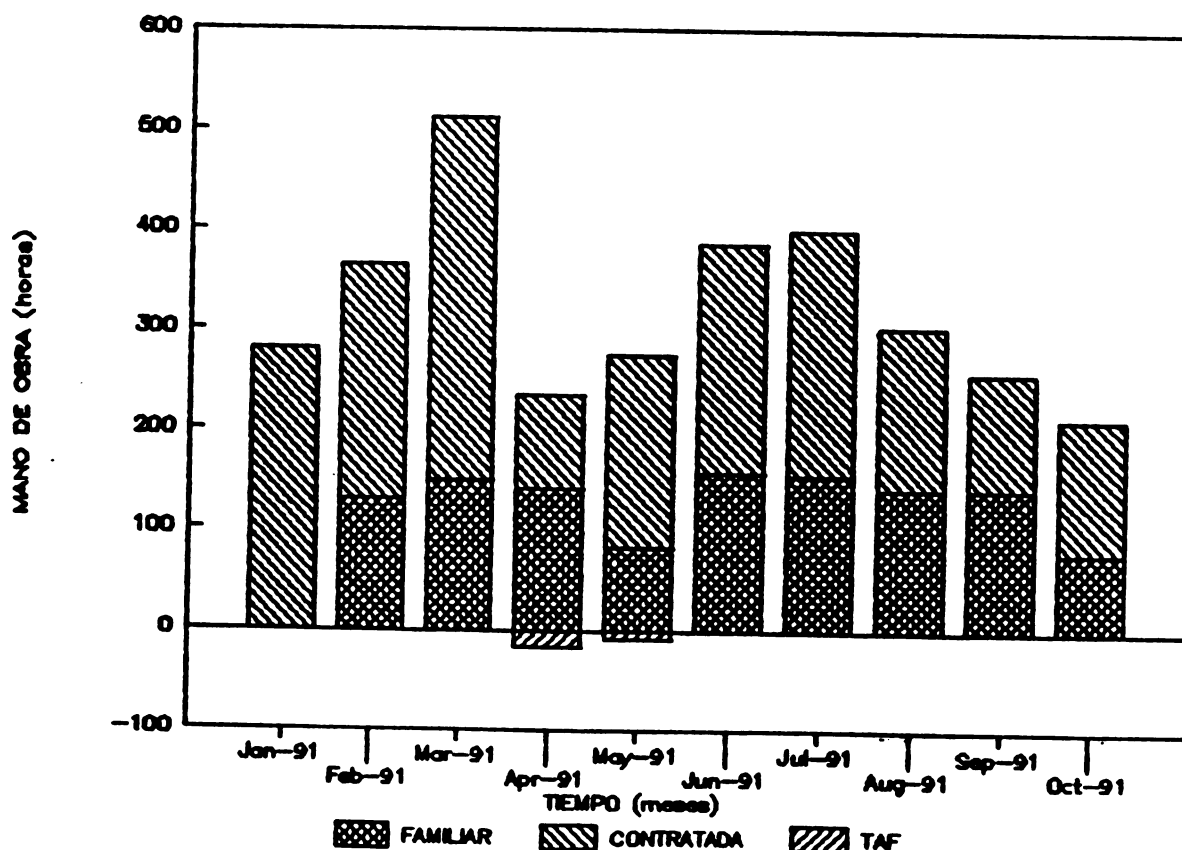
para toda la finca



## Data output of farm 4

### Summary of the economic activities of farm 4

AGROECOSISTEMA	AREA	ING. BRUTO	INSUMOS	NOC	Gr. margin	MOF (h)	RET. MOF
Ayote	1.25	0.00	7260.00	1100.00	-8360.00	49.00	-170.61
Bamboe	1.00	0.00	0.00	0.00	0.00	5.00	0.00
Cacao	1.66	31449.20	0.00	9740.00	21709.20	102.00	212.84
Ganado	1.00	42000.00	16000.00	0.00	26000.00	7.00	3714.29
Maize	2.85	135952.00	21687.67	34910.00	79354.33	94.00	844.19
Maize	1.17	15000.00	9370.80	7130.00	-1500.80	95.00	-15.80
Mantenimiento	1.00	0.00	0.00	500.00	-500.00	5.00	-100.00
Palmito	2.87	39315.00	54534.88	74360.00	-89579.88	344.00	-260.41
Pasto	6.7	0	820	8370	-9190	34	-270.294
Platano	2.59	142480	38101.9076	39650	64728.0924	357.5	181.0576
Trabajar afuera	1	0	0	0	0	24	0
Yuca	1.12	51501.6	4000.0156	9879.93	37621.6544	33	1140.050
Yuca	1.12	0	3209.096	11260	-14469.096	58	-249.467
<b>TOTALES</b>	<b>25.33</b>	<b>457697.80</b>	<b>154984.38</b>	<b>196899.93</b>	<b>105813.49</b>	<b>1207.50</b>	<b>87.63</b>



Family labour, hired labour and off farm work per month.

yuca

Cuadro 7. Flujo mensual de costos de insumos y MU contratada (\$/parcela).

	Insumos	MU contratada	TOTAL
Jan-91	0.00	0.00	0.00
Feb-91	0.00	0.00	0.00
Mar-91	0.00	0.00	0.00
Apr-91	0.00	0.00	0.00
May-91	0.00	0.00	0.00
Jun-91	0.00	0.00	0.00
Jul-91	0.00	0.00	0.00
Aug-91	0.00	2000.00	2000.00
Sep-91	0.00	0.00	0.00
Oct-91	800.00	1000.00	1800.00
<b>TOTALES</b>	<b>800.00</b>	<b>3000.00</b>	<b>3800.00</b>

Cuadro 19. Flujo mensual acumulado de ingresos y egresos (¢).

	INGRESOS	EGRESOS	DIFERENCIA
Jan-91	0.00	0.00	0.00
Feb-91	0.00	0.00	0.00
Mar-91	0.00	0.00	0.00
Apr-91	0.00	0.00	0.00
May-91	0.00	0.00	0.00
Jun-91	0.00	0.00	0.00
Jul-91	0.00	0.00	0.00
Aug-91	0.00	2000.00	-2000.00
Sep-91	0.00	0.00	0.00
Oct-91	0.00	1800.00	-1800.00
<b>TOTALES</b>	<b>0.00</b>	<b>3800.00</b>	<b>-3800.00</b>



yuca

Cuadro 2. Flujo mensual de mano de obra (horas/ha).

	FAMILIAR	CONTRATADA	TOTAL
Jan-91	0.00	0.00	0.00
Feb-91	0.00	0.00	0.00
Mar-91	131.43	0.00	131.43
Apr-91	11.43	0.00	11.43
May-91	51.43	0.00	51.43
Jun-91	0.00	0.00	0.00
Jul-91	0.00	0.00	0.00
Aug-91	0.00	57.14	57.14
Sep-91	0.00	0.00	0.00
Oct-91	34.29	28.57	62.86
TOTALES	228.57	85.71	314.29

Cuadro 3. Flujo mensual de costos de insumos y MD contratada (\$/ha).

	Insumos	MD contratada	TOTAL
Jan-91	0.00	0.00	0.00
Feb-91	0.00	0.00	0.00
Mar-91	0.00	0.00	0.00
Apr-91	0.00	0.00	0.00
May-91	0.00	0.00	0.00
Jun-91	0.00	0.00	0.00
Jul-91	0.00	0.00	0.00
Aug-91	0.00	5714.29	5714.29
Sep-91	0.00	0.00	0.00
Oct-91	2285.71	2857.14	5142.86
TOTALES	2285.71	8571.43	10857.14

Cuadro 6. Flujo mensual de mano de obra por parcela (horas/parcela).

	FAMILIAR	CONTRATADA	TOTAL
Jan-91	0.00	0.00	0.00
Feb-91	0.00	0.00	0.00
Mar-91	46.00	0.00	46.00
Apr-91	4.00	0.00	4.00
May-91	18.00	0.00	18.00
Jun-91	0.00	0.00	0.00
Jul-91	0.00	0.00	0.00
Aug-91	0.00	20.00	20.00
Sep-91	0.00	0.00	0.00
Oct-91	12.00	10.00	22.00
TOTALES	80.00	30.00	110.00

yuca

Cuadro 4. Mano de obra por actividad (horas/ha).

ACTIVIDAD	FAMILIAR	CONTRATADA	TOTAL MOC (Z)	MOC (€)	
Sembrar	11.43	0.00	11.43	0.00%	0.00
Sacar Semilla	157.14	0.00	157.14	0.00%	0.00
Limpiar	14.29	85.71	100.00	85.71%	8571.43
Aplicar Pesticidas	34.29	0.00	34.29	0.00%	0.00
Cosechar	11.43	0.00	11.43	0.00%	0.00
<b>TOTALES</b>	<b>228.57</b>	<b>85.71</b>	<b>314.29</b>	<b>0.86</b>	<b>8571.43</b>

Cuadro 5. Costos de insumos y MOC por actividad (\$/ha).

ACTIVIDAD	INSUMOS	MOC	TOTAL INSUMOS (Z)
Sembrar	0.00	0.00	0.00 ERR
Sacar Semilla	0.00	0.00	0.00 ERR
Limpiar	0.00	8571.43	8571.43 0.00%
Aplicar Pesticidas	2285.71	0.00	2285.71 100.00%
Cosechar	0.00	0.00	0.00 ERR
<b>TOTALES</b>	<b>2285.71</b>	<b>8571.43</b>	<b>10857.14 ERR</b>

Cuadro 8. Mano de obra por actividad (horas/parcela).

ACTIVIDAD	FAMILIAR	CONTRATADA	TOTAL MOC (Z)	MOC (€)	
Sembrar	4.00	0.00	4.00	0.00%	0.00%
Sacar Semilla	55.00	0.00	55.00	0.00%	0.00%
Limpiar	5.00	30.00	35.00	85.71%	30000.00%
Aplicar Pesticidas	12.00	0.00	12.00	0.00%	0.00%
Cosechar	4.00	0.00	4.00	0.00%	0.00%
<b>TOTALES</b>	<b>80.00</b>	<b>30.00</b>	<b>110.00</b>	<b>0.86</b>	<b>3000.00</b>

Cuadro 9. Costos de insumos y MOC por actividad (\$/parcela).

ACTIVIDAD	INSUMOS	MOC	TOTAL INSUMOS (Z)
Sembrar	0.00	0.00	0.00 ERR
Sacar Semilla	0.00	0.00	0.00 ERR
Limpiar	0.00	3000.00	3000.00 0.00%
Aplicar Pesticidas	800.00	0.00	800.00 100.00%
Cosechar	0.00	0.00	0.00 ERR

CUADRO 1. RESUMEN DE COSTOS Y BENEFICIOS.

Agricultor : Farm 2  
 Area finca : 16.20 ha  
 Agroecosistema: Yuca  
 Area Agroec. : 0.35 ha

RUBRO	POR PARCELA		POR HECTAREA	
	Kg	Económico	Kg	Económico
<b>INGRESOS</b>				
<b>PRODUCCION:</b>				
Producción vendida	0.00	0.00	0.00	0.00
Consumo Flia.	0.00	0.00	0.00	0.00
Otros	0.00	0.00	0.00	0.00
<b>INGRESO BRUTO</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>COSTOS</b>				
<b>COSTOS DE OPERACION</b>				
Mano de obra Contratada		3000.00		8571.43
Mano de obra Familiar		8000.00		22857.14
Insumos		800.00		2285.71
Otros		0.00		0.00
<b>Total Costos de Operación</b>		<b>11800.00</b>		<b>33714.29</b>
<b>OTROS COSTOS</b>				
Alquiler de la tierra		0.00		0.00
Interés (5% Cost.Oper.)		0.00		0.00
Administración (10% C.ÚP.)		0.00		0.00
<b>Total Otros Costos</b>		<b>0.00</b>		<b>0.00</b>
<b>COSTOS TOTALES</b>		<b>11800.00</b>		<b>33714.29</b>
<b>GANANCIA &amp; PERDIDA</b>				
Value added		-800.0		-2285.71
Gross margin		-3800.00		-10857.14
<b>Net margin</b>		<b>-11800.00</b>		<b>-33714.29</b>
<b>INDICES DE EFICIENCIA</b>				
Beneficio total/(MOC+INSUMOS)		0.00		0.00
Beneficio total/Costo Total		0.00		0.00
Retorno neto al capital efectivo en insumos		-13.75		-13.75
Retorno a Mano de Obra		-7.27		-7.27
Retorno a M.O. Familiar		-47.50		-47.50
Retorno neto a tierra		-11800.00		-33714.29

maize 1

Cuadro 6. Flujo mensual de mano de obra por parcela (horas/parcela).

	FAMILIAR	CONTRATADA	TOTAL
Jan-91	80.00	0.00	80.00
Feb-91	24.00	0.00	24.00
Mar-91	48.00	0.00	48.00
Apr-91	23.00	0.00	23.00
May-91	31.00	0.00	31.00
Jun-91	0.00	0.00	0.00
Jul-91	0.00	0.00	0.00
Aug-91	0.00	0.00	0.00
Sep-91	0.00	0.00	0.00
Oct-91	3.00	0.00	3.00
<b>TOTALES</b>	<b>209.00</b>	<b>0.00</b>	<b>209.00</b>

Cuadro 7. Flujo mensual de costos de insumos y MO contratada (\$/parcela)

	Insumos	MO contratada	TOTAL
Jan-91	5049.97	0.00	5049.97
Feb-91	2262.49	0.00	2262.49
Mar-91	2737.49	0.00	2737.49
Apr-91	0.00	0.00	0.00
May-91	1012.89	0.00	1012.89
Jun-91	0.00	0.00	0.00
Jul-91	0.00	0.00	0.00
Aug-91	0.00	0.00	0.00
Sep-91	0.00	0.00	0.00
Oct-91	524.93	0.00	524.93
<b>TOTALES</b>	<b>11587.78</b>	<b>0.00</b>	<b>11587.78</b>

Cuadro 19. Flujo mensual acumulado de ingresos y egresos (¢).

	INGRESOS	EGRESOS	DIFERENCIA
Jan-91	0.00	5049.97	-5049.97
Feb-91	0.00	2262.49	-2262.49
Mar-91	0.00	2737.49	-2737.49
Apr-91	0.00	0.00	0.00
May-91	0.00	1012.89	-1012.89
Jun-91	32760.00	0.00	32760.00
Jul-91	0.00	0.00	0.00
Aug-91	0.00	0.00	0.00
Sep-91	0.00	0.00	0.00
Oct-91	0.00	524.93	-524.93
<b>TOTALES</b>	<b>32760.00</b>	<b>11587.78</b>	<b>21172.22</b>

maize 1

Cuadro 4. Mano de obra por actividad (horas/ha).

ACTIVIDAD	FAMILIAR	CONTRATADA	TOTAL MOC (%)	
Sembrar	0.00	0.00	0.00	ERR
Resembrar	23.33	0.00	23.33	0.00%
Chapear	75.56	0.00	75.56	0.00%
Limpiar	4.44	0.00	4.44	0.00%
Aplicar Fertilisante	15.56	0.00	15.56	0.00%
Aplicar Pesticidas	94.44	0.00	94.44	0.00%
Doblar Malz	13.33	0.00	13.33	0.00%
Cortar Madera	5.56	0.00	5.56	0.00%
Cosechar	0.00	0.00	0.00	ERR
<b>TOTALES</b>	<b>232.22</b>	<b>0.00</b>	<b>232.22</b>	<b>ERR</b>

Cuadro 5. Costos de insumos y MOC por actividad (\$/ha).

ACTIVIDAD	INSUMOS	MOC	TOTAL INSUMOS (%)	
Sembrar	1111.11	0.00	1111.11	100.00%
Resembrar	0.00	0.00	0.00	ERR
Chapear	0.00	0.00	0.00	ERR
Limpiar	0.00	0.00	0.00	ERR
Aplicar Fertilisante	583.25	0.00	583.25	100.00%
Aplicar Pesticidas	11180.95	0.00	11180.95	100.00%
Doblar Malz	0.00	0.00	0.00	ERR
Cortar Madera	0.00	0.00	0.00	ERR
Cosechar	0.00	0.00	0.00	ERR
<b>TOTALES</b>	<b>12875.31</b>	<b>0.00</b>	<b>12875.31</b>	<b>ERR</b>

Cuadro 8. Mano de obra por actividad (horas/parcela).

ACTIVIDAD	FAMILIAR	CONTRATADA	TOTAL MOC (%)	
Sembrar	0.00	0.00	0.00	ERR
Resembrar	21.00	0.00	21.00	0.00%
Chapear	68.00	0.00	68.00	0.00%
Limpiar	4.00	0.00	4.00	0.00%
Aplicar Fertilisante	14.00	0.00	14.00	0.00%
Aplicar Pesticidas	85.00	0.00	85.00	0.00%
Doblar Malz	12.00	0.00	12.00	0.00%
Cortar Madera	5.00	0.00	5.00	0.00%
Cosechar	0.00	0.00	0.00	ERR
<b>TOTALES</b>	<b>209.00</b>	<b>0.00</b>	<b>209.00</b>	<b>ERR</b>

maize 1

Cuadro 9. Costos de insumos y MOC por actividad (\$/parcela).

ACTIVIDAD	INSUMOS	MOC	TOTAL	INSUMOS (%)
Sembrar	1000.00	0.00	1000.00	100.00%
Resembrar	0.00	0.00	0.00	ERR
Chapear	0.00	0.00	0.00	ERR
Limpiar	0.00	0.00	0.00	ERR
Aplicar Fertilizante	524.93	0.00	524.93	100.00%
Aplicar Pesticidas	10062.85	0.00	10062.85	100.00%
Doblar Maiz	0.00	0.00	0.00	ERR
Cortar Madera	0.00	0.00	0.00	ERR
Cosechar	0.00	0.00	0.00	ERR
<b>TOTALES</b>	<b>11587.78</b>	<b>0.00</b>	<b>11587.78</b>	<b>ERR</b>

Cuadro 2. Flujo mensual de mano de obra (horas/ha).

	FAMILIAR	CONTRATADA	TOTAL
Jan-91	88.89	0.00	88.89
Feb-91	26.67	0.00	26.67
Mar-91	53.33	0.00	53.33
Apr-91	25.56	0.00	25.56
May-91	34.44	0.00	34.44
Jun-91	0.00	0.00	0.00
Jul-91	0.00	0.00	0.00
Aug-91	0.00	0.00	0.00
Sep-91	0.00	0.00	0.00
Oct-91	3.33	0.00	3.33
<b>TOTALES</b>	<b>232.22</b>	<b>0.00</b>	<b>232.22</b>

Cuadro 3. Flujo mensual de costos de insumos y MO contratada (\$/ha).

	Insumos	MO contratada	TOTAL
Jan-91	5611.08	0.00	5611.08
Feb-91	2513.88	0.00	2513.88
Mar-91	3041.66	0.00	3041.66
Apr-91	0.00	0.00	0.00
May-91	1125.43	0.00	1125.43
Jun-91	0.00	0.00	0.00
Jul-91	0.00	0.00	0.00
Aug-91	0.00	0.00	0.00
Sep-91	0.00	0.00	0.00
Oct-91	583.25	0.00	583.25
<b>TOTALES</b>	<b>12875.31</b>	<b>0.00</b>	<b>12875.31</b>

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Cuadro 9. Costos de insumos y MOC por actividad (\$/parcela).

ACTIVIDAD	INSUMOS	MOC	TOTAL INSUMOS (2)	
Preparar el Terreno	0.00	0.00	0.00	ERR
Sembrar	6670.00	4370.08	11040.08	60.42%
Alistar Semilla	4500.00	0.00	4500.00	100.00%
Embolsar	0.00	680.04	680.04	0.00%
Chapear	0.00	16305.00	16305.00	0.00%
Limpiar	0.00	8000.00	8000.00	0.00%
Acordenar	0.00	0.00	0.00	ERR
Rodajear	0.00	1600.00	1600.00	0.00%
Aplicar Fertilizante	11592.75	0.00	11592.75	100.00%
Aplicar Pesticidas	19995.61	400.00	20395.61	98.04%
Cosechar	0.00	0.00	0.00	ERR
<b>TOTALES</b>	<b>42758.36</b>	<b>31355.12</b>	<b>74113.48</b>	<b>ERR</b>

Cuadro 2. Flujo mensual de mano de obra (horas/ha).

	FAMILIAR	CONTRATADA	TOTAL
Jun-90	0.00	0.00	0.00
Jul-90	0.97	7.74	8.71
Aug-90	42.26	79.03	121.29
Sep-90	18.39	9.03	27.42
Oct-90	21.61	10.00	31.61
Nov-90	35.81	22.90	58.71
Dec-90	0.00	0.00	0.00
Jan-91	65.81	0.00	65.81
Feb-91	35.48	0.00	35.48
Mar-91	0.00	3.23	3.23
Apr-91	0.00	0.00	0.00
May-91	56.13	74.19	130.32
Jun-91	0.00	12.90	12.90
Jul-91	0.00	0.00	0.00
Aug-91	2.58	5.16	7.74
Sep-91	24.19	0.00	24.19
Oct-91	22.58	0.00	22.58
Nov-91	0.00	0.00	0.00
<b>TOTALES</b>	<b>325.81</b>	<b>224.19</b>	<b>550.00</b>

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Cuadro 4. Mano de obra por actividad (horas/ha).

ACTIVIDAD	FAMILIAR	CONTRATADA	TOTAL MOC (Z)	
Preparar el Terreno	9.35	0.00	9.35	0.00%
Sembrar	21.29	46.45	67.74	68.57%
Alistar Semilla	0.97	0.00	0.97	0.00%
Embolsar	0.00	7.74	7.74	100.00%
Chapear	55.81	148.71	204.52	72.71%
Limpiar	0.00	5.16	5.16	100.00%
Acordenar	3.23	0.00	3.23	0.00%
Rodajear	48.39	12.90	61.29	21.05%
Aplicar Fertilisante	0.00	0.00	0.00	ERR
Aplicar Pesticidas	182.26	3.23	185.48	1.74%
Cosechar	4.52	0.00	4.52	0.00%
<b>TOTALES</b>	<b>325.81</b>	<b>224.19</b>	<b>550.00</b>	<b>ERR</b>

Cuadro 5. Costos de insumos y MOC por actividad (\$/ha).

ACTIVIDAD	INSUMOS	MOC	TOTAL INSUMOS (Z)	
Preparar el Terreno	0.00	0.00	0.00	ERR
Sembrar	4303.23	2819.40	7122.63	60.42%
Alistar Semilla	2903.23	0.00	2903.23	100.00%
Embolsar	0.00	438.74	438.74	0.00%
Chapear	0.00	10519.35	10519.35	0.00%
Limpiar	0.00	5161.29	5161.29	0.00%
Acordenar	0.00	0.00	0.00	ERR
Rodajear	0.00	1032.26	1032.26	0.00%
Aplicar Fertilisante	7479.19	0.00	7479.19	100.00%
Aplicar Pesticidas	12900.39	258.06	13158.46	98.04%
Cosechar	0.00	0.00	0.00	ERR
<b>TOTALES</b>	<b>27586.04</b>	<b>20229.11</b>	<b>47815.15</b>	<b>ERR</b>

Cuadro 8. Mano de obra por actividad (horas/parcela).

ACTIVIDAD	FAMILIAR	CONTRATADA	TOTAL MOC (Z)	
Preparar el Terreno	14.50	0.00	14.50	0.00%
Sembrar	33.00	72.00	105.00	68.57%
Alistar Semilla	1.50	0.00	1.50	0.00%
Embolsar	0.00	12.00	12.00	100.00%
Chapear	86.50	230.50	317.00	72.71%
Limpiar	0.00	8.00	8.00	100.00%
Acordenar	5.00	0.00	5.00	0.00%
Rodajear	75.00	20.00	95.00	21.05%
Aplicar Fertilisante	0.00	0.00	0.00	ERR
Aplicar Pesticidas	282.50	5.00	287.50	1.74%
Cosechar	7.00	0.00	7.00	0.00%
<b>TOTALES</b>	<b>505.00</b>	<b>347.50</b>	<b>852.50</b>	<b>ERR</b>

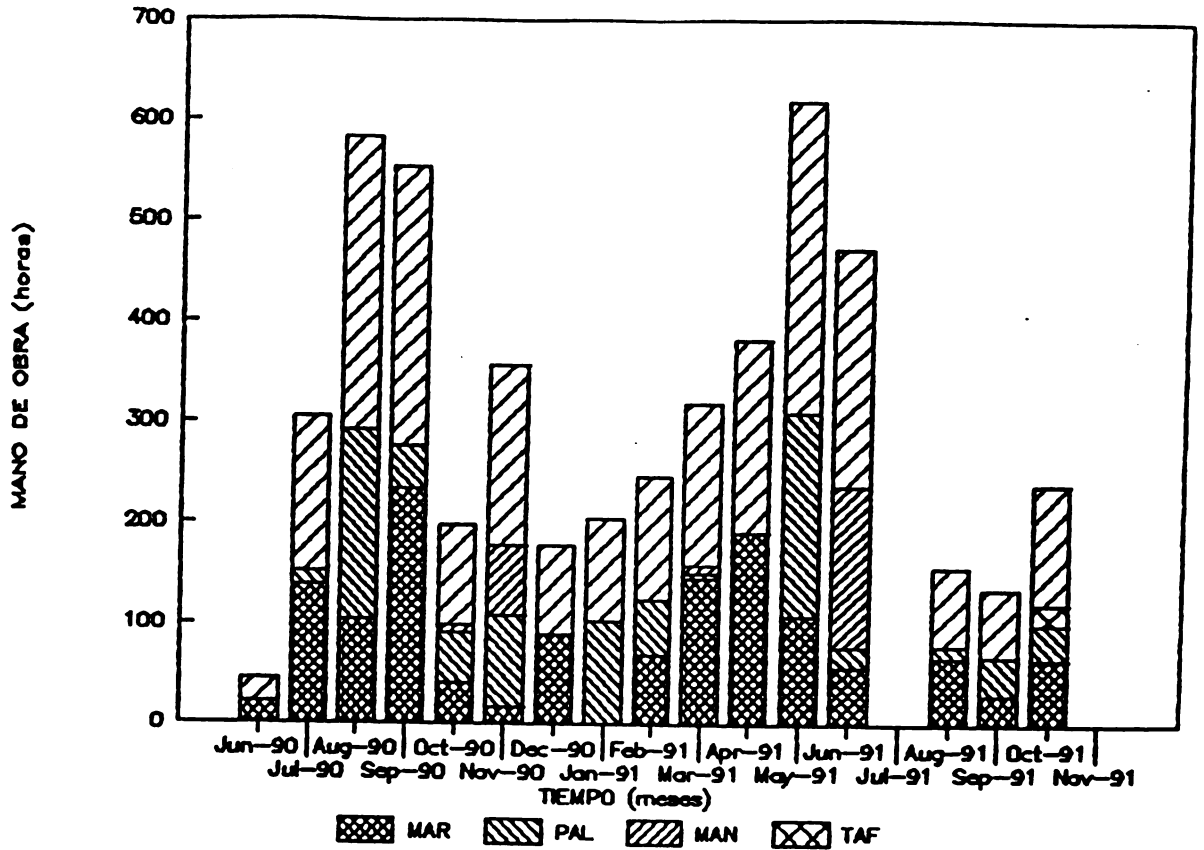


**CUADRO 1. RESUMEN DE COSTOS Y BENEFICIOS.**

Agricultor : farm 10  
 Area finca : 12.51 ha  
 Agroecosistema: Palmito  
 Area Agroec. : 1.55 ha

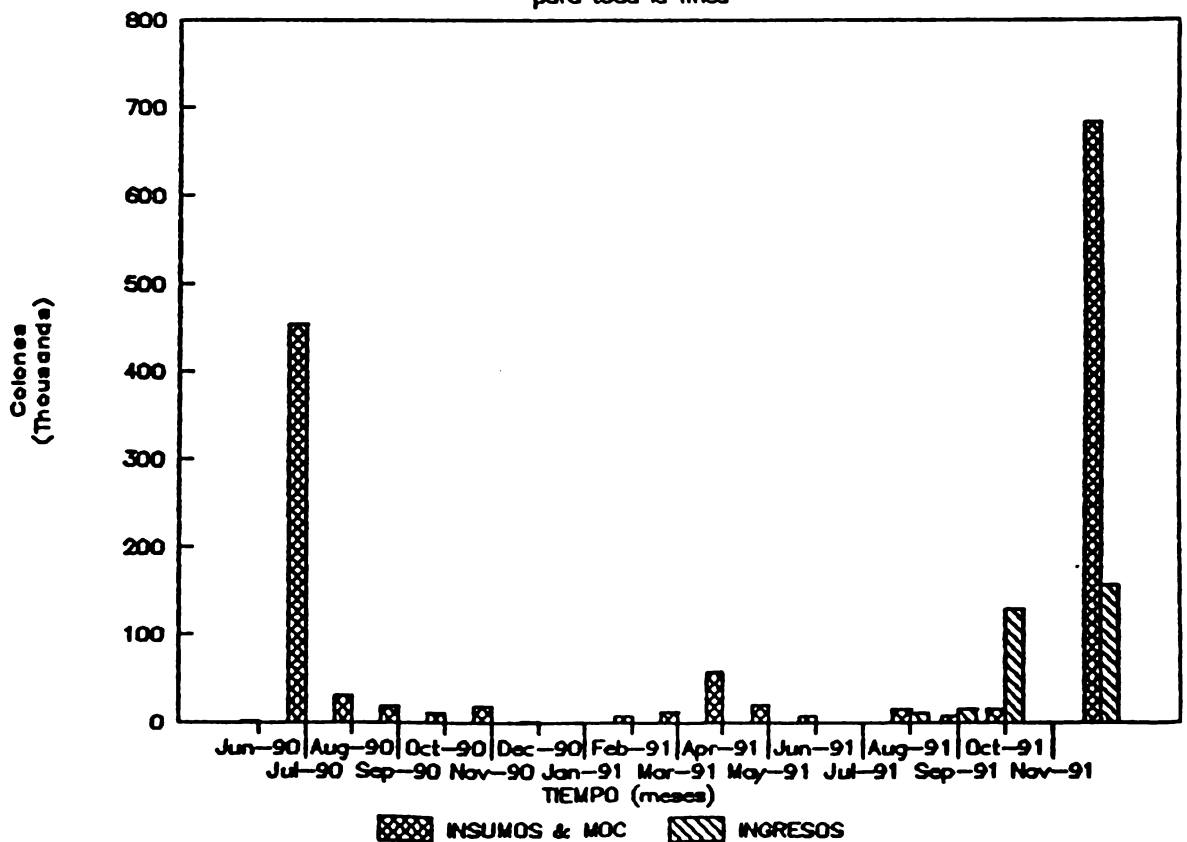
RUBRO	POR PARCELA		POR HECTAREA	
	Kg	Económico	Kg	Económico
<b>INGRESOS</b>				
<b>PRODUCCION:</b>				
Producción vendida	120.00	5340.00	77.42	3445.16
Consumo Flia.	0.00	0.00	0.00	0.00
Otros	0.00	0.00	0.00	0.00
<b>INGRESO BRUTO</b>	<b>120.00</b>	<b>5340.00</b>	<b>77.42</b>	<b>3445.16</b>
<b>COSTOS</b>				
<b>COSTOS DE OPERACION</b>				
Mano de obra Contratada		31355.12		20229.11
Mano de obra Familiar		50500.00		32580.65
Insumos		42758.36		27586.04
Otros		0.00		0.00
<b>Total Costos de Operación</b>		<b>124613.48</b>		<b>80395.79</b>
<b>OTROS COSTOS</b>				
Alquiler de la tierra		0.00		0.00
Interés (5% Cost.Oper.)		0.00		0.00
Administración (10% C.OP.)		0.00		0.00
<b>Total Otros Costos</b>		<b>0.00</b>		<b>0.00</b>
<b>COSTOS TOTALES</b>		<b>124613.48</b>		<b>80395.79</b>
<b>GANANCIA ó PERDIDA</b>				
Value added		-37418.4		-24140.9
Gross margin		-68773.48		-44369.98
<b>Net margin</b>		<b>-119273.48</b>		<b>-76950.63</b>
<b>INDICES DE EFICIENCIA</b>				
Beneficio total/(NOC+INSUMOS)		0.07		0.07
Beneficio total/Costo Total		0.04		0.04
Retorno neto al capital efectivo en insumos		-1.79		-1.79
Retorno a Mano de Obra		-43.89		-43.89
Retorno a M.O. Familiar		-136.19		-136.19
Retorno neto a tierra		-119273.48		-76950.63

## Uso de MO mensual por agroecosistema



## Flujo de costos e ingresos por mes

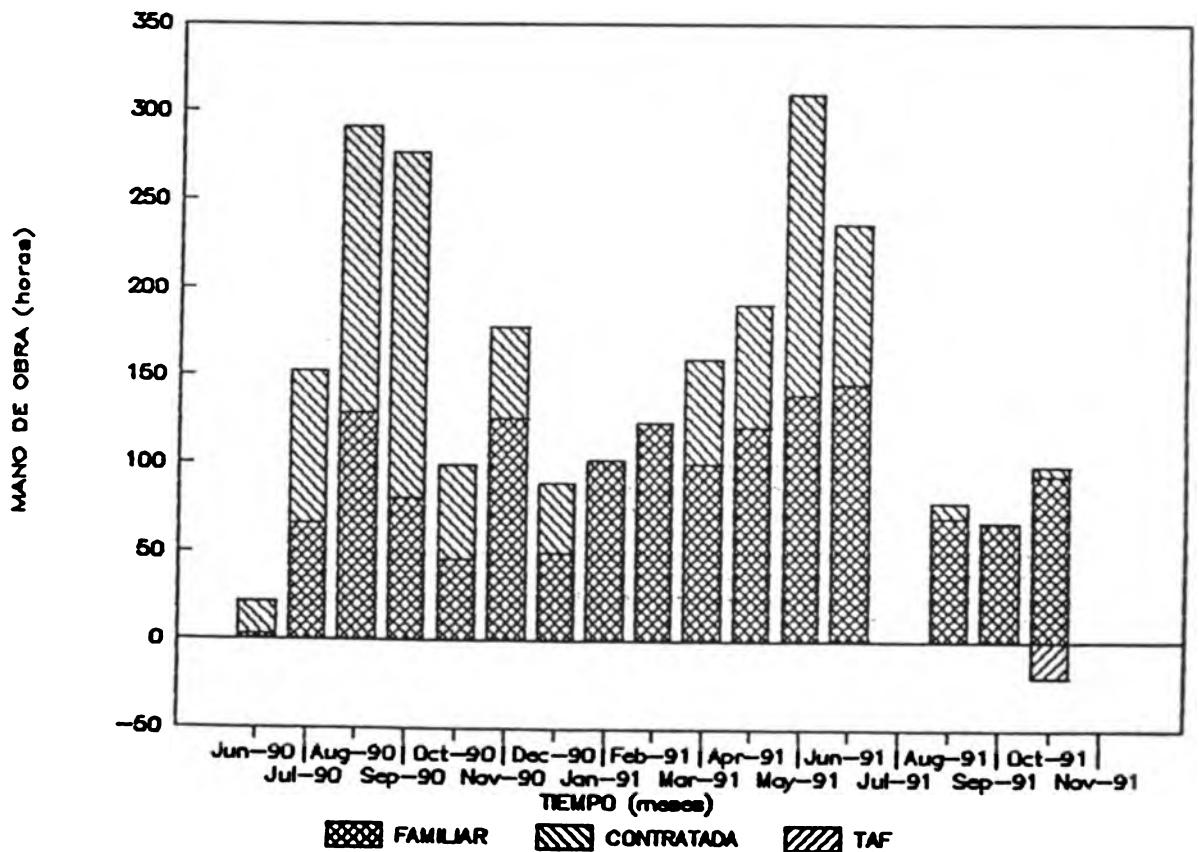
para toda la finca



## Data output of farm 10

### Summary of the economic activities of farm 10

AGROECOSISTEMA	AREA	ING. BRUTO	INSUMOS	MOC	Gr. margin	MOF (h)	RET. MOF
Mantenimiento	1.00	0.00	2300.00	6310.00	-8610.00	167.00	-51.56
Maracuya	1.81	125139.54	155004.57	427210.02	-457075.05	790.50	-578.21
Palmito	1.55	5340.00	42758.36	31355.12	-68773.48	505.00	-136.19
Trabajar afuera	1.00	26000.00	18180.00	0.00	7820.00	20.00	391.00
<b>TOTALES</b>	<b>5.36</b>	<b>156479.54</b>	<b>218242.93</b>	<b>464875.14</b>	<b>-526638.52</b>	<b>1482.50</b>	<b>-355.24</b>



Family labour, hired labour and off farm work.

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Cuadro 7. Flujo mensual de costos de insumos y MU contratada (\$/parcela)

	Insumos	MU contratada	TOTAL
Jan-91	20534.00	0.00	20534.00
Feb-91	19822.00	0.00	19822.00
Mar-91	16050.00	0.00	16050.00
Apr-91	15560.00	0.00	15560.00
May-91	14870.00	0.00	14870.00
Jun-91	17970.50	0.00	17970.50
Jul-91	15750.00	0.00	15750.00
Aug-91	19359.00	0.00	19359.00
Sep-91	25580.00	0.00	25580.00
Oct-91	28568.80	500.00	29068.80
<b>TOTALES</b>	<b>194064.30</b>	<b>500.00</b>	<b>194564.30</b>

Cuadro 19. Flujo mensual acumulado de ingresos y egresos (€).

	INGRESOS	EGRESOS	DIFERENCIA
Jan-91	50090.00	20534.00	29556.00
Feb-91	44070.00	19822.00	24248.00
Mar-91	30155.00	16050.00	14105.00
Apr-91	44619.95	15560.00	29059.95
May-91	36040.00	14870.00	21170.00
Jun-91	53710.00	17970.50	35739.50
Jul-91	62439.96	15750.00	46689.96
Aug-91	32820.01	19359.00	13461.01
Sep-91	44874.00	25580.00	19294.00
Oct-91	49105.00	29068.80	20036.20
<b>TOTALES</b>	<b>447923.92</b>	<b>194564.30</b>	<b>253359.62</b>

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Cuadro 2. Flujo mensual de mano de obra (horas/ha).

	FAMILIAR	CONTRATADA	TOTAL
Jan-91	245.00	0.00	245.00
Feb-91	72.00	0.00	72.00
Mar-91	128.00	0.00	128.00
Apr-91	129.60	0.00	129.60
May-91	97.00	0.00	97.00
Jun-91	179.00	0.00	179.00
Jul-91	152.00	0.00	152.00
Aug-91	75.50	0.00	75.50
Sep-91	88.00	0.00	88.00
Oct-91	84.00	5.00	89.00
<b>TOTALES</b>	<b>1250.10</b>	<b>5.00</b>	<b>1255.10</b>

Cuadro 3. Flujo mensual de costos de insumos y MO contratada (\$/ha).

	Insumos	MO contratada	TOTAL
Jan-91	20534.00	0.00	20534.00
Feb-91	19822.00	0.00	19822.00
Mar-91	16050.00	0.00	16050.00
Apr-91	15560.00	0.00	15560.00
May-91	14870.00	0.00	14870.00
Jun-91	17970.50	0.00	17970.50
Jul-91	15750.00	0.00	15750.00
Aug-91	19359.00	0.00	19359.00
Sep-91	25580.00	0.00	25580.00
Oct-91	28568.80	500.00	29068.80
<b>TOTALES</b>	<b>194064.30</b>	<b>500.00</b>	<b>194564.30</b>

Cuadro 6. Flujo mensual de mano de obra por parcela (horas/parcela).

	FAMILIAR	CONTRATADA	TOTAL
Jan-91	245.00	0.00	245.00
Feb-91	72.00	0.00	72.00
Mar-91	128.00	0.00	128.00
Apr-91	129.60	0.00	129.60
May-91	97.00	0.00	97.00
Jun-91	179.00	0.00	179.00
Jul-91	152.00	0.00	152.00
Aug-91	75.50	0.00	75.50
Sep-91	88.00	0.00	88.00
Oct-91	84.00	5.00	89.00
<b>TOTALES</b>	<b>1250.10</b>	<b>5.00</b>	<b>1255.10</b>

taf

Cuadro 4. Mano de obra por actividad (horas/ha).

ACTIVIDAD	FAMILIAR	CONTRATADA	TOTAL MOC (%)	
Cosechar	746.10	0.00	746.10	0.00%
Transportar	177.00	0.00	177.00	0.00%
Procesar Palmito	263.00	5.00	268.00	1.87%
Impuesto	64.00	0.00	64.00	0.00%
<b>TOTALES</b>	<b>1250.10</b>	<b>5.00</b>	<b>1255.10</b>	<b>0.02</b>

Cuadro 5. Costos de insumos y MOC por actividad (\$/ha).

ACTIVIDAD	INSUMOS	MOC	TOTAL INSUMOS (%)	
Cosechar	0.00	0.00	0.00	ERR
Transportar	29800.00	0.00	29800.00	100.00%
Procesar Palmito	158669.30	500.00	159169.30	99.69%
Impuesto	5595.00	0.00	5595.00	100.00%
<b>TOTALES</b>	<b>194064.30</b>	<b>500.00</b>	<b>194564.30</b>	<b>ERR</b>

Cuadro 8. Mano de obra por actividad (horas/parcela).

ACTIVIDAD	FAMILIAR	CONTRATADA	TOTAL MOC (%)	
Cosechar	746.10	0.00	746.10	0.00%
Transportar	177.00	0.00	177.00	0.00%
Procesar Palmito	263.00	5.00	268.00	1.87%
Impuesto	64.00	0.00	64.00	0.00%
<b>TOTALES</b>	<b>1250.10</b>	<b>5.00</b>	<b>1255.10</b>	<b>0.02</b>

Cuadro 9. Costos de insumos y MOC por actividad (\$/parcela).

ACTIVIDAD	INSUMOS	MOC	TOTAL INSUMOS (%)	
Cosechar	0.00	0.00	0.00	ERR
Transportar	29800.00	0.00	29800.00	100.00%
Procesar Palmito	158669.30	500.00	159169.30	99.69%
Impuesto	5595.00	0.00	5595.00	100.00%
<b>TOTALES</b>	<b>194064.30</b>	<b>500.00</b>	<b>194564.30</b>	<b>ERR</b>

**CUADRO 1. RESUMEN DE COSTOS Y BENEFICIOS.**

Agricultor : farm 9  
 Area finca : 10.76 ha  
 Agroecosistema: Trabajar afuera  
 Area Agroec. : 1.00 ha

RUBRO	POR PARCELA		POR HECTAREA	
	Kg	Económico	Kg	Económico
<b>INGRESOS</b>				
<b>PRODUCCION:</b>				
Producción vendida	10848.00	447923.92	10848.00	447923.92
Consumo Flia.	0.00	0.00	0.00	0.00
Otros	0.00	0.00	0.00	0.00
<b>INGRESO BRUTO</b>	<b>10848.00</b>	<b>447923.92</b>	<b>10848.00</b>	<b>447923.92</b>
<b>COSTOS</b>				
<b>COSTOS DE OPERACION</b>				
Mano de obra Contratada		500.00		500.00
Mano de obra Familiar		125010.00		125010.00
Insumos		194064.30		194064.30
Otros		0.00		0.00
<b>Total Costos de Operación</b>		<b>319574.30</b>		<b>319574.30</b>
<b>OTROS COSTOS</b>				
Alquiler de la tierra		0.00		0.00
Interés (5% Cost.Oper.)		0.00		0.00
Administración (10% C.OP.)		0.00		0.00
<b>Total Otros Costos</b>		<b>0.00</b>		<b>0.00</b>
<b>COSTOS TOTALES</b>		<b>319574.30</b>		<b>319574.30</b>
<b>GANANCIA &amp; PERDIDA</b>				
Value added		253859.6		253859.6
Gross margin		253359.62		253359.62
<b>Net margin</b>		<b>128349.62</b>		<b>128349.62</b>
<b>INDICES DE EFICIENCIA</b>				
Beneficio total/(MOC+INSUMOS)		2.30		2.30
Beneficio total/Costo Total		1.40		1.40
Retorno neto al capital efectivo en insumos		1.66		1.66
Retorno a Mano de Obra		202.26		202.26
Retorno a M.O. Familiar		202.67		202.67
Retorno neto a tierra		128349.62		128349.62

palmito

Cuadro 19. Flujo mensual acumulado de ingresos y egresos (¢).

	INGRESOS	EGRESOS	DIFERENCIA
Jan-91	40434.00	1389.85	39044.15
Feb-91	67942.00	25041.86	42900.14
Mar-91	13570.00	0.00	13570.00
Apr-91	11470.00	7239.99	4230.01
May-91	86790.00	3806.00	82984.00
Jun-91	22370.50	9910.95	12459.55
Jul-91	39270.00	7652.01	31617.99
Aug-91	51944.00	4404.50	47539.50
Sep-91	33600.00	3050.00	30550.00
Oct-91	58723.00	8784.99	49938.01
<b>TOTALES</b>	<b>426113.50</b>	<b>71280.15</b>	<b>354833.35</b>



palmito

Cuadro 3. Flujo mensual de costos de insumos y MD contratada (\$/ha).

	Insumos	MD contratada	TOTAL
Jan-91	356.37	0.00	356.37
Feb-91	5851.76	569.23	6420.99
Mar-91	0.00	0.00	0.00
Apr-91	1856.41	0.00	1856.41
May-91	463.08	512.82	975.90
Jun-91	2541.27	0.00	2541.27
Jul-91	1962.05	0.00	1962.05
Aug-91	1129.36	0.00	1129.36
Sep-91	782.05	0.00	782.05
Oct-91	2124.36	128.21	2252.56
TOTALES	17066.70	1210.26	18276.96

Cuadro 6. Flujo mensual de mano de obra por parcela (horas/parcela).

	FAMILIAR	CONTRATADA	TOTAL
Jan-91	108.00	0.00	108.00
Feb-91	289.00	23.00	312.00
Mar-91	71.00	0.00	71.00
Apr-91	79.00	0.00	79.00
May-91	90.00	20.00	110.00
Jun-91	250.00	0.00	250.00
Jul-91	205.00	0.00	205.00
Aug-91	237.00	0.00	237.00
Sep-91	68.00	0.00	68.00
Oct-91	167.50	5.00	172.50
TOTALES	1564.50	48.00	1612.50

Cuadro 7. Flujo mensual de costos de insumos y MD contratada (\$/parcela)

	Insumos	MD contratada	TOTAL
Jan-91	1389.85	0.00	1389.85
Feb-91	22821.86	2220.00	25041.86
Mar-91	0.00	0.00	0.00
Apr-91	7239.99	0.00	7239.99
May-91	1806.00	2000.00	3806.00
Jun-91	9910.95	0.00	9910.95
Jul-91	7652.01	0.00	7652.01
Aug-91	4404.50	0.00	4404.50
Sep-91	3050.00	0.00	3050.00
Oct-91	8284.99	500.00	8784.99
TOTALES	66560.15	4720.00	71280.15

palmito

Cuadro 8. Mano de obra por actividad (horas/parcela).

ACTIVIDAD	FAMILIAR	CONTRATADA	TOTAL MOC (Z)	
Preparar el Terreno	13.00	10.00	23.00	43.48%
Alistar Semilla	2.00	0.00	2.00	0.00%
Embolsar	6.00	5.00	11.00	45.45%
Chapear	63.00	0.00	63.00	0.00%
Limpiar	5.00	0.00	5.00	0.00%
Deshijar	64.00	0.00	64.00	0.00%
Deshojar	42.00	0.00	42.00	0.00%
Acordenar	397.00	15.00	412.00	3.64%
Rodajear	49.00	0.00	49.00	0.00%
Aplicar Fertilisante	99.00	0.00	99.00	0.00%
Aplicar Pesticidas	380.00	0.00	380.00	0.00%
Cosechar	444.50	18.00	462.50	3.89%
<b>TOTALES</b>	<b>1564.50</b>	<b>48.00</b>	<b>1612.50</b>	<b>0.96</b>

Cuadro 9. Costos de insumos y MOC por actividad (\$/parcela).

ACTIVIDAD	INSUMOS	MOC	TOTAL INSUMOS (Z)	
Preparar el Terreno	0.00	1000.00	1000.00	0.00%
Alistar Semilla	6800.00	0.00	6800.00	100.00%
Embolsar	450.00	420.00	870.00	51.72%
Chapear	0.00	0.00	0.00	ERR
Limpiar	0.00	0.00	0.00	ERR
Deshijar	0.00	0.00	0.00	ERR
Deshojar	0.00	0.00	0.00	ERR
Acordenar	0.00	1500.00	1500.00	0.00%
Rodajear	0.00	0.00	0.00	ERR
Aplicar Fertilisante	33830.35	0.00	33830.35	100.00%
Aplicar Pesticidas	25479.80	0.00	25479.80	100.00%
Cosechar	0.00	1800.00	1800.00	0.00%
<b>TOTALES</b>	<b>66560.15</b>	<b>4720.00</b>	<b>71280.15</b>	<b>ERR</b>

Cuadro 2. Flujo mensual de mano de obra (horas/ha).

	FAMILIAR	CONTRATADA	TOTAL
Jan-91	27.69	0.00	27.69
Feb-91	74.10	5.90	80.00
Mar-91	18.21	0.00	18.21
Apr-91	20.26	0.00	20.26
May-91	23.08	5.13	28.21
Jun-91	64.10	0.00	64.10
Jul-91	52.56	0.00	52.56
Aug-91	60.77	0.00	60.77
Sep-91	17.44	0.00	17.44
Oct-91	42.95	1.28	44.23

palmito

Cuadro 4. Mano de obra por actividad (horas/ha).

ACTIVIDAD	FAMILIAR	CONTRATADA	TOTAL MOC (Z)	
Preparar el Terreno	3.33	2.56	5.90	43.48%
Alistar Semilla	0.51	0.00	0.51	0.00%
Embolsar	1.54	1.28	2.82	45.45%
Chapear	16.15	0.00	16.15	0.00%
Limpiar	1.28	0.00	1.28	0.00%
Deshijar	16.41	0.00	16.41	0.00%
Deshojar	10.77	0.00	10.77	0.00%
Acordenar	101.79	3.85	105.64	3.64%
Rodajear	12.56	0.00	12.56	0.00%
Aplicar Fertilisante	25.38	0.00	25.38	0.00%
Aplicar Pesticidas	97.44	0.00	97.44	0.00%
Cosechar	113.97	4.62	118.59	3.89%
<b>TOTALES</b>	<b>401.15</b>	<b>12.31</b>	<b>413.46</b>	<b>0.96</b>

Cuadro 5. Costos de insumos y MOC por actividad (\$/ha).

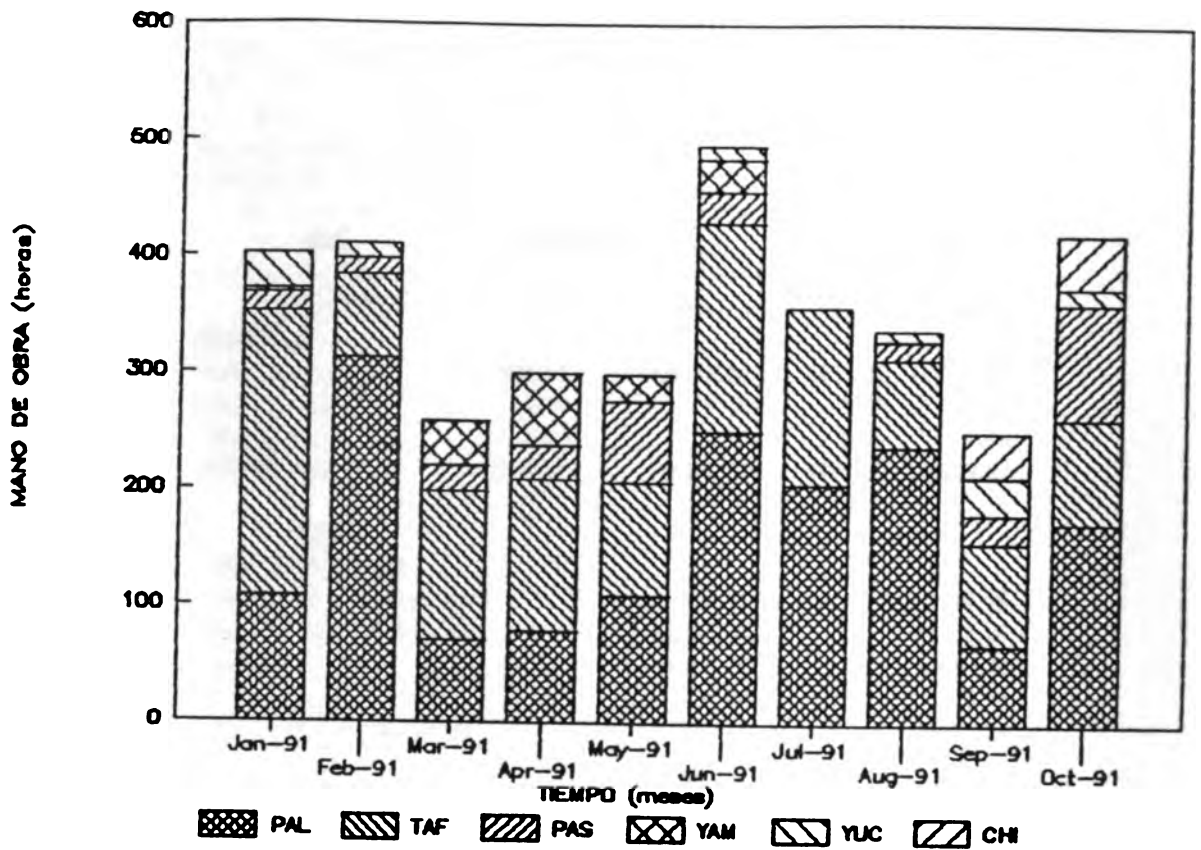
ACTIVIDAD	INSUMOS	MOC	TOTAL INSUMOS (Z)	
Preparar el Terreno	0.00	256.41	256.41	0.00%
Alistar Semilla	1743.59	0.00	1743.59	100.00%
Embolsar	115.38	107.69	223.08	51.72%
Chapear	0.00	0.00	0.00	ERR
Limpiar	0.00	0.00	0.00	ERR
Deshijar	0.00	0.00	0.00	ERR
Deshojar	0.00	0.00	0.00	ERR
Acordenar	0.00	384.62	384.62	0.00%
Rodajear	0.00	0.00	0.00	ERR
Aplicar Fertilisante	8674.45	0.00	8674.45	100.00%
Aplicar Pesticidas	6533.28	0.00	6533.28	100.00%
Cosechar	0.00	461.54	461.54	0.00%
<b>TOTALES</b>	<b>17066.70</b>	<b>1210.26</b>	<b>18276.96</b>	<b>ERR</b>

**CUADRO 1. RESUMEN DE COSTOS Y BENEFICIOS.**

Agricultor : farm 9  
 Area finca : 10.76 ha  
 Agroecosistema: Palmito  
 Area Agroec. : 3.90 ha

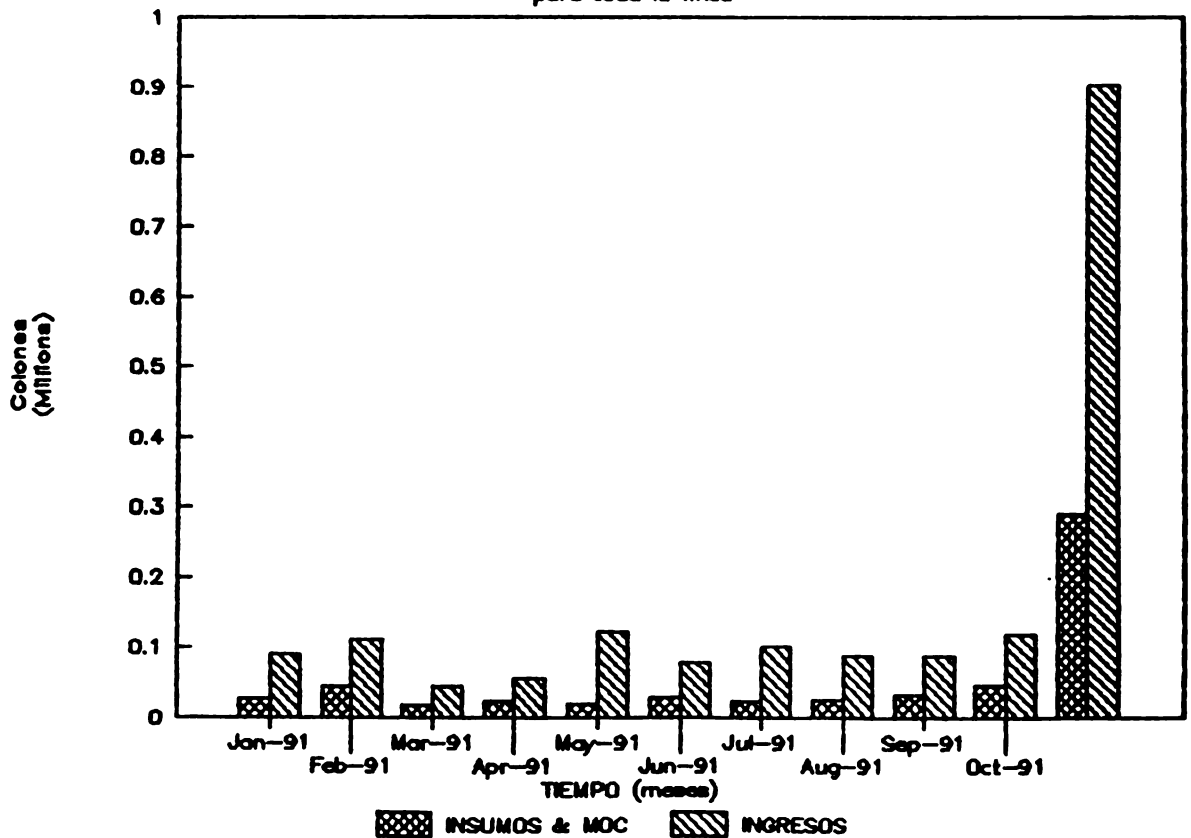
RUBRO	POR PARCELA		POR HECTAREA	
	Kg	Económico	Kg	Económico
<b>INGRESOS</b>				
<b>PRODUCCION:</b>				
Producción vendida	17526.00	426113.50	4493.85	109259.87
Consumo Flia.	0.00	0.00	0.00	0.00
Otros	0.00	0.00	0.00	0.00
<b>INGRESO BRUTO</b>	<b>17526.00</b>	<b>426113.50</b>	<b>4493.85</b>	<b>109259.87</b>
<b>COSTOS</b>				
<b>COSTOS DE OPERACION</b>				
Mano de obra Contratada		4720.00		1210.26
Mano de obra Familiar		156450.00		40115.38
Insumos		66560.15		17066.70
Otros		0.00		0.00
<b>Total Costos de Operación</b>		<b>227730.15</b>		<b>58392.34</b>
<b>OTROS COSTOS</b>				
Alquiler de la tierra		0.00		0.00
Interés (5% Cost.Oper.)		0.00		0.00
Administración (10% C.OP.)		0.00		0.00
<b>Total Otros Costos</b>		<b>0.00</b>		<b>0.00</b>
<b>COSTOS TOTALES</b>		<b>227730.15</b>		<b>58392.34</b>
<b>GANANCIA ó PERDIDA</b>				
Value added		359553.4		92193.2
Gross margin		354833.35		90982.91
<b>Net margin</b>		<b>198383.35</b>		<b>50867.53</b>
<b>INDICES DE EFICIENCIA</b>				
<b>Beneficio total/(MOC+INSUMOS)</b>		<b>5.98</b>		<b>5.98</b>
<b>Beneficio total/Costo Total</b>		<b>1.87</b>		<b>1.87</b>
<b>Retorno neto al capital efectivo en insumos</b>		<b>3.98</b>		<b>3.98</b>
<b>Retorno a Mano de Obra</b>		<b>222.98</b>		<b>222.98</b>
<b>Retorno a M.O. Familiar</b>		<b>226.80</b>		<b>226.80</b>
<b>Retorno neto a tierra</b>		<b>198383.35</b>		<b>50867.53</b>

## Uso de MO mensual por agroecosistema



## Flujo de costos e ingresos por mes

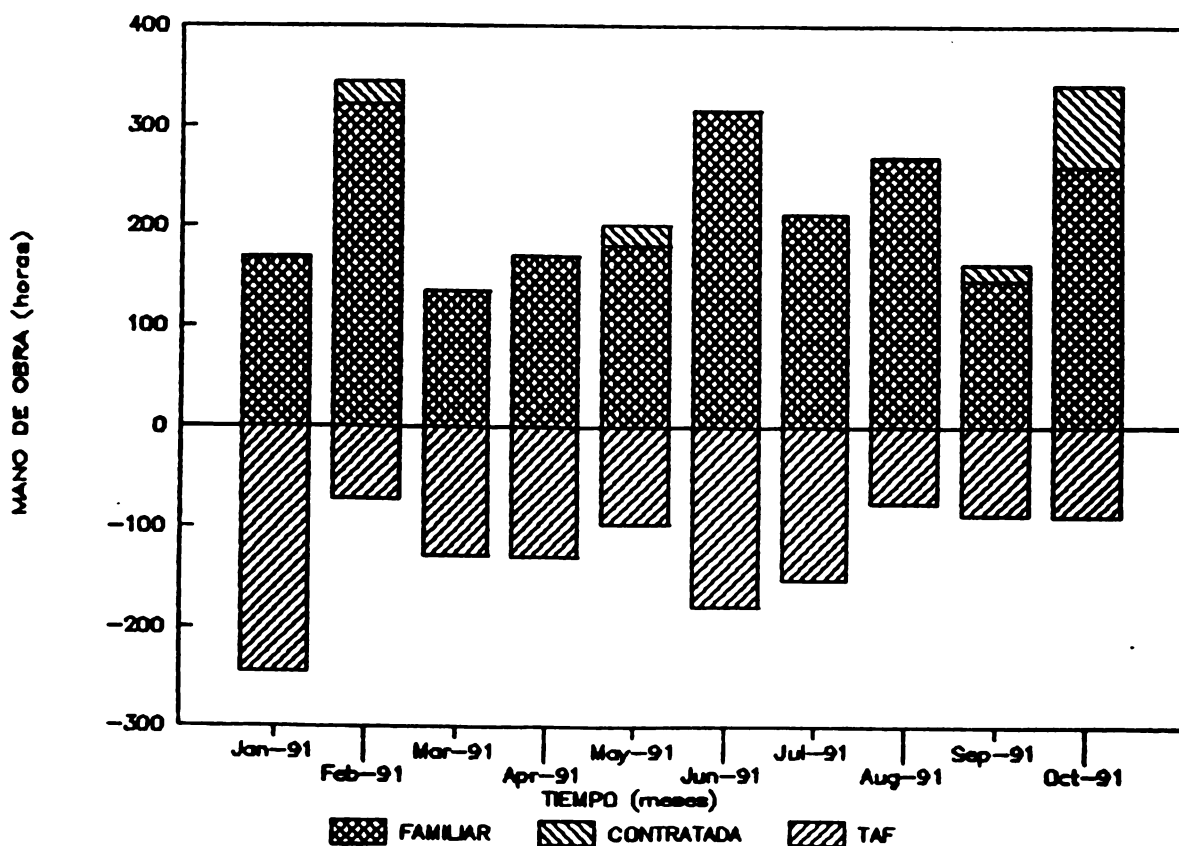
para toda la finca



## DATA OUTPUT OF FARM 9

Summary of the economic activities of farm 9

AGROECOSISTEMA	AREA	ING. BRUTO	INSUMOS	MOC	Gr. margin	MOF (h)	RET. MOF
Animales	1.00	0.00	1823.00	0.00	-1823.00	0.00	ERR
Chile	0.75	0.00	3908.00	500.00	-4408.00	78.70	-56.01
Frijoles	0.75	0.00	534.00	0.00	-534.00	17.50	-30.51
Frijoles	0.75	0.00	0.00	0.00	0.00	14.00	0.00
Ganado	1.00	0.00	3558.00	0.00	-3558.00	10.50	-338.86
Palmito	3.90	426113.50	66560.15	4720.00	354833.35	1564.50	226.80
Pasto	4.81	0.00	0.00	7600.00	-7600.00	241.00	-31.54
Trabajar afuera	1.00	447923.92	194064.30	500.00	253359.62	1250.10	202.67
Mane	1	0	3500	0	-3500	154	-22.7272
Yuca	2	27325	1306.1022	1000	25018.8978	100	250.1889
<b>TOTALES</b>	<b>16.96</b>	<b>901362.42</b>	<b>275253.55</b>	<b>14320.00</b>	<b>611788.87</b>	<b>3430.30</b>	<b>178.35</b>



FAMILY LABOUR, HIRED LABOUR AND OFF FARM WORK.

palmito

Cuadro 6. Flujo mensual de mano de obra por parcela (horas/parcela).

	FAMILIAR	CONTRATADA	TOTAL
Jan-91	94.00	0.00	94.00
Feb-91	49.00	0.00	49.00
Mar-91	37.00	0.00	37.00
Apr-91	73.00	0.00	73.00
May-91	18.00	0.00	18.00
Jun-91	51.00	0.00	51.00
Jul-91	46.00	0.00	46.00
Aug-91	53.50	0.00	53.50
Sep-91	26.00	0.00	26.00
Oct-91	50.00	0.00	50.00
TOTALES	497.50	0.00	497.50

Cuadro 7. Flujo mensual de costos de insumos y MD contratada (\$/parcela)

	Insumos	MD contratada	TOTAL
Jan-91	578.00	0.00	578.00
Feb-91	1617.50	0.00	1617.50
Mar-91	0.00	0.00	0.00
Apr-91	1937.00	0.00	1937.00
May-91	770.50	0.00	770.50
Jun-91	460.80	0.00	460.80
Jul-91	345.00	0.00	345.00
Aug-91	400.00	0.00	400.00
Sep-91	6150.60	0.00	6150.60
Oct-91	232.00	0.00	232.00
TOTALES	12491.40	0.00	12491.40

Cuadro 19. Flujo mensual acumulado de ingresos y egresos (¢).

	INGRESOS	EGRESOS	DIFERENCIA
Jan-91	0.00	578.00	-578.00
Feb-91	0.00	1617.50	-1617.50
Mar-91	19800.00	0.00	19800.00
Apr-91	27000.00	1937.00	25063.00
May-91	0.00	770.50	-770.50
Jun-91	26830.00	460.80	26369.20
Jul-91	26910.00	345.00	26565.00
Aug-91	13000.00	400.00	12600.00
Sep-91	11700.00	6150.60	5549.40
Oct-91	14300.00	232.00	14068.00
TOTALES	139540.00	12491.40	127048.60

palmito

Cuadro 9. Costos de insumos y MOC por actividad (\$/parcela).

ACTIVIDAD	INSUMOS	MOC	TOTAL INSUMOS (2)	
Embolsar	1425.00	0.00	1425.00	100.00%
Chapear	0.00	0.00	0.00	ERR
Deshijar	0.00	0.00	0.00	ERR
Deshojar	0.00	0.00	0.00	ERR
Acordenar	1825.00	0.00	1825.00	100.00%
Rodajear	0.00	0.00	0.00	ERR
Aplicar Fertilisante	6495.60	0.00	6495.60	100.00%
Aplicar Pesticidas	2745.80	0.00	2745.80	100.00%
Reparar Cercas	0.00	0.00	0.00	ERR
Cosechar	0.00	0.00	0.00	ERR
<b>TOTALES</b>	<b>12491.40</b>	<b>0.00</b>	<b>12491.40</b>	<b>ERR</b>

Cuadro 2. Flujo mensual de mano de obra (horas/ha).

	FAMILIAR	CONTRATADA	TOTAL
Jan-91	77.05	0.00	77.05
Feb-91	40.16	0.00	40.16
Mar-91	30.33	0.00	30.33
Apr-91	59.84	0.00	59.84
May-91	14.75	0.00	14.75
Jun-91	41.80	0.00	41.80
Jul-91	37.70	0.00	37.70
Aug-91	43.85	0.00	43.85
Sep-91	21.31	0.00	21.31
Oct-91	40.98	0.00	40.98
<b>TOTALES</b>	<b>407.79</b>	<b>0.00</b>	<b>407.79</b>

Cuadro 3. Flujo mensual de costos de insumos y MD contratada (\$/ha).

	Insumos	MD contratada	TOTAL
Jan-91	473.77	0.00	473.77
Feb-91	1325.82	0.00	1325.82
Mar-91	0.00	0.00	0.00
Apr-91	1587.70	0.00	1587.70
May-91	631.56	0.00	631.56
Jun-91	377.71	0.00	377.71
Jul-91	282.79	0.00	282.79
Aug-91	327.87	0.00	327.87
Sep-91	5041.48	0.00	5041.48
Oct-91	190.16	0.00	190.16
<b>TOTALES</b>	<b>10238.85</b>	<b>0.00</b>	<b>10238.85</b>



palmito

Cuadro 4. Mano de obra por actividad (horas/ha).

ACTIVIDAD	FAMILIAR	CONTRATADA	TOTAL MOC (%)	
Embolsar	31.97	0.00	31.97	0.00%
Chapear	23.77	0.00	23.77	0.00%
Deshijar	38.52	0.00	38.52	0.00%
Deshojar	32.79	0.00	32.79	0.00%
Acordenar	140.16	0.00	140.16	0.00%
Rodajear	12.30	0.00	12.30	0.00%
Aplicar Fertilisante	4.10	0.00	4.10	0.00%
Aplicar Pesticidas	38.52	0.00	38.52	0.00%
Reparar Cercas	1.64	0.00	1.64	0.00%
Cosechar	84.02	0.00	84.02	0.00%
<b>TOTALES</b>	<b>407.79</b>	<b>0.00</b>	<b>407.79</b>	<b>0.00</b>

Cuadro 5. Costos de insumos y MOC por actividad (\$/ha).

ACTIVIDAD	INSUMOS	MOC	TOTAL INSUMOS (%)	
Embolsar	1168.03	0.00	1168.03	100.00%
Chapear	0.00	0.00	0.00	ERR
Deshijar	0.00	0.00	0.00	ERR
Deshojar	0.00	0.00	0.00	ERR
Acordenar	1495.90	0.00	1495.90	100.00%
Rodajear	0.00	0.00	0.00	ERR
Aplicar Fertilisante	5324.26	0.00	5324.26	100.00%
Aplicar Pesticidas	2250.65	0.00	2250.65	100.00%
Reparar Cercas	0.00	0.00	0.00	ERR
Cosechar	0.00	0.00	0.00	ERR
<b>TOTALES</b>	<b>10238.85</b>	<b>0.00</b>	<b>10238.85</b>	<b>ERR</b>

Cuadro 8. Mano de obra por actividad (horas/parcela).

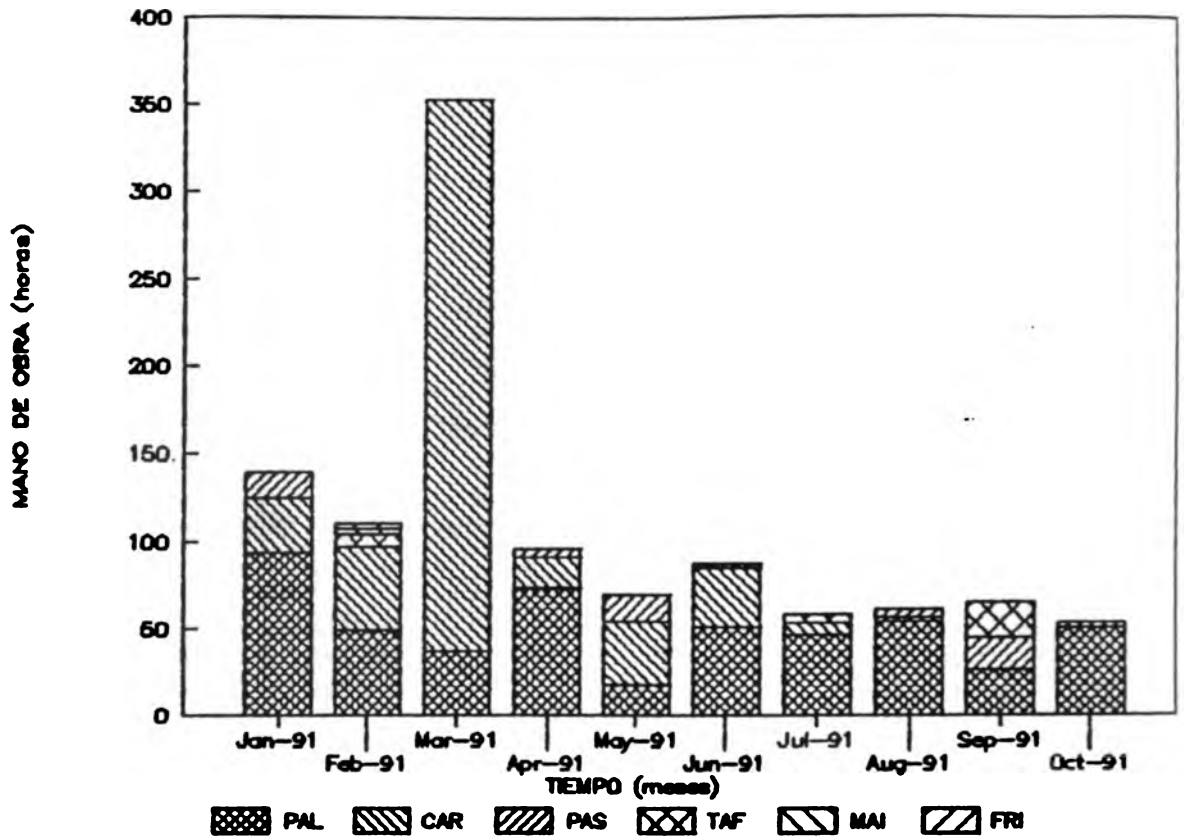
ACTIVIDAD	FAMILIAR	CONTRATADA	TOTAL MOC (%)	
Embolsar	39.00	0.00	39.00	0.00%
Chapear	29.00	0.00	29.00	0.00%
Deshijar	47.00	0.00	47.00	0.00%
Deshojar	40.00	0.00	40.00	0.00%
Acordenar	171.00	0.00	171.00	0.00%
Rodajear	15.00	0.00	15.00	0.00%
Aplicar Fertilisante	5.00	0.00	5.00	0.00%
Aplicar Pesticidas	47.00	0.00	47.00	0.00%
Reparar Cercas	2.00	0.00	2.00	0.00%
Cosechar	102.50	0.00	102.50	0.00%
<b>TOTALES</b>	<b>497.50</b>	<b>0.00</b>	<b>497.50</b>	<b>0.00</b>

**CUADRO 1. RESUMEN DE COSTOS Y BENEFICIOS.**

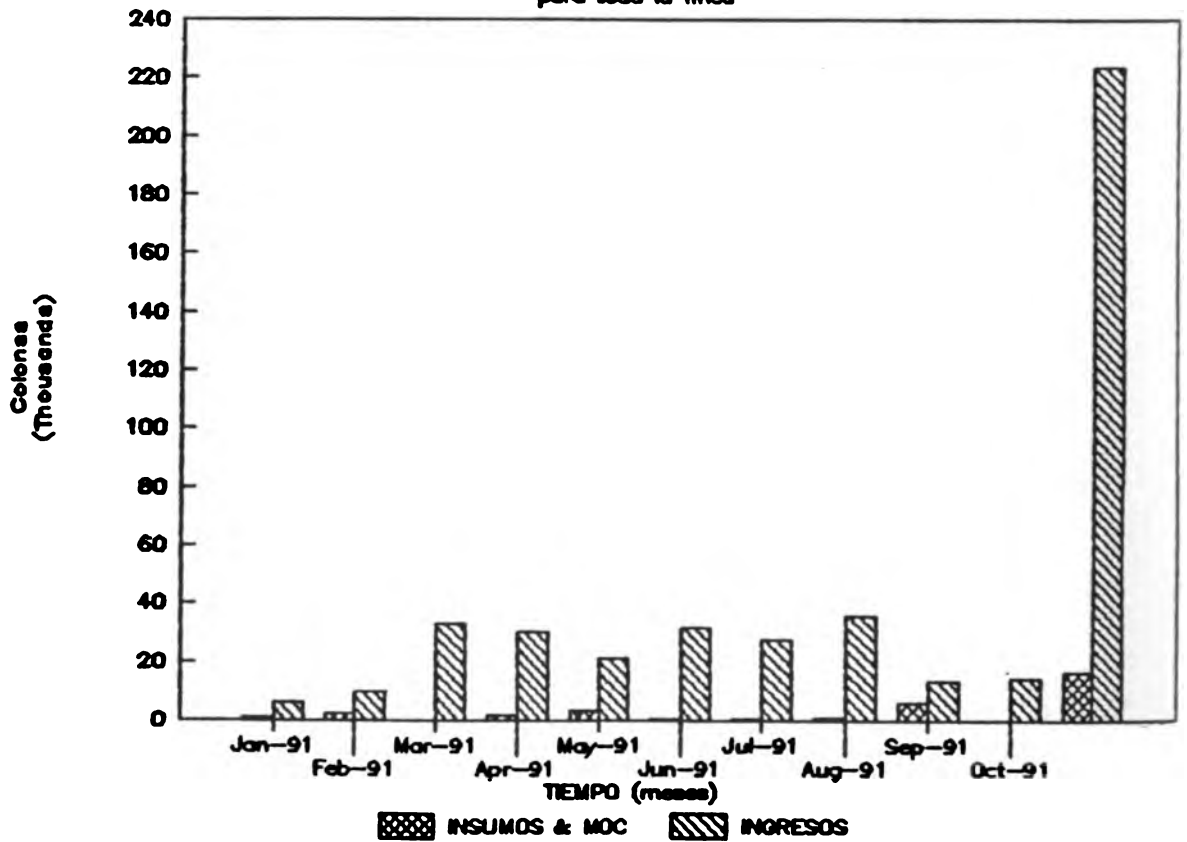
Agricultor : farm 8  
 Area finca : 10.80 ha  
 Agroecosistema: Palmito  
 Area Agroec. : 1.22 ha

RUBRO	POR PARCELA		POR HECTAREA	
	Kg	Económico	Kg	Económico
<b>INGRESOS</b>				
<b>PRODUCCION:</b>				
Producción vendida	5318.00	139540.00	4359.02	114377.05
Consumo Flia.	0.00	0.00	0.00	0.00
Otros	0.00	0.00	0.00	0.00
<b>INGRESO BRUTO</b>	<b>5318.00</b>	<b>139540.00</b>	<b>4359.02</b>	<b>114377.05</b>
<b>COSTOS</b>				
<b>COSTOS DE OPERACION</b>				
Mano de obra Contratada		0.00		0.00
Mano de obra Familiar		49750.00		40778.69
Insumos		12491.40		10238.85
Otros		0.00		0.00
<b>Total Costos de Operación</b>		<b>62241.40</b>		<b>51017.54</b>
<b>OTROS COSTOS</b>				
Alquiler de la tierra		0.00		0.00
Interés (5% Cost.Oper.)		0.00		0.00
Administración (10% C.OP.)		0.00		0.00
<b>Total Otros Costos</b>		<b>0.00</b>		<b>0.00</b>
<b>COSTOS TOTALES</b>		<b>62241.40</b>		<b>51017.54</b>
<b>GANANCIA &amp; PERDIDA</b>				
Value added		127048.6		104138.2
Gross margin		127048.60		104138.20
Net margin		77298.60		63359.51
<b>INDICES DE EFICIENCIA</b>				
Beneficio total/(MOC+INSUMOS)		11.17		11.17
Beneficio total/Costo Total		2.24		2.24
Retorno neto al capital efectivo en insumos		7.19		7.19
Retorno a Mano de Obra		255.37		255.37
Retorno a M.O. Familiar		255.37		255.37
Retorno neto a tierra		77298.60		63359.51

## Uso de MO mensual por agroecosistema



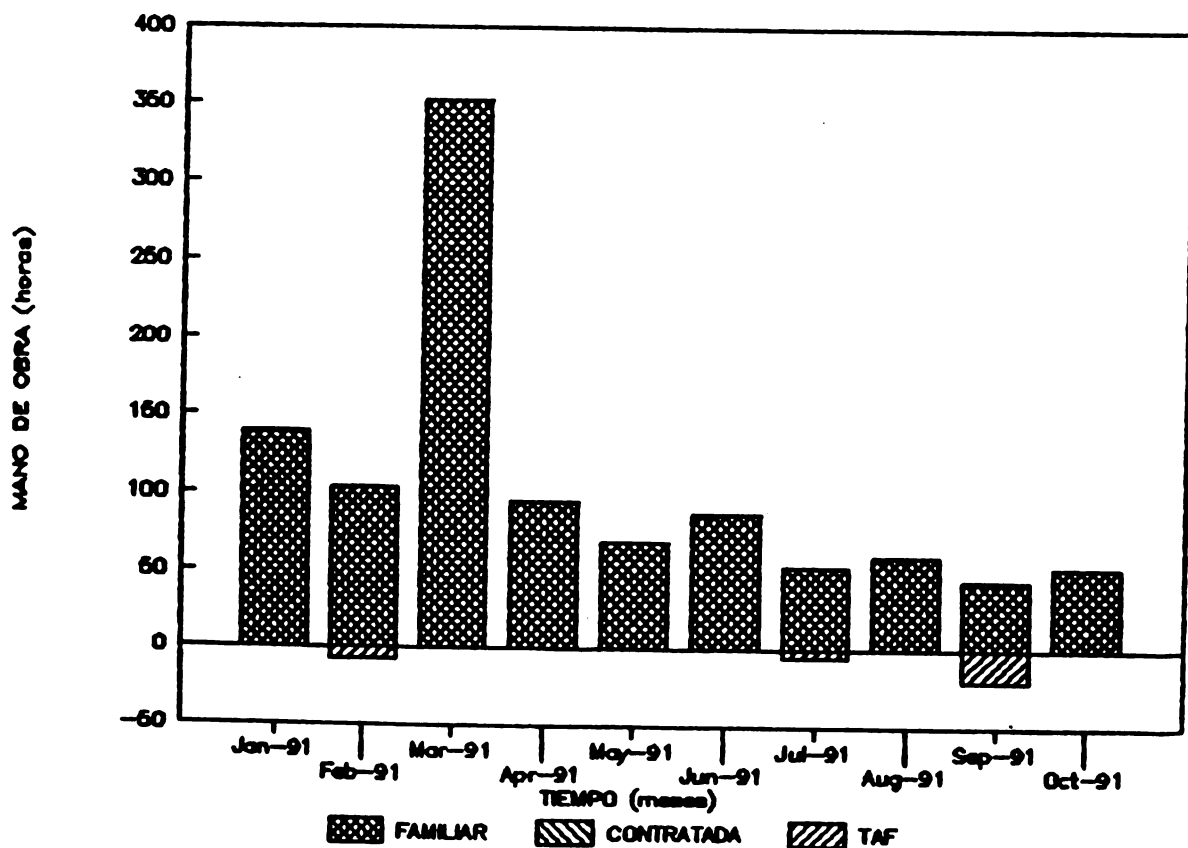
## Flujo de costos e ingresos por mes para toda la finca



Data output of farm 8

Summary of the economic activities of farm 8

AGROECOSISTENA	AREA	ING. BRUTO	INSUMOS	NOC	Gr. margin	NOF (h)	RET.
Carbon	1.00	40800.00	2800.00	100.00	37900.00	491.00	77
Frijoles	0.30	0.00	29.00	0.00	-29.00	3.00	-9
Ganado	1.00	40000.00	700.00	0.00	39300.00	0.00	
Maiz	0.25	0.00	645.00	0.00	-645.00	3.00	-215
Palmito	1.22	139540.00	12491.40	0.00	127048.60	497.50	255
Pasto	3.98	0.00	0.00	0.00	0.00	61.00	0.
Trabajar afuera	1.00	3525.00	0.00	0.00	3525.00	32.00	110.
<b>TOTALES</b>	<b>8.75</b>	<b>223865.00</b>	<b>16665.40</b>	<b>100.00</b>	<b>207099.60</b>	<b>1087.50</b>	<b>190.</b>



Family labour, hired labour and off farm work per month.

yuca

Cuadro 7. Flujo mensual de costos de insumos y MO contratada (\$/parcela)

	Insumos	MO contratada	TOTAL
Jan-91	545.00	0.00	545.00
Feb-91	1532.01	0.00	1532.01
Mar-91	0.00	0.00	0.00
Apr-91	0.00	0.00	0.00
May-91	0.00	0.00	0.00
Jun-91	0.00	0.00	0.00
Jul-91	0.00	0.00	0.00
Aug-91	0.00	20000.00	20000.00
Sep-91	0.00	0.00	0.00
Oct-91	0.00	15000.00	15000.00
TOTALES	2077.00	35000.00	37077.00

Cuadro 19. Flujo mensual acumulado de ingresos y egresos (€).

	INGRESOS	EGRESOS	DIFERENCIA
Jan-91	0.00	545.00	-545.00
Feb-91	0.00	1532.01	-1532.01
Mar-91	0.00	0.00	0.00
Apr-91	0.00	0.00	0.00
May-91	0.00	0.00	0.00
Jun-91	0.00	0.00	0.00
Jul-91	0.00	0.00	0.00
Aug-91	104400.00	20000.00	84400.00
Sep-91	0.00	0.00	0.00
Oct-91	9504.00	15000.00	-5496.00
TOTALES	113904.00	37077.00	76827.00

yuca

Cuadro 2. Flujo mensual de mano de obra (horas/ha).

	FAMILIAR	CONTRATADA	TOTAL
Jan-91	5.88	0.00	5.88
Feb-91	23.53	0.00	23.53
Mar-91	28.24	0.00	28.24
Apr-91	0.00	0.00	0.00
May-91	0.00	0.00	0.00
Jun-91	0.00	0.00	0.00
Jul-91	0.00	0.00	0.00
Aug-91	0.00	117.65	117.65
Sep-91	0.00	0.00	0.00
Oct-91	5.88	88.24	94.12
TOTALES	63.53	205.88	269.41

Cuadro 3. Flujo mensual de costos de insumos y MO contratada (\$/ha).

	Insumos	MO contratada	TOTAL
Jan-91	320.59	0.00	320.59
Feb-91	901.18	0.00	901.18
Mar-91	0.00	0.00	0.00
Apr-91	0.00	0.00	0.00
May-91	0.00	0.00	0.00
Jun-91	0.00	0.00	0.00
Jul-91	0.00	0.00	0.00
Aug-91	0.00	11764.71	11764.71
Sep-91	0.00	0.00	0.00
Oct-91	0.00	8823.53	8823.53
TOTALES	1221.77	20588.24	21810.00

Cuadro 6. Flujo mensual de mano de obra por parcela (horas/parcela).

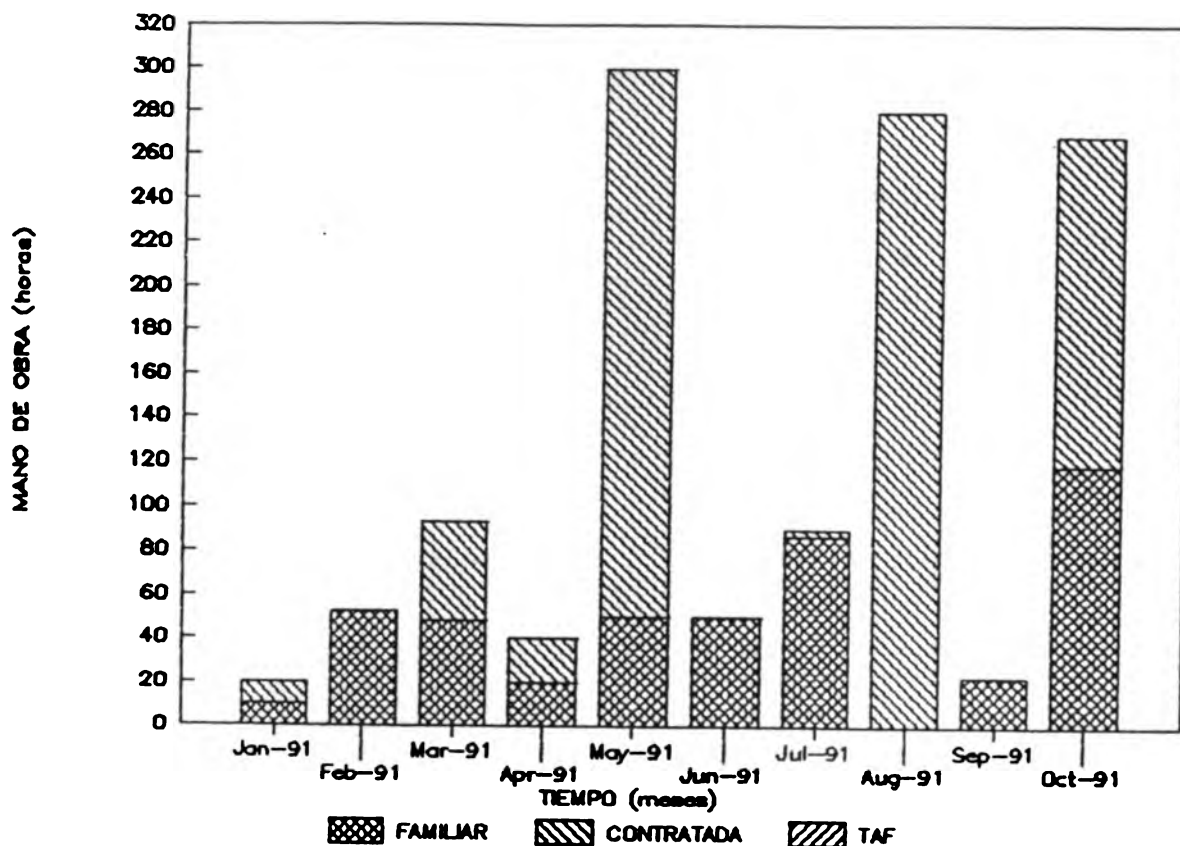
	FAMILIAR	CONTRATADA	TOTAL
Jan-91	10.00	0.00	10.00
Feb-91	40.00	0.00	40.00
Mar-91	48.00	0.00	48.00
Apr-91	0.00	0.00	0.00
May-91	0.00	0.00	0.00
Jun-91	0.00	0.00	0.00
Jul-91	0.00	0.00	0.00
Aug-91	0.00	200.00	200.00
Sep-91	0.00	0.00	0.00
Oct-91	10.00	150.00	160.00
TOTALES	108.00	350.00	458.00

CUADRO 1. RESUMEN DE COSTOS Y BENEFICIOS.

Agricultor : farm 7  
 Area finca : 11.79 ha  
 Agroecosistema: Yuca  
 Area Agroec. : 1.70 ha

RUBRO	POR PARCELA		POR HECTAREA	
	Kg	Económico	Kg	Económico
<b>INGRESOS</b>				
<b>PRODUCCION:</b>				
Producción vendida	13080.00	113904.00	7694.12	67002.35
Consumo Flia.	0.00	0.00	0.00	0.00
Otros	0.00	0.00	0.00	0.00
<b>INGRESO BRUTO</b>	<b>13080.00</b>	<b>113904.00</b>	<b>7694.12</b>	<b>67002.35</b>
<b>COSTOS</b>				
<b>COSTOS DE OPERACION</b>				
Mano de obra Contratada		35000.00		20588.24
Mano de obra Familiar		10800.00		6352.94
Insumos		2077.00		1221.77
Otros		0.00		0.00
<b>Total Costos de Operación</b>		<b>47877.00</b>		<b>28162.94</b>
<b>OTROS COSTOS</b>				
Alquiler de la tierra		0.00		0.00
Interés (5% Cost.Oper.)		0.00		0.00
Administración (10% C.OP.)		0.00		0.00
<b>Total Otros Costos</b>		<b>0.00</b>		<b>0.00</b>
<b>COSTOS TOTALES</b>		<b>47877.00</b>		<b>28162.94</b>
<b>GANANCIA ó PERDIDA</b>				
Value added		111827		65780.6
Gross margin		76827.00		45192.35
<b>Net margin</b>		<b>66027.00</b>		<b>38839.41</b>
<b>INDICES DE EFICIENCIA</b>				
Beneficio total/(MOC+INSUMOS)		3.07		3.07
Beneficio total/Costo Total		2.38		2.38
Retorno neto al capital efectivo en insumos		32.79		32.79
Retorno a Mano de Obra		244.16		244.16
Retorno a M.O. Familiar		711.36		711.36
Retorno neto a tierra		66027.00		38839.41

DATA OUTPUT OF FARM 7



FAMILY LABOUR, HIRED LABOUR & OFF FARM WORK PER MONTH.

Summary of the economic activities of farm 7

AGROECOSISTEMA	AREA	ING. BRUTO	INSUMOS	MOC	Gr. margin	MOF (h)	RET. MOF
Chile	1.00	0.00	630.00	500.01	-1130.01	35.00	-32.29
Frijoles	1.00	0.00	200.00	0.00	-200.00	6.00	-33.33
Ganado	1.00	36320.00	2300.00	0.00	34020.00	0.00	ERR
Mantenimiento	1.00	0.00	0.00	0.00	0.00	0.00	ERR
Pasto	7.64	0.00	0.00	34940.00	-34940.00	40.00	-873.50
Pina	0.75	162604.00	84260.00	4000.00	74344.00	270.00	275.35
Yuca	1.70	113904.00	2077.00	35000.00	76827.00	108.00	711.36
TOTALES	14.09	312828.00	89467.00	74440.01	148920.99	459.00	324.45



yuca

Cuadro 7. Flujo mensual de costos de insumos y MD contratada (\$/parcela).

	Insumos	MD contratada	TOTAL
Jan-91	1458.00	0.00	1458.00
Feb-91	0.00	0.00	0.00
Mar-91	0.00	0.00	0.00
Apr-91	0.00	0.00	0.00
May-91	0.00	0.00	0.00
Jun-91	1750.01	0.00	1750.01
Jul-91	3000.00	2400.00	5400.00
Aug-91	6000.00	2399.98	8399.98
Sep-91	0.00	0.00	0.00
Oct-91	0.00	0.00	0.00
<b>TOTALES</b>	<b>12208.01</b>	<b>4799.98</b>	<b>17007.99</b>

Cuadro 19. Flujo mensual acumulado de ingresos y egresos (¢).

	INGRESOS	EGRESOS	DIFERENCIA
Jan-91	0.00	1458.00	-1458.00
Feb-91	0.00	0.00	0.00
Mar-91	0.00	0.00	0.00
Apr-91	0.00	0.00	0.00
May-91	0.00	0.00	0.00
Jun-91	0.00	1750.01	-1750.01
Jul-91	12250.00	5400.00	6850.00
Aug-91	22750.00	8399.98	14350.02
Sep-91	0.00	0.00	0.00
Oct-91	0.00	0.00	0.00
<b>TOTALES</b>	<b>35000.00</b>	<b>17007.99</b>	<b>17992.01</b>

yuca

Cuadro 2. Flujo mensual de mano de obra (horas/ha).

	FAMILIAR	CONTRATADA	TOTAL
Jan-91	85.45	0.00	85.45
Feb-91	3.64	0.00	3.64
Mar-91	0.00	0.00	0.00
Apr-91	0.00	0.00	0.00
May-91	0.00	0.00	0.00
Jun-91	54.55	0.00	54.55
Jul-91	7.27	21.82	29.09
Aug-91	54.09	20.00	74.09
Sep-91	0.00	0.00	0.00
Oct-91	4.55	0.00	4.55
TOTALES	209.55	41.82	251.36

Cuadro 3. Flujo mensual de costos de insumos y MO contratada (\$/ha).

	Insumos	MO contratada	TOTAL
Jan-91	1325.45	0.00	1325.45
Feb-91	0.00	0.00	0.00
Mar-91	0.00	0.00	0.00
Apr-91	0.00	0.00	0.00
May-91	0.00	0.00	0.00
Jun-91	1590.92	0.00	1590.92
Jul-91	2727.27	2181.82	4909.09
Aug-91	5454.55	2181.80	7636.35
Sep-91	0.00	0.00	0.00
Oct-91	0.00	0.00	0.00
TOTALES	11098.19	4363.62	15461.81

Cuadro 6. Flujo mensual de mano de obra por parcela (horas/parcela).

	FAMILIAR	CONTRATADA	TOTAL
Jan-91	94.00	0.00	94.00
Feb-91	4.00	0.00	4.00
Mar-91	0.00	0.00	0.00
Apr-91	0.00	0.00	0.00
May-91	0.00	0.00	0.00
Jun-91	60.00	0.00	60.00
Jul-91	8.00	24.00	32.00
Aug-91	59.50	22.00	81.50
Sep-91	0.00	0.00	0.00
Oct-91	5.00	0.00	5.00

yuca

Cuadro 4. Mano de obra por actividad (horas/ha).

ACTIVIDAD	FAMILIAR	CONTRATADA	TOTAL MOC (Z)	MOC (€)
Chapear	36.36	0.00	36.36	0.00Z
Limpiar	69.09	0.00	69.09	0.00Z
Aplicar Pesticidas	38.18	0.00	38.18	0.00Z
Cosechar	65.91	41.82	107.73	38.82Z
Transportar	0.00	0.00	0.00	ERR
<b>TOTALES</b>	<b>209.55</b>	<b>41.82</b>	<b>251.36</b>	<b>ERR</b>

Cuadro 5. Costos de insumos y MOC por actividad (\$/ha).

ACTIVIDAD	INSUMOS	MOC	TOTAL INSUMOS (Z)
Chapear	0.00	0.00	0.00
Limpiar	0.00	0.00	0.00
Aplicar Pesticidas	2916.37	0.00	2916.37
Cosechar	0.00	4363.62	4363.62
Transportar	8181.82	0.00	8181.82
<b>TOTALES</b>	<b>11098.19</b>	<b>4363.62</b>	<b>15461.81</b>

Cuadro 8. Mano de obra por actividad (horas/parcela).

ACTIVIDAD	FAMILIAR	CONTRATADA	TOTAL MOC (Z)	MOC (€)
Chapear	40.00	0.00	40.00	0.00Z
Limpiar	76.00	0.00	76.00	0.00Z
Aplicar Pesticidas	42.00	0.00	42.00	0.00Z
Cosechar	72.50	46.00	118.50	38.82Z
Transportar	0.00	0.00	0.00	ERR
<b>TOTALES</b>	<b>230.50</b>	<b>46.00</b>	<b>276.50</b>	<b>ERR</b>

Cuadro 9. Costos de insumos y MOC por actividad (\$/parcela).

ACTIVIDAD	INSUMOS	MOC	TOTAL INSUMOS (Z)
Chapear	0.00	0.00	0.00
Limpiar	0.00	0.00	0.00
Aplicar Pesticidas	3208.01	0.00	3208.01
Cosechar	0.00	4799.98	4799.98
Transportar	9000.00	0.00	9000.00

**CUADRO 1. RESUMEN DE COSTOS Y BENEFICIOS.**

Agricultor : farm 6  
 Area finca : 17.16 ha  
 Agroecosistema: Yuca  
 Area Agroec. : 1.10 ha

RUBRO	POR PARCELA		POR HECTAREA	
	Kg	Económico	Kg	Económico
<b>INGRESOS</b>				
<b>PRODUCCION:</b>				
Producción vendida	3650.00	35000.00	3318.18	31818.18
Consumo Flia.	0.00	0.00	0.00	0.00
Otros	0.00	0.00	0.00	0.00
<b>INGRESO BRUTO</b>	<b>3650.00</b>	<b>35000.00</b>	<b>3318.18</b>	<b>31818.18</b>
<b>COSTOS</b>				
<b>COSTOS DE OPERACION</b>				
Mano de obra Contratada		4799.98		4363.62
Mano de obra Familiar		23050.00		20954.55
Insumos		12208.01		11098.19
Otros		0.00		0.00
<b>Total Costos de Operación</b>		<b>40057.99</b>		<b>36416.35</b>
<b>OTROS COSTOS</b>				
Alquiler de la tierra		0.00		0.00
Interés (5% Cost.Oper.)		0.00		0.00
Administración (10% C.OP.)		0.00		0.00
<b>Total Otros Costos</b>		<b>0.00</b>		<b>0.00</b>
<b>COSTOS TOTALES</b>		<b>40057.99</b>		<b>36416.35</b>
<b>GANANCIA ó PERDIDA</b>				
Value added		22791.99		20719.99
Gross margin		17992.01		16356.37
<b>Net margin</b>		<b>-5057.99</b>		<b>-4598.17</b>
<b>INDICES DE EFICIENCIA</b>				
Beneficio total/(MOC+INSUMOS)		2.06		2.06
Beneficio total/Costo Total		0.87		0.87
Retorno neto al capital efectivo en insumos		0.59		0.59
Retorno a Mano de Obra		82.43		82.43
Retorno a M.O. Familiar		78.06		78.06
Retorno neto a tierra		-5057.99		-4598.17

maize 2

Cuadro 9. Costos de insumos y MOC por actividad (\$/parcela).

ACTIVIDAD	INSUMOS	MOC	TOTAL INSUMOS (Z)	
Preparar el Terreno	0.00	2000.00	2000.00	0.00%
Sembrar	0.00	500.00	500.00	0.00%
Chapear	0.00	0.00	0.00	ERR
Aplicar Fertilisante	11319.11	1400.00	12719.11	88.99%
Aplicar Pesticidas	9655.78	880.00	10535.78	91.65%
Cosechar	0.00	13800.00	13800.00	0.00%
Transportar	4000.00	0.00	4000.00	100.00%
<b>TOTALES</b>	<b>24974.88</b>	<b>18580.00</b>	<b>43554.88</b>	<b>ERR</b>

Cuadro 2. Flujo mensual de mano de obra (horas/ha).

	FAMILIAR	CONTRATADA	TOTAL
Jan-91	0.00	0.00	0.00
Feb-91	0.00	0.00	0.00
Mar-91	0.00	0.00	0.00
Apr-91	0.00	0.00	0.00
May-91	0.00	0.00	0.00
Jun-91	0.00	0.00	0.00
Jul-91	42.31	18.69	61.00
Aug-91	53.08	0.00	53.08
Sep-91	66.92	81.54	148.46
Oct-91	34.62	43.85	78.46
<b>TOTALES</b>	<b>196.92</b>	<b>144.08</b>	<b>341.00</b>

Cuadro 3. Flujo mensual de costos de insumos y MO contratada (\$/ha).

	Insumos	MO contratada	TOTAL
Jan-91	0.00	0.00	0.00
Feb-91	0.00	0.00	0.00
Mar-91	0.00	0.00	0.00
Apr-91	0.00	0.00	0.00
May-91	0.00	0.00	0.00
Jun-91	0.00	0.00	0.00
Jul-91	6438.13	1753.85	8191.98
Aug-91	6611.08	0.00	6611.08
Sep-91	5355.31	8153.85	13509.16
Oct-91	806.92	4384.62	5191.54
<b>TOTALES</b>	<b>19211.45</b>	<b>14292.31</b>	<b>33503.76</b>

maize 2

Cuadro 6. Flujo mensual de mano de obra por parcela (horas/parcela).

	FAMILIAR	CONTRATADA	TOTAL
Jan-91	0.00	0.00	0.00
Feb-91	0.00	0.00	0.00
Mar-91	0.00	0.00	0.00
Apr-91	0.00	0.00	0.00
May-91	0.00	0.00	0.00
Jun-91	0.00	0.00	0.00
Jul-91	55.00	24.30	79.30
Aug-91	69.00	0.00	69.00
Sep-91	87.00	106.00	193.00
Oct-91	45.00	57.00	102.00
TOTALES	256.00	187.30	443.30

Cuadro 7. Flujo mensual de costos de insumos y NO contratada (\$/parcela)

	Insumos	NO contratada	TOTAL
Jan-91	0.00	0.00	0.00
Feb-91	0.00	0.00	0.00
Mar-91	0.00	0.00	0.00
Apr-91	0.00	0.00	0.00
May-91	0.00	0.00	0.00
Jun-91	0.00	0.00	0.00
Jul-91	8369.57	2280.00	10649.57
Aug-91	8594.41	0.00	8594.41
Sep-91	6961.91	10600.00	17561.91
Oct-91	1049.00	5700.00	6749.00
TOTALES	24974.88	18580.00	43554.88

Cuadro 19. Flujo mensual acumulado de ingresos y egresos (¢).

	INGRESOS	EGRESOS	DIFERENCIA
Jan-91	0.00	0.00	0.00
Feb-91	0.00	0.00	0.00
Mar-91	0.00	0.00	0.00
Apr-91	0.00	0.00	0.00
May-91	0.00	0.00	0.00
Jun-91	0.00	0.00	0.00
Jul-91	0.00	10649.57	-10649.57
Aug-91	0.00	8594.41	-8594.41
Sep-91	42800.00	17561.91	25238.09
Oct-91	40000.00	6749.00	33251.00
	82800.00	43554.88	39245.12

maize 2

Cuadro 4. Mano de obra por actividad (horas/ha).

ACTIVIDAD	FAMILIAR	CONTRATADA	TOTAL MOC (Z)	
Preparar el Terreno	0.00	15.38	15.38	100.00%
Sembrar	53.85	3.85	57.69	6.67%
Chapear	3.85	0.00	3.85	0.00%
Aplicar Fertilisante	23.85	11.54	35.38	32.61%
Aplicar Pesticidas	54.62	7.15	61.77	11.58%
Cosechar	33.08	106.15	139.23	76.24%
Transportar	27.69	0.00	27.69	0.00%
<b>TOTALES</b>	<b>196.92</b>	<b>144.08</b>	<b>341.00</b>	<b>2.27</b>

Cuadro 5. Costos de insumos y MOC por actividad (\$/ha).

ACTIVIDAD	INSUMOS	MOC	TOTAL INSUMOS (Z)	
Preparar el Terreno	0.00	1538.46	1538.46	0.00%
Sembrar	0.00	384.62	384.62	0.00%
Chapear	0.00	0.00	0.00	ERR
Aplicar Fertilisante	8707.00	1076.92	9783.93	88.99%
Aplicar Pesticidas	7427.52	676.92	8104.44	91.65%
Cosechar	0.00	10615.38	10615.38	0.00%
Transportar	3076.92	0.00	3076.92	100.00%
<b>TOTALES</b>	<b>19211.45</b>	<b>14292.31</b>	<b>33503.76</b>	<b>ERR</b>

Cuadro 8. Mano de obra por actividad (horas/parcela).

ACTIVIDAD	FAMILIAR	CONTRATADA	TOTAL MOC (Z)	
Preparar el terreno	0.00	20.00	20.00	100.00%
Sembrar	70.00	5.00	75.00	6.67%
Chapear	5.00	0.00	5.00	0.00%
Aplicar Fertilisante	31.00	15.00	46.00	32.61%
Aplicar Pesticidas	71.00	9.30	80.30	11.58%
Cosechar	43.00	138.00	181.00	76.24%
Transportar	36.00	0.00	36.00	0.00%
<b>TOTALES</b>	<b>256.00</b>	<b>187.30</b>	<b>443.30</b>	<b>2.27</b>

palmheart

Cuadro 3. Flujo mensual de costos de insumos y MD contratada (\$/ha).

	Insumos	MD contratada	TOTAL
Jun-90	322.58	0.00	322.58
Jul-90	3470.33	438.74	3909.06
Aug-90	46.45	5532.26	5578.71
Sep-90	0.00	632.26	632.26
Oct-90	2038.71	406.50	2445.21
Nov-90	9609.96	832.26	10442.22
Dec-90	0.00	0.00	0.00
Jan-91	0.00	0.00	0.00
Feb-91	4887.29	0.00	4887.29
Mar-91	0.00	258.06	258.06
Apr-91	4303.23	0.00	4303.23
May-91	0.00	5935.48	5935.48
Jun-91	0.00	1032.26	1032.26
Jul-91	0.00	0.00	0.00
Aug-91	968.13	5161.29	6129.42
Sep-91	1551.48	0.00	1551.48
Oct-91	387.87	0.00	387.87
Nov-91	0.00	0.00	0.00
<b>TOTALES</b>	<b>27586.04</b>	<b>20229.11</b>	<b>47815.15</b>

Cuadro 6. Flujo mensual de mano de obra por parcela (horas/parcela).

	FAMILIAR	CONTRATADA	TOTAL
Jun-90	0.00	0.00	0.00
Jul-90	1.50	12.00	13.50
Aug-90	65.50	122.50	188.00
Sep-90	28.50	14.00	42.50
Oct-90	33.50	15.50	49.00
Nov-90	55.50	35.50	91.00
Dec-90	0.00	0.00	0.00
Jan-91	102.00	0.00	102.00
Feb-91	55.00	0.00	55.00
Mar-91	0.00	5.00	5.00
Apr-91	0.00	0.00	0.00
May-91	87.00	115.00	202.00
Jun-91	0.00	20.00	20.00
Jul-91	0.00	0.00	0.00
Aug-91	4.00	8.00	12.00
Sep-91	37.50	0.00	37.50
Oct-91	35.00	0.00	35.00
Nov-91	0.00	0.00	0.00
<b>TOTALES</b>	<b>505.00</b>	<b>347.50</b>	<b>852.50</b>



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Cuadro 7. Flujo mensual de costos de insumos y MD contratada (\$/parcela)

	Insunios	MD contratada	TOTAL
Jun-90	500.01	0.00	500.01
Jul-90	5379.01	680.04	6059.05
Aug-90	72.00	8575.00	8647.00
Sep-90	0.00	980.00	980.00
Oct-90	3160.00	630.08	3790.08
Nov-90	14895.44	1290.00	16185.44
Dec-90	0.00	0.00	0.00
Jan-91	0.00	0.00	0.00
Feb-91	7575.30	0.00	7575.30
Mar-91	0.00	400.00	400.00
Apr-91	6670.00	0.00	6670.00
May-91	0.00	9200.00	9200.00
Jun-91	0.00	1600.00	1600.00
Jul-91	0.00	0.00	0.00
Aug-91	1500.60	8000.00	9500.60
Sep-91	2404.80	0.00	2404.80
Oct-91	601.20	0.00	601.20
Nov-91	0.00	0.00	0.00
<b>TOTALES</b>	<b>42758.36</b>	<b>31355.12</b>	<b>74113.48</b>

Cuadro 19. Flujo mensual acumulado de ingresos y egresos (¢).

	INGRESOS	EGRESOS	DIFERENCIA
Jun-90	0.00	500.01	-500.01
Jul-90	0.00	6059.05	-6059.05
Aug-90	0.00	8647.00	-8647.00
Sep-90	0.00	980.00	-980.00
Oct-90	0.00	3790.08	-3790.08
Nov-90	0.00	16185.44	-16185.44
Dec-90	0.00	0.00	0.00
Jan-91	0.00	0.00	0.00
Feb-91	0.00	7575.30	-7575.30
Mar-91	0.00	400.00	-400.00
Apr-91	0.00	6670.00	-6670.00
May-91	0.00	9200.00	-9200.00
Jun-91	0.00	1600.00	-1600.00
Jul-91	0.00	0.00	0.00
Aug-91	0.00	9500.60	-9500.60
Sep-91	0.00	2404.80	-2404.80
Oct-91	5340.00	601.20	4738.80
Nov-91	0.00	0.00	0.00
<b>TOTALES</b>	<b>5340.00</b>	<b>74113.48</b>	<b>-68773.48</b>

**CUADRO 1. RESUMEN DE COSTOS Y BENEFICIOS.**

Agricultor : fam 10  
 Area finca : 12.51 ha  
 Agroecosistema: Maracuya  
 Area Agroec. : 1.81 ha

RUBRO	POR PARCELA		POR HECTAREA	
	Kg	Económico	Kg	Económico
<b>INGRESOS</b>				
<b>PRODUCCION:</b>				
Producción vendida	2529.00	125139.54	1397.24	69137.87
Consumo Fija.	0.00	0.00	0.00	0.00
Otros	0.00	0.00	0.00	0.00
<b>INGRESO BRUTO</b>	<b>2529.00</b>	<b>125139.54</b>	<b>1397.24</b>	<b>69137.87</b>
<b>COSTOS</b>				
<b>COSTOS DE OPERACION</b>				
Mano de obra Contratada		427210.02		236027.64
Mano de obra Familiar		79050.00		43674.03
Insumos		155004.57		85637.88
Otros		0.00		0.00
<b>Total Costos de Operación</b>		<b>661264.59</b>		<b>365339.55</b>
<b>OTROS COSTOS</b>				
Alquiler de la tierra		0.00		0.00
Interés (5% Cost.Oper.)		0.00		0.00
Administración (10% C.OP.)		0.00		0.00
<b>Total Otros Costos</b>		<b>0.00</b>		<b>0.00</b>
<b>COSTOS TOTALES</b>		<b>661264.59</b>		<b>365339.55</b>
<b>GANANCIA ó PERBIDA</b>				
Value added		-29865.03		-16500.01
Gross margin		-457075.05		-252527.65
<b>Net margin</b>		<b>-536125.05</b>		<b>-296201.68</b>
<b>INDICES DE EFICIENCIA</b>				
Beneficio total/(MOC+INSUMOS)		0.21		0.21
Beneficio total/Costo Total		0.19		0.19
Retorno neto al capital efectivo en insumos		-2.46		-2.46
Retorno a Mano de Obra		-21.76		-21.76
Retorno a M.O. Familiar		-578.21		-578.21
Retorno neto a tierra		-536125.05		-296201.68

Maracuyá

Cuadro 4. Mano de obra por actividad (horas/ha).

ACTIVIDAD	FAMILIAR	CONTRATADA	TOTAL MOC (Z)	
Preparar el Terreno	0.00	8.29	8.29	100.00%
Sembrar	23.76	15.47	39.23	39.44%
Chapear	69.06	88.40	157.46	56.14%
Deshojar	2.21	0.00	2.21	0.00%
Rodajear	1.38	0.00	1.38	0.00%
Podar	10.22	0.00	10.22	0.00%
Anarrar	98.34	197.24	295.58	66.73%
Aplicar Fertilisante	28.18	0.00	28.18	0.00%
Aplicar Pesticidas	151.66	9.39	161.05	5.83%
Cosechar	11.60	2.76	14.36	19.23%
Mantenimiento	40.33	0.00	40.33	0.00%
<b>TOTALES</b>	<b>436.74</b>	<b>321.55</b>	<b>758.29</b>	<b>2.87</b>

Cuadro 5. Costos de insumos y MOC por actividad (\$/ha).

ACTIVIDAD	INSUMOS	MOC	TOTAL INSUMOS (Z)	
Preparar el Terreno	0.00	662.98	662.98	0.00%
Sembrar	0.00	0.00	0.00	ERR
Chapear	0.00	6640.88	6640.88	0.00%
Deshojar	0.00	0.00	0.00	ERR
Rodajear	0.00	0.00	0.00	ERR
Podar	0.00	0.00	0.00	ERR
Anarrar	64325.97	228447.52	292773.49	21.97%
Aplicar Fertilisante	7062.01	0.00	7062.01	100.00%
Aplicar Pesticidas	14249.91	0.00	14249.91	100.00%
Cosechar	0.00	276.24	276.24	0.00%
Mantenimiento	0.00	0.00	0.00	ERR
<b>TOTALES</b>	<b>85637.88</b>	<b>236027.64</b>	<b>321665.52</b>	<b>ERR</b>

Cuadro 8. Mano de obra por actividad (horas/parcela).

ACTIVIDAD	FAMILIAR	CONTRATADA	TOTAL MOC (Z)	
Preparar el Terreno	0.00	15.00	15.00	100.00%
Sembrar	43.00	28.00	71.00	39.44%
Chapear	125.00	160.00	285.00	56.14%
Deshojar	4.00	0.00	4.00	0.00%
Rodajear	2.50	0.00	2.50	0.00%
Podar	18.50	0.00	18.50	0.00%
Anarrar	178.00	357.00	535.00	66.73%
Aplicar Fertilisante	51.00	0.00	51.00	0.00%
Aplicar Pesticidas	274.50	17.00	291.50	5.83%
Cosechar	21.00	5.00	26.00	19.23%
Mantenimiento	73.00	0.00	73.00	0.00%
<b>TOTALES</b>	<b>1050.50</b>	<b>582.00</b>	<b>1632.50</b>	

maracuyá

Cuadro 9. Costos de insumos y MOC por actividad (\$/parcela).

ACTIVIDAD	INSUMOS	MOC	TOTAL INSUMOS (\$)	TOTAL INSUMOS (%)
Preparar el Terreno	0.00	1200.00	1200.00	0.00%
Sembrar	0.00	0.00	0.00	ERR
Chapear	0.00	12020.00	12020.00	0.00%
Deshojar	0.00	0.00	0.00	ERR
Rodajear	0.00	0.00	0.00	ERR
Podar	0.00	0.00	0.00	ERR
Anarrar	116430.00	413490.02	529920.02	21.97%
Aplicar Fertilizante	12782.23	0.00	12782.23	100.00%
Aplicar Pesticidas	25792.34	0.00	25792.34	100.00%
Cosechar	0.00	500.00	500.00	0.00%
Mantenimiento	0.00	0.00	0.00	ERR
<b>TOTALES</b>	<b>155004.57</b>	<b>427210.02</b>	<b>582214.59</b>	<b>ERR</b>

Cuadro 2. Flujo mensual de mano de obra (horas/ha).

	FAMILIAR	CONTRATADA	TOTAL
Jun-90	1.66	10.50	12.15
Jul-90	35.91	40.88	76.80
Aug-90	34.81	22.10	56.91
Sep-90	29.01	100.00	129.01
Oct-90	7.18	15.47	22.65
Nov-90	0.00	9.39	9.39
Dec-90	27.62	21.55	49.17
Jan-91	0.00	0.00	0.00
Feb-91	37.57	0.00	37.57
Mar-91	50.28	29.83	80.11
Apr-91	66.85	38.67	105.52
May-91	28.73	30.39	59.12
Jun-91	31.49	0.00	31.49
Jul-91	0.00	0.00	0.00
Aug-91	36.46	0.00	36.46
Sep-91	16.57	0.00	16.57
Oct-91	32.60	2.76	35.36
Nov-91	0.00	0.00	0.00
<b>TOTALES</b>	<b>436.74</b>	<b>321.55</b>	<b>758.29</b>

maracuyá

Cuadro 3. Flujo mensual de costos de insumos y MD contratada (\$/ha).

	Insunos	MD contratada	TOTAL
Jun-90	276.25	629.83	906.08
Jul-90	30510.49	216685.08	247195.58
Aug-90	10773.48	1546.96	12320.44
Sep-90	2554.89	7000.00	9554.89
Oct-90	3888.40	0.00	3888.40
Nov-90	1699.06	0.00	1699.06
Dec-90	0.00	1292.82	1292.82
Jan-91	0.00	0.00	0.00
Feb-91	0.00	0.00	0.00
Mar-91	3704.42	3071.83	6776.25
Apr-91	25579.60	3093.92	28673.52
May-91	3624.32	2430.94	6055.26
Jun-91	220.99	0.00	220.99
Jul-91	0.00	0.00	0.00
Aug-91	507.95	0.00	507.95
Sep-91	462.10	0.00	462.10
Oct-91	1835.91	276.24	2112.16
Nov-91	0.00	0.00	0.00
<b>TOTALES</b>	<b>85637.88</b>	<b>236027.64</b>	<b>321665.52</b>

Cuadro 6. Flujo mensual de mano de obra por parcela (horas/parcela).

	FAMILIAR	CONTRATADA	TOTAL
Jun-90	3.00	19.00	22.00
Jul-90	65.00	74.00	139.00
Aug-90	63.00	40.00	103.00
Sep-90	52.50	181.00	233.50
Oct-90	13.00	28.00	41.00
Nov-90	0.00	17.00	17.00
Dec-90	50.00	39.00	89.00
Jan-91	0.00	0.00	0.00
Feb-91	68.00	0.00	68.00
Mar-91	91.00	54.00	145.00
Apr-91	121.00	70.00	191.00
May-91	52.00	55.00	107.00
Jun-91	57.00	0.00	57.00
Jul-91	0.00	0.00	0.00
Aug-91	66.00	0.00	66.00
Sep-91	30.00	0.00	30.00
Oct-91	59.00	5.00	64.00
Nov-91	0.00	0.00	0.00
<b>TOTALES</b>	<b>790.50</b>	<b>582.00</b>	<b>1372.50</b>

Maracuyá

Cuadro 7. Flujo mensual de costos de insumos y MO contratada (\$/parcela)

	Insumos	MO contratada	TOTAL
Jun-90	500.01	1140.00	1640.01
Jul-90	55223.99	392200.00	447423.99
Aug-90	19500.00	2800.00	22300.00
Sep-90	4624.36	12670.00	17294.36
Oct-90	7038.01	0.00	7038.01
Nov-90	3075.30	0.00	3075.30
Dec-90	0.00	2340.00	2340.00
Jan-91	0.00	0.00	0.00
Feb-91	0.00	0.00	0.00
Mar-91	6705.00	5560.02	12265.02
Apr-91	46299.08	5600.00	51899.08
May-91	6560.02	4400.00	10960.02
Jun-91	400.00	0.00	400.00
Jul-91	0.00	0.00	0.00
Aug-91	919.39	0.00	919.39
Sep-91	836.40	0.00	836.40
Oct-91	3323.00	500.00	3823.00
Nov-91	0.00	0.00	0.00
<b>TOTALES</b>	<b>155004.57</b>	<b>427210.02</b>	<b>582214.59</b>

Cuadro 19. Flujo mensual acumulado de ingresos y egresos (¢).

	INGRESOS	EGRESOS	DIFERENCIA
Jun-90	0.00	1640.01	-1640.01
Jul-90	0.00	447423.99	-447423.99
Aug-90	0.00	22300.00	-22300.00
Sep-90	0.00	17294.36	-17294.36
Oct-90	0.00	7038.01	-7038.01
Nov-90	0.00	3075.30	-3075.30
Dec-90	0.00	2340.00	-2340.00
Jan-91	0.00	0.00	0.00
Feb-91	0.00	0.00	0.00
Mar-91	0.00	12265.02	-12265.02
Apr-91	0.00	51899.08	-51899.08
May-91	0.00	10960.02	-10960.02
Jun-91	0.00	400.00	-400.00
Jul-91	0.00	0.00	0.00
Aug-91	2340.00	919.39	1420.61
Sep-91	10500.00	836.40	9663.60
Oct-91	112299.54	3823.00	108476.54
Nov-91	0.00	0.00	0.00
<b>TOTALES</b>	<b>125139.54</b>	<b>582214.59</b>	<b>-457075.05</b>

Data output of the farms which have only been investigated for four month.

Summary of the economic activities of farm 3

AGROECOSISTEMA	AREA	ING. BRUTO	INSUMOS	MOC	Gr. margin	MOF (h)	RET. MOF
Animales	1.00	0.00	0.00	0.00	0.00	61.00	0.00
Ayote	2.12	0.00	6271.99	2000.00	-8271.99	63.00	-131.30
Ganado	1.00	0.00	2470.00	0.00	-2470.00	108.00	-22.87
Pasto	11.00	0.00	4500.00	800.00	-5300.00	23.00	-230.43
Trabajar afuera	1.00	0.00	0.00	0.00	0.00	130.00	0.00
Yuca	6.00	70996.86	0.00	23800.00	47196.86	18.00	2622.05
<b>TOTALES</b>	<b>22.12</b>	<b>70996.86</b>	<b>13241.99</b>	<b>26600.00</b>	<b>31154.87</b>	<b>403.00</b>	<b>77.31</b>

Summary of the economic activities of farm 5

AGROECOSISTEMA	AREA	ING. BRUTO	INSUMOS	MOC	Gr. margin	MOF (h)	RET. MOF
Animales	1.00	0.00	7635.00	0.00	-7635.00	1.00	-7635.00
Chile	1.00	0.00	1611.00	0.00	-1611.00	25.00	-64.44
Coco	0.54	0.00	100.00	0.00	-100.00	22.00	-4.55
Frijoles	0.14	0.00	0.00	0.00	0.00	5.00	0.00
Ganado	1.00	0.00	0.00	0.00	0.00	14.00	0.00
Maiz	0.50	0.00	2761.20	3000.00	-5761.20	37.50	-153.63
Mantenimiento	1.00	0.00	0.00	0.00	0.00	32.00	0.00
Pasto	8.00	0.00	820.00	0.00	-820.00	139.50	-5.88
Platano	0.25	0	0	0	0	6	0
Trabajar afuera	1	17280	0	0	17280	168	102.8571
Tequisque	0.05	0	0	0	0	4	0
Yuca	0.08	0	0	0	0	7	0
<b>TOTALES</b>	<b>14.56</b>	<b>17280.00</b>	<b>12927.20</b>	<b>3000.00</b>	<b>1352.80</b>	<b>461.00</b>	<b>2.93</b>

Summary of the economic activities on farm 11.

AGROECOSISTEMA	AREA	ING. BRUTO	INSUMOS	MOC	Gr. margin	MOF (h)	RET. MOF
Ganado	1.00	0.00	1250.00	0.00	-1250.00	211.00	-5.92
Pasto	45.62	0.00	0.00	10000.00	-10000.00	111.00	-90.09
Pina	0.50	0.00	400.00	0.00	-400.00	0.00	0.00
Trabajar afuera	1.00	31000.00	0.00	0.00	31000.00	355.00	87.32
<b>TOTALES</b>	<b>48.12</b>	<b>31000.00</b>	<b>1650.00</b>	<b>10000.00</b>	<b>19350.00</b>	<b>677.00</b>	<b>28.58</b>

Summary of the economic activities of farm 12

AGROECOSISTEMA	AREA	ING. BRUTO	INSUMOS	MOC	Gr. margin	MOF (h)	RET. MOF
Chanol	0.27	0.00	400.75	0.00	-400.75	33.00	-12.14
Frijoles	0.10	0.00	0.00	0.00	0.00	7.00	0.00
Mantenimiento	1.00	0.00	0.00	0.00	0.00	29.00	0.00
Maipi	0.70	0.00	22053.25	12200.00	-34253.25	374.00	-91.59
Palmito	0.75	46800.00	3611.60	2500.00	40688.40	160.00	254.30
Pina	0.20	15830.50	0.00	800.00	15030.50	68.00	221.04
Trabajar afuera	1.00	3500.00	0.00	0.00	3500.00	23.00	152.17
Maiz	0.10	0.00	1292.00	1300.00	-2592.00	81.00	-32.00
<b>TOTALES</b>	<b>4.12</b>	<b>66130.50</b>	<b>27357.60</b>	<b>16800.00</b>	<b>21972.90</b>	<b>775.00</b>	<b>28.35</b>

Summary of the economic activities of farm 13

AGROECOSISTEMA	AREA	ING. BRUTO	INSUMOS	MOC	Gr. margin	MOF (h)	RET. MOF
Animales	1.00	0.00	1320.00	0.00	-1320.00	0.00	0.00
Ganado	1.00	0.00	7020.00	0.00	-7020.00	40.00	-175.50
Palmito	1.30	56580.00	8551.00	1100.00	46929.00	253.00	185.49
Pasto	7.85	0.00	2567.20	1500.00	-4067.20	41.00	-99.20
Trabajar afuera	1.00	57000.00	70000.00	0.00	-13000.00	228.00	-57.02
<b>TOTALES</b>	<b>12.15</b>	<b>113580.00</b>	<b>89458.20</b>	<b>2600.00</b>	<b>21521.80</b>	<b>562.00</b>	<b>38.30</b>



SUMMARY file CATEGORY no. 7

BASE image VARIABLE name : MAPA TIPO DE SUELOS ASENTAMIENTO  
NEGUEV PART

CLASS =====	POINTS =====	HECTARES =====	% =====	DESCRIPTION =====
0	0.	0.000	0.00	%
1	40.	3.600	30.53	% Ne
2	0.	0.000	0.00	% Si
3	0.	0.000	0.00	% u
4	0.	0.000	0.00	% Mi
5	2.	0.180	1.53	% De
6	0.	0.000	0.00	% Wi
7	0.	0.000	0.00	% Bo
8	0.	0.000	0.00	% Pa
9	0.	0.000	0.00	% Fl
10	0.	0.000	0.00	% Tu
11	0.	0.000	0.00	% Do
12	0.	0.000	0.00	% Lu
13	0.	0.000	0.00	% Li
14	0.	0.000	0.00	% Si/d
15	0.	0.000	0.00	% Si/c u+u
16	0.	0.000	0.00	% Si/c
17	0.	0.000	0.00	% Si/E
18	0.	0.000	0.00	% Ne/D
19	0.	0.000	0.00	% Ne/c
20	51.	4.590	38.93	% Ne/E
21	0.	0.000	0.00	% Mi/b
22	0.	0.000	0.00	% Mi/E
23	0.	0.000	0.00	% Mik2/B
24	0.	0.000	0.00	% De2
25	0.	0.000	0.00	% Ne/a
26	38.	3.420	29.01	% Wi2
27	0.	0.000	0.00	% Mi/F
28	0.	0.000	0.00	% De4
29	0.	0.000	0.00	% D03K2
30	0.	0.000	0.00	% D02
31	0.	0.000	0.00	% Do3
32	0.	0.000	0.00	% LuIII
33	0.	0.000	0.00	% BoIII
34	0.	0.000	0.00	% Ne/b-c
35	0.	0.000	0.00	% Ne/c-d

TOTALS: 131. 11.790

Totals and Percentages are Based on NON-ZERO points

SUMMARY file CATEGORY no.13

BASE image VARIABLE name : MAPA TIPO DE SUELOS ASENTAMIENTO  
NEGUEV PART

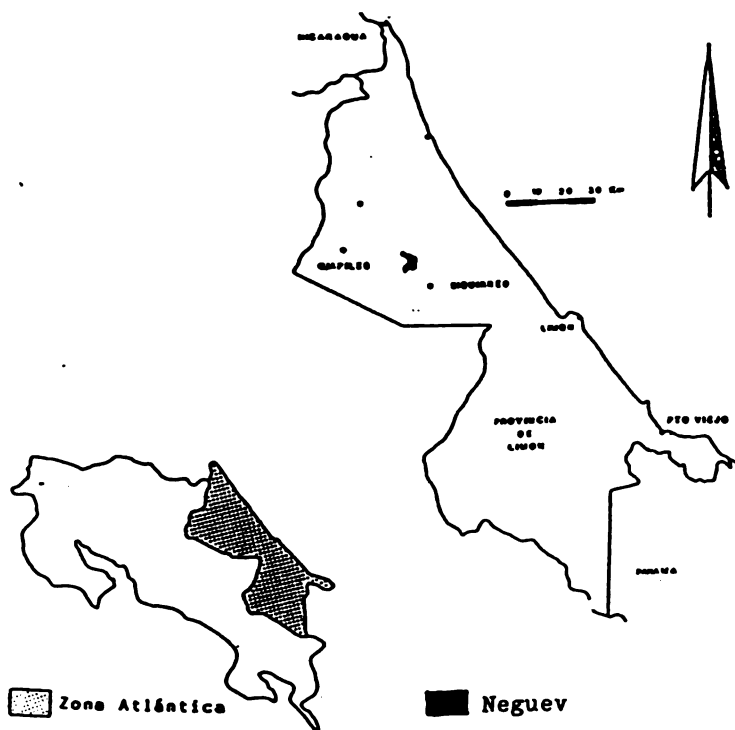
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2	0.	0.000	0.00 %	Si
3	0.	0.000	0.00 %	u
4	0.	0.000	0.00 %	Mi
5	0.	0.000	0.00 %	De
6	14.	1.260	13.33 %	Wi
7	0.	0.000	0.00 %	Bo
8	0.	0.000	0.00 %	Pa
9	0.	0.000	0.00 %	El
10	0.	0.000	0.00 %	Tu
11	0.	0.000	0.00 %	Do
12	0.	0.000	0.00 %	Lu
13	0.	0.000	0.00 %	Ls
14	0.	0.000	0.00 %	Si/c
15	43.	3.870	40.95 %	Si/c utu
16	0.	0.000	0.00 %	Si/c
17	19.	1.710	18.10 %	Si/c
18	0.	0.720	7.62 %	Ne/c
19	2.	0.180	1.90 %	Ne/c
20	7.	0.810	8.57 %	Ne/c
21	0.	0.000	0.00 %	Mi/c
22	0.	0.000	0.00 %	Mi/c
23	0.	0.000	0.00 %	Mi/c2/c
24	0.	0.000	0.00 %	
25		0.000	0.00 %	
26		0.	0.00 %	Wi2
27	0.	0.000	0.00 %	Mi/c
28		0.000	0.00 %	De4
	0.	0.000	0.00 %	Do4
	0.	0.000	0.00 %	
31	0.	0.000	0.00 %	
32	0.	0.000	0.00 %	
33	0.	0.000	0.00 %	
34	0.	0.000	0.00 %	
35	0.	0.000	0.00 %	

Appendix 6      INFORMATION GIVEN TO THE FARMERS

PROGRAMA ZONA ATLÁNTICA

MAG/UAW/CATIE

Estudio económico en el asentamiento Neguev.  
Parcela ?



Estudio económico en el asentamiento Neguev.

La información adjunta es un adicional de nuestro informe presentado el día 29 de noviembre de 1991, en el Asentamiento Neguev.

Cada campesino obtiene información sobre su parcela, la cual esta dividida en cinco partes; dicha información forma parte de nuestro reporte final.

Primeramente un mapa de la parcela; subdividida en lotes dandose diferentes cultivos u otros agroecosistemas. Los números de el mapa refiere a los números de la primera columna del cuadro 1.

Seguidamente un mapa de la parcela; subdividido según el tipo de suelo, clasificado en alta o en baja fertilidad; pero en el cuadro 1 puede encontrar el tipo de suelo más especializado.

Cuadro 1: En este cuadro se puede encontrar el No. de lote, tamaño del área, tipos de suelos, cultivos y período de cultivación por lote.

Cuadro 2: Este es un resumen de los datos económicos por cultivo, se incluye el tipo de cultivo, el área, los ingresos (entrada de dinero), los egresos (salidas de dinero), costos por contratación de peones, ganancia (incluye ingresos menos egresos y costos por contratación de peones), horas mano de obra familiar y ganancia por hora familiar.

Figura 1: Esta nos muestra el período de tiempo laborado en diferentes cultivos, utilizando los 6 más importantes de la finca, determinando el tiempo por mes.

Específicamente en los casos de agricultores que han sido entrevistados por poco tiempo (4 meses), los datos son incompletos. Por ejemplo pueden haber muchos egresos pero no ingresos, por el momento, pero una vez cosechados sus productos las ganancias pueden mejorar. Por esta razón y otras continuaremos el estudio económico a completar el año.

Muchas gracias por su colaboración y buena suerte en el futuro.