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ESTABULACION PERMANENTE Y PASTOREO-  
ESTABULACION EN EL CRECIMIENTO DE  
TERNERAS DE RAZAS LECHERAS

Por

Camilo Hadad

# INSTITUTO INTERAMERICANO DE CIENCIAS AGRICOLAS

Turrialba, Costa Rica

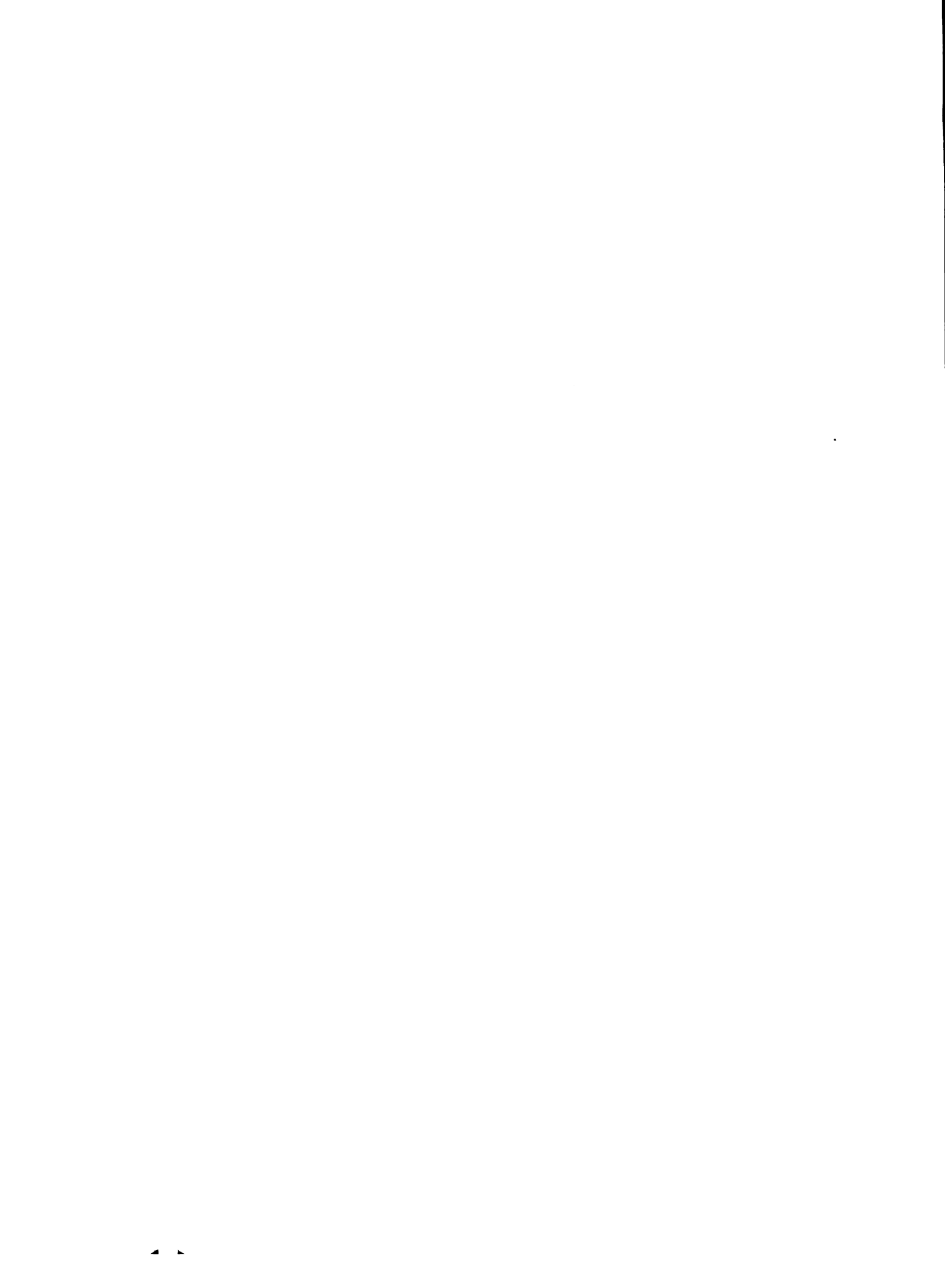


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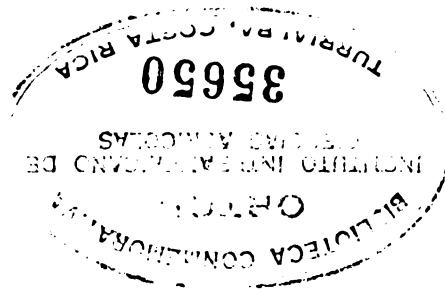
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Centro de Enseñanza e Investigación

Turrialba, Costa Rica

Febrero, 1969



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ESTABULACION PERMANENTE Y PASTOREO-ESTABULACION EN EL  
CRECIMIENTO DE TERNERAS DE RAZAS LECHERAS

Tesis

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en el

Instituto Interamericano de Ciencias Agrícolas de la OEA

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Febrero, 1969

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A la memoria de Rolando Martínez

A mis padres

A mis familiares

A Ana Isabel

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describes the general situation  
of the country and the  
state of the economy.

## AGRADECIMIENTOS

El autor desea expresar sus agradecimientos al Dr. Karel Vohnout, Consejero Principal, por la valiosa colaboración en el desarrollo del presente estudio y por las enseñanzas impartidas a través de su formación profesional.

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A sus compañeros y amigos del Centro.

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## BIOGRAFIA

El autor nació en Armenia, Departamento del Quindío, Colombia, el 17 de octubre de 1944. Realizó sus estudios primarios en el Colegio San José de Armenia. Cursó sus estudios secundarios en el Colegio San Bartolomé La Merced de Bogotá. Inició sus estudios universitarios en la Escuela Agrícola Panamericana de Honduras, para luego ingresar a la Universidad de Arizona y obtener el título de Bachelor of Science en Agricultura en enero de 1967.

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The first part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that every entry should be supported by a valid receipt or invoice. This ensures transparency and allows for easy verification of the data.

In the second section, the author details the various methods used to collect and analyze the data. This includes both manual and automated processes. The goal is to ensure that the data is both reliable and representative of the overall population being studied.

The third part of the document focuses on the results of the analysis. It presents a series of charts and graphs that illustrate the trends and patterns in the data. These visual aids are essential for understanding the complex relationships between different variables.

Finally, the document concludes with a series of recommendations based on the findings. These suggestions are designed to help improve the efficiency and accuracy of future data collection and analysis efforts.

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## INTRODUCCION

Los rendimientos de un hato lechero dependen, en parte, de los cuidados en el manejo y alimentación de los animales durante el crecimiento. La alimentación de las terneras influye en el tiempo que necesitan estas para empezar la reproducción, en su estado de salud y posiblemente en el futuro desarrollo de su potencial lechero. Por lo tanto, el suministro de raciones balanceadas para cubrir los requisitos es importante. Por otra parte, el manejo de los animales debe ser aquel que, bajo las condiciones que presenta un medio ambiente específico, no solo les permita prepararse para resistir las adversidades, sino también les permita obtener el alimento al costo más bajo.

Las condiciones de alta humedad y temperatura que prevalecen en ciertas regiones tropicales afectan el desarrollo de los animales y favorecen la proliferación de enfermedades y parásitos. Normalmente los animales en pastoreo soportan de una manera más rigurosa estas condiciones, existiendo la posibilidad de que los animales que entren por primera vez a pastoreo sean los más afectados por las contingencias del clima y los parásitos. Sin embargo, el pastoreo, bajo ciertas condiciones, puede ser el sistema más barato de alimentar los animales en el trópico, y por consiguiente, se debe adaptar a los animales a este regimen a la edad más temprana. En tal situación, se hace necesario adaptar un sistema que permita que los animales jóvenes obtengan los máximos beneficios del pastoreo sin que sean significativamente afectados por las contingencias mencionadas. El presente estudio se proyectó para comparar un sistema



de estabulación permanente con otro de pastoreo-estabulación en la etapa inmediata al destete, en terneras de 70 a 120 kilos de peso, en lo referente al ritmo de crecimiento de los animales y costo de cada uno de los sistemas.

The first part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that proper record-keeping is essential for ensuring the integrity and reliability of financial data. This section also outlines the various methods and tools used to collect and analyze financial information, highlighting the need for consistency and transparency in the reporting process.

The second part of the document provides a detailed overview of the current financial landscape, including market trends, regulatory changes, and the impact of global economic events. It discusses the challenges faced by financial institutions and offers insights into potential solutions and strategies for navigating these complexities. The text also touches upon the role of technology in modern finance, exploring how digital innovations are reshaping the industry.

Finally, the document concludes with a series of recommendations and best practices for financial management. It stresses the importance of staying informed, maintaining open communication, and adhering to ethical standards. The author encourages readers to take proactive steps to ensure their financial health and to contribute positively to the overall stability of the financial system.



REVISION DE LITERATURA

Efecto del pastoreo en la crianza de terneras

El pastoreo parece, a la fecha presente, la forma más barata de alimentar bovinos en el trópico. A más que el animal que pastorea tiene la posibilidad de seleccionar su dieta, que resulta más nutritiva que si el pasto es cortado y ofrecido al animal (16) el animal hace su propia cosecha del forraje. Sin embargo, aunque los animales en pastoreo tienen una dieta más rica en nutrimentos, se ha reportado que el gasto de energía por el animal para mantener sus actividades adicionales en pastoreo es alrededor de 40 a 50% superior al gasto de energía necesaria para su mantenimiento en confinamiento (34). Este gasto adicional es atribuido al hecho de que el animal se mantiene caminando, a las condiciones climáticas reinantes en campo abierto y especialmente al esfuerzo del animal para cosechar el forraje (9). En animales jóvenes el gasto de energía para pastorear puede ser aún mayor que en animales adultos debido a que estos animales tienden a jugar durante el pastoreo (15). En el caso de las ovejas se ha reportado que el gasto de energía en pastoreo era comparado con los requerimientos de mantenimiento, 33% superior en ovejas de 46 kilos, mientras que dicho gasto en ovejas de 26 kilos ascendía a 275% cuando pastoreaban durante todo el día (25).

El pastoreo a una edad temprana puede resultar ventajoso, por la adquisición de resistencia a algunas enfermedades como la ana-

THE HISTORY OF THE UNITED STATES OF AMERICA

The history of the United States of America is a story of growth and change. It begins with the first settlers who came to the eastern coast of North America in the early 17th century. These settlers, known as the Pilgrims, were seeking religious freedom and a better life. They established the Plymouth colony in 1620, which became one of the first permanent English settlements in North America.

Over the next century, more settlers came to the United States, and the colonies grew in size and number. By the mid-18th century, there were 13 colonies along the eastern coast. These colonies were part of the British Empire, and they were subject to British laws and taxes. However, the colonists began to resent British rule, especially the taxes imposed on them without their consent. This led to a series of protests and conflicts, culminating in the American Revolutionary War (1775-1783).

The war was fought between the 13 colonies and Great Britain. The colonists, led by George Washington, fought the Battle of Yorktown in 1781, which resulted in a decisive victory for the colonists. The British evacuated the colonies and returned to Europe. The war ended with the signing of the Treaty of Paris in 1783, which recognized the independence of the United States.

After the war, the new nation faced many challenges. It had to establish a government and a system of laws. The framers of the Constitution met in 1787 to create a new government for the United States. The Constitution was signed in 1788 and went into effect in 1789. It established a federal government with three branches: the executive, the legislative, and the judicial.

The United States continued to grow and expand westward. By the mid-19th century, the country had stretched from the Atlantic coast to the Rocky Mountains. This led to conflicts with Native Americans and the discovery of gold in California in 1848. The gold rush led to a large influx of settlers to the West, and the United States became a major power in the world.

In 1861, the United States was divided by the Civil War. The Southern states seceded from the Union, and the war was fought between the Union and the Confederacy. The war was fought from 1861 to 1865, and it resulted in the preservation of the Union and the abolition of slavery. The war was one of the most devastating in American history, with over 600,000 deaths.

After the Civil War, the United States continued to grow and expand. It became a major industrial power and a world leader. The country was involved in several wars, including the Spanish-American War (1898) and World War I (1914-1918). The United States emerged from World War I as a superpower, and it played a leading role in the formation of the United Nations and the North Atlantic Treaty Organization (NATO).

In the mid-20th century, the United States was involved in the Vietnam War (1955-1975). The war was a controversial and costly conflict, and it led to a large anti-war movement. The United States withdrew from Vietnam in 1973, and the war ended in 1975. The Vietnam War was one of the most divisive in American history, and it led to a loss of confidence in the government.

The United States has a long and rich history, and it has played a leading role in the world. It has been a land of opportunity and freedom, and it has been a source of inspiration for people around the world. The United States is a country that has grown and changed over time, and it continues to be a source of strength and hope for the future.

plasmosis y piroplasmosis (2). Sin embargo, puede presentar ciertos riesgos donde existen infestaciones del gusano del pulmón (Dyctiocaulus viviparus) (2, 4), reportándose mortalidades anuales de 6 y 25% en terneras Criollo y Jersey respectivamente, de aproximadamente 12 meses de edad y en los primeros meses de pastoreo de los animales (21).

Las consideraciones expuestas indican que existen ventajas y desventajas en el uso del pastoreo en animales jóvenes. Sin embargo, hay muy pocas referencias experimentales que pudieran permitir establecer a la fecha presente un régimen de manejo ideal, especialmente en las regiones del trópico "cálido-húmedo". Los aspectos más importantes a considerarse deberían ser obtener el crecimiento más rápido con la menor inversión de capital, de modo que las novillas estuvieran en condiciones de producir su primer becerro a la edad aproximada de 2 años.

#### Velocidad de crecimiento y eficiencia alimenticia

Los niveles de nutrición que permiten obtener un crecimiento máximo, son más eficaces desde el punto de vista de la eficiencia de la energía suministrada al animal (28). Por lo tanto, a medida que aumente la ganancia de peso diaria, disminuye la cantidad total de nutrimentos digestibles necesaria para producir una unidad de aumento de peso. Se ha reportado que novillas con aumentos de peso de .630 y .135 kilogramos requirieron 6,8 y 20,5 kilos de NDT por kilo de aumento de peso respectivamente (27). En el otro extremo,



un aumento de peso excesivo no es aconsejable debido a que el animal tiende a depositar grasa en sus tejidos, y esta grasa no solo disminuye la eficiencia de la alimentación sino que afecta también la eficiencia reproductiva del animal (36, 38, 39).

### Ritmo de crecimiento y reproducción

Las ventajas del crecimiento rápido no se reflejan únicamente en la eficiencia alimenticia sino también en la posibilidad de anticipar la edad del primer parto. La fase reproductiva de un bovino comienza con la pubertad, o sea, desde la aparición del primer celo (35). Parece de consentimiento unánime (10, 13, 17, 23, 32, 33, 36) que el comienzo de la pubertad está más relacionada con el tamaño corporal del animal que con la edad, siendo por consiguiente función de la rapidez de crecimiento. Como la rapidez de crecimiento depende, en gran parte, del nivel nutricional impuesto al animal, la pubertad viene a estar íntimamente relacionada con el nivel nutricional durante el crecimiento. Se ha reportado que en ganado Holstein, la pubertad comienza cuando la novilla pesa alrededor de 270 kilos (33, 36, 37), y en Jersey a los 190 kilos (37), o sea, cuando el animal obtiene el 45% de su peso a la madurez (11). Sin embargo, servir a una novilla a una edad muy temprana puede traer dificultades durante el parto, posiblemente por estrechez pelviana (41).

Con relación a la eficiencia reproductiva, el resultado de varias investigaciones indica que el ritmo de crecimiento no tiene

The first part of the report deals with the general situation of the country and the progress of the work during the year. It is followed by a detailed account of the various projects and the results achieved. The report concludes with a summary of the work done and the plans for the future.

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ninguna influencia en el número de servicios requerido por una novilla para su primera concepción (13, 31, 33, 40). Sin embargo, parece que hay cierta tendencia de los animales criados bajo un régimen nutricional demasiado alto a requerir un número mayor de servicios (23). Hay evidencia además, de que las terneras en crecimiento rápido que llegan a la pubertad a los 10 meses requieren más servicios que terneras que alcanzan la pubertad a la misma edad que se les comenzó a inseminar después de los 14 meses (41).

#### Ritmo de crecimiento y producción de leche

Si una novilla puede ser servida a los 14-16 meses sin problemas de tipo reproductivo, indica que puede producir su primer ternero a la edad de dos años. Varios estudios se han llevado a cabo para encontrar la relación que existe entre la edad y el peso al primer parto y la producción de leche en las diferentes lactancias. La mayoría de los estudios con datos provenientes de hatos comerciales han demostrado que, dentro de una misma raza, no existe una relación entre el peso del animal y su futura producción lechera (12, 13, 42). Por lo tanto, demorar más de dos años la edad del primer parto para obtener un mayor peso y así una mayor producción, no es económicamente aconsejable (8, 41).

En resumen, se debe propender a un manejo que permita obtener terneras que a los 14 a 16 meses puedan ser inseminadas, lo cual en las regiones templadas bajo estabulación completa, se puede obtener con niveles de alimentación de 70-80% de lo recomendado por el NRC





(37). Para evitar problemas durante el parto y asegurar una buena producción en la primera lactancia, se requiere un nivel nutricional tal, que las novillas de razas "pequeñas" pesen alrededor de 330 kilos y novillas de razas "grandes" 475 kilos al momento del parto.

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## MATERIALES Y METODOS

### Localización

La presente investigación se llevó a cabo en el Departamento de Zootecnia del Instituto Interamericano de Ciencias Agrícolas de la OEA, en Turrialba, Costa Rica. Turrialba se encuentra a 605 m. de altitud, con una temperatura media de 22°C\*, aproximadamente 3.000 mm de precipitación y humedad relativa promedio de 90%. El trabajo se inició en abril de 1968 y finalizó en noviembre del mismo año.

### Manejo de los animales

Se utilizaron 22 terneras, de las cuales tres eran de raza Jersey, siete Criollas y 12 Criollo-Jersey. Las terneras entraban al experimento a medida que obtenían 70 kilos de peso.

Los animales permanecieron estabulados en corralitos individuales desde el nacimiento hasta el destete a los 70 kilos. Para reducir y distribuir en forma uniforme el error debido a los efectos de enfermedades y parásitos en los diferentes tratamientos del experimento, todas las terneras fueron sometidas a un programa de premunición antes de alcanzar los 70 kilos de peso, programa que consistió en:

- a) A los 35 kilos de peso se inyectó a las terneras 5 cc de

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\* Variación de temperatura, diaria de 17 a 27°C, anual de 21 a 23°C.

### Introduction

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The first part of the document discusses the importance of maintaining accurate records. It highlights the need for consistency and transparency in all transactions. The second part details the specific procedures for recording and reporting, ensuring that all data is captured and analyzed correctly. The final section provides a summary of the findings and recommendations for future improvements.

The following table provides a detailed breakdown of the data collected during the study. Each row represents a different category, and the columns show the corresponding values and percentages. This data is crucial for understanding the overall trends and identifying areas that require attention.

Category	Value	Percentage
Category A	150	15%
Category B	200	20%
Category C	300	30%
Category D	250	25%
Category E	100	10%

The analysis shows a clear upward trend in the data, with Category C showing the most significant growth. This suggests that the current strategies are effective, but there is still room for improvement in other areas. The recommendations provided aim to address these gaps and ensure long-term success.

In conclusion, the findings of this study are highly significant and provide valuable insights into the current state of affairs. It is recommended that the organization take immediate action on the findings to optimize performance and achieve its goals.

sangre proveniente de animales con síntomas de anaplasmosis, manteniéndolas bajo observación para proceder a tratarlas por cualquier síntoma agudo de enfermedad.

b) Después que los animales alcanzaron 50 kilos de peso, fueron pastoreados durante 5 días para exponerlas a la infección con larvas del "gusano del pulmón" (Dictyocaulus viviparus) y tuvieran contacto con garrapatas en caso de que la sangre inyectada no hubiera tenido efecto infectante en el caso de la anaplasmosis. A los 10 días de efectuado el pastoreo, los animales fueron tratados con Certuna\* y Francozán\*\*, para eliminar las larvas localizadas en el pulmón y en la circulación respectivamente. Con este tratamiento se intentó obtener resistencia a futuras infestaciones.

c) Cuando las terneras llegaron a los 70 kilos recibieron un tratamiento antiparasitario con Ripercol\*\*\*. Luego de este tratamiento las terneras fueron distribuidas en cada uno de los dos tratamientos. A las siete semanas de estar las terneras en el experimento recibieron otra dosis de Ripercol y baños garrapaticidas cuando fue necesario.

Los animales en cada tratamiento fueron divididos en cinco clases de acuerdo al peso. En cada clase las terneras recibieron sus requisitos nutritivos mediante la administración de dos concentrados cuya proporción se fue cambiando de acuerdo al peso de los animales, según se indica en el cuadro 1.

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\* Fabricado por Bayer.  
\*\* Fabricado por The Wellcome Foundation Ltd.  
\*\*\* Fabricado por Cyanamid.

- The first part of the document discusses the importance of maintaining accurate records of all transactions and activities. It emphasizes that these records are essential for the proper management of the organization's finances and for ensuring compliance with applicable laws and regulations.

- The second part of the document outlines the specific procedures and controls that should be implemented to ensure the accuracy and integrity of the records. This includes the use of standardized forms, the implementation of a robust internal control system, and the regular review and reconciliation of accounts.

- The third part of the document provides a detailed description of the various types of records that should be maintained, including financial statements, tax records, and supporting documentation. It also discusses the retention periods for these records and the methods for their secure storage and retrieval.

- The fourth part of the document discusses the role of management in ensuring the effectiveness of the record-keeping system. It emphasizes that management should provide the necessary resources and oversight to ensure that the system is properly implemented and maintained.

- The fifth part of the document discusses the importance of training and education for the personnel responsible for maintaining the records. It emphasizes that all personnel should be trained in the proper procedures and controls, and that they should be kept up-to-date on any changes to the system.

- The sixth part of the document discusses the importance of regular audits and reviews of the record-keeping system. It emphasizes that these audits should be conducted by independent personnel and should be designed to identify any weaknesses or deficiencies in the system.

- The seventh part of the document discusses the importance of maintaining the confidentiality and security of the records. It emphasizes that appropriate measures should be taken to protect the records from unauthorized access, loss, or destruction.

- The eighth part of the document discusses the importance of maintaining the accuracy and integrity of the records over the long term. It emphasizes that the records should be regularly reviewed and updated to reflect any changes in the organization's activities and financial position.

- The ninth part of the document discusses the importance of maintaining the records in a clear and concise manner. It emphasizes that the records should be organized in a logical and systematic way, and that they should be easy to understand and interpret.

- The tenth part of the document discusses the importance of maintaining the records in a secure and accessible format. It emphasizes that the records should be stored in a secure location, and that they should be easily accessible to authorized personnel.

Cuadro 1. Administración de concentrado de acuerdo con el peso de las terneras, kilos de materia seca por día.

Clase	Peso animal kilogramos	Concentrado 1	Concentrado 2	Total
1	70 - 79	1,85	0,61	2,46
2	80 - 89	1,62	1,02	2,64
3	90 - 99	1,50	2,02	3,52
4	100 - 109	0,85	2,70	3,55
5	110 - 119	0,58	3,38	3,96

Para los 22 animales se dispuso de 10 corrales, cinco para cada tratamiento, según las clases indicadas en el cuadro 1. Los animales de cada tratamiento entraron a su primer corral cuando pesaron 70 kilos. Para poder reclasificarlos oportunamente, los animales fueron pesados semanalmente. Antes de pesarlos, se los mantuvo en ayuno durante 20 horas para disminuir el error debido al peso del alimento en el aparato digestivo.

Las terneras en el tratamiento de estabulación permanente recibieron la mitad del alimento concentrado aproximadamente a las 6 am y la otra mitad a las 4 pm. Estos animales recibieron además de corte de las especies Elefante (Pennisetum purpureum) o Imperial (Axonopus scoparius) ad libitum. Las terneras en el tratamiento de de pastoreo-estabulación recibieron toda la ración concentrada a

• Adaptation - process of organisms becoming better suited to their environment

• Survival of the fittest - organisms best adapted to their environment survive

Adaptation	Benefit	Cost
• camouflage	• avoid predators	• energy cost
• migration	• avoid harsh conditions	• energy cost
• hibernation	• survive winter	• energy cost
• thick fur	• retain heat	• energy cost
• small ears	• reduce heat loss	• sensory cost

• Convergent evolution - different species evolve similar traits

• Divergent evolution - related species evolve different traits

• Stabilizing selection - selects against extreme phenotypes

• Directional selection - selects for one extreme phenotype

• Disruptive selection - selects for both extreme phenotypes

• Sexual selection - selects for traits that increase mating success

• Artificial selection - selects for traits that are desirable to humans

• Genetic drift - random changes in allele frequencies

• Founder effect - small population founding a new population

• Bottleneck effect - population size is reduced

• Genetic flow - movement of genes between populations

• Speciation - formation of new species

• Reproductive isolation - barriers to interbreeding

• Geographic isolation - physical barriers between populations

• Temporal isolation - differences in breeding time

• Behavioral isolation - differences in courtship rituals



las 4 pm, siendo pastoreadas en Pangola (Digitaria decumbens) desde las 9 am hasta las 3:30 pm. Se tomaron datos del consumo total de concentrado por grupos dentro de las clases de cada tratamiento. Para tener una estimación de la magnitud del pastoreo, se midió en dos días diferentes el tiempo gastado en la actividad de pastorear.

### Raciones

Para minimizar los costos, las raciones concentradas fueron formuladas por programación lineal, para proporcionar los requisitos propuestos por el National Research Council (30) para materia seca, total de nutrimentos digestibles y proteína digestible. Los valores para digestibilidad de los ingredientes de las raciones se obtuvieron de las tablas de Morrison (29) y de los análisis efectuados en el laboratorio del Departamento de Zootecnia. Además, se hizo una prueba de digestibilidad con cada uno de los dos concentrados utilizados en las raciones, uno para animales de 70 kilos (concentrado 1) y otro para animales de 120 kilos de peso (concentrado 2). Combinando estos dos concentrados se obtuvieron las mezclas con los requisitos para los animales de los pesos intermedios, según las clases del cuadro 1. En el cuadro 2 se da el detalle de los ingredientes utilizados.

Debido a limitaciones en el uso indiscriminado de la melaza (18), en el concentrado 2 ésta se fijó como un valor constante (cuadro 2) con el valor de 30%. El pasto de corte se consideró como alimento suplementario, debido a su baja calidad y su elevado

1. The first part of the report

The first part of the report is a general introduction to the subject. It discusses the importance of the subject and the objectives of the study. It also mentions the scope of the study and the methods used.

2. The second part of the report

The second part of the report is a detailed description of the results of the study. It discusses the findings of the study and the conclusions drawn from them. It also mentions the limitations of the study and the suggestions for further research.

The third part of the report is a summary of the findings of the study. It discusses the main points of the study and the conclusions drawn from them.

The fourth part of the report is a list of references. It lists the books, articles, and other sources used in the study.

The fifth part of the report is a list of appendices. It lists the tables, figures, and other material included in the report.

3. The third part of the report

The third part of the report is a summary of the findings of the study. It discusses the main points of the study and the conclusions drawn from them.

The fourth part of the report is a list of references. It lists the books, articles, and other sources used in the study.

The fifth part of the report is a list of appendices. It lists the tables, figures, and other material included in the report.

costo, más alto que el de algunos sub-productos agro-industriales. Por desconocimiento del consumo exacto de forraje y de los requerimientos energéticos de los animales en pastoreo, se asumió las mismas consideraciones como válidas para el forraje directamente pastoreado.

Cuadro 2. Composición de los concentrados, base seca.

Ingrediente	Concentrado 1	Concentrado 2
Torta de algodón	22	5
Afrecho de trigo	9	65
Maíz	57	-
Melaza	12	30
Hueso molido	1	1
Sal	1	1
Total	102	102

En el cuadro 3 se da el detalle del análisis proximal y el precio de cada uno de los ingredientes usado para el cálculo de las raciones.

The first part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that every entry should be supported by a valid receipt or invoice. This ensures transparency and allows for easy verification of the data.

In addition, it is crucial to review the records regularly to identify any discrepancies or errors. This proactive approach helps in resolving issues before they become significant problems.

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**Financial Statement Analysis**

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The following table provides a detailed breakdown of the financial data for the period under review. Each row represents a different category, and the columns show the values for each quarter.

Category	Q1	Q2	Q3	Q4
Revenue	120,000	130,000	140,000	150,000
Expenses	80,000	85,000	90,000	95,000
Profit	40,000	45,000	50,000	55,000

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**Operational Performance Review**

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The operational performance has shown steady improvement over the last year. Key metrics such as production volume and efficiency have both increased significantly.

Moving forward, the focus will be on further optimizing processes and reducing waste to maintain this upward trend.

Cuadro 3. Análisis proximal y precio de los ingredientes de las raciones, por ciento base seca.

Ingrediente	% PD	% NDT	Precio \$/kg MS
Torta de algodón	39	78	0,71
Afrecho de trigo	12	74	0,48
Maíz	8	94	0,78
Melaza	-	66	0,16

PD = Proteína digestible

NDT = Nutrimentos digestibles totales.

MS = Materia seca.

#### Pruebas de digestibilidad

Para conocer los principios nutritivos ofrecidos a los animales del experimento, se hizo una prueba de digestibilidad con cada uno de los concentrados usados en las raciones. Se utilizó el método de colección total de heces. En cada prueba se usó 6 toretes de aproximadamente 100 kilos de peso. Los toretes permanecieron en cajones individuales los 12 días de duración de cada prueba. En los últimos cinco días se recogieron las heces dos veces al día para luego hacer una muestra compuesta para cada animal. Se midió el consumo diario de alimento desde el tercero hasta el onceavo día de la prueba. Los análisis proximales de los dos concentrados y de las heces se hicieron de acuerdo a las recomendaciones de AOAC (5).

1. The first part of the document is a list of names and addresses.

Name	Address
John Doe	123 Main St, New York, NY
Jane Smith	456 Elm St, Los Angeles, CA
Bob Johnson	789 Oak St, Chicago, IL
Alice Brown	101 Pine St, San Francisco, CA
Charlie Davis	202 Cedar St, Boston, MA
Eve White	303 Birch St, Philadelphia, PA
Frank Green	404 Spruce St, Houston, TX
Grace Black	505 Willow St, Phoenix, AZ
Henry Gold	606 Ash St, San Diego, CA
Ivy Silver	707 Hickory St, Dallas, TX
Jack Copper	808 Walnut St, San Antonio, TX
Karen Iron	909 Chestnut St, Fort Worth, TX
Liam Lead	1010 Maple St, Austin, TX
Mia Zinc	1111 Poplar St, San Jose, CA
Noah Tin	1212 Sycamore St, San Luis Obispo, CA
Olivia Nickel	1313 Magnolia St, Santa Barbara, CA
Peter Platinum	1414 Dogwood St, Santa Cruz, CA
Quinn Silver	1515 Redwood St, Santa Clara, CA
Rachel Gold	1616 Cypress St, Santa Cruz, CA
Samuel Iron	1717 Juniper St, Santa Cruz, CA
Tina Lead	1818 Fir St, Santa Cruz, CA
Uma Zinc	1919 Hemlock St, Santa Cruz, CA
Victor Tin	2020 Spruce St, Santa Cruz, CA
Wendy Nickel	2121 Cedar St, Santa Cruz, CA
Xavier Copper	2222 Pine St, Santa Cruz, CA
Yara Silver	2323 Oak St, Santa Cruz, CA
Zoe Gold	2424 Elm St, Santa Cruz, CA

2. The second part of the document is a list of names and addresses.

- John Doe, 123 Main St, New York, NY
- Jane Smith, 456 Elm St, Los Angeles, CA
- Bob Johnson, 789 Oak St, Chicago, IL
- Alice Brown, 101 Pine St, San Francisco, CA
- Charlie Davis, 202 Cedar St, Boston, MA
- Eve White, 303 Birch St, Philadelphia, PA
- Frank Green, 404 Spruce St, Houston, TX
- Grace Black, 505 Willow St, Phoenix, AZ
- Henry Gold, 606 Ash St, San Diego, CA
- Ivy Silver, 707 Hickory St, Dallas, TX
- Jack Copper, 808 Walnut St, San Antonio, TX
- Karen Iron, 909 Chestnut St, Fort Worth, TX
- Liam Lead, 1010 Maple St, Austin, TX
- Mia Zinc, 1111 Poplar St, San Jose, CA
- Noah Tin, 1212 Sycamore St, San Luis Obispo, CA
- Olivia Nickel, 1313 Magnolia St, Santa Barbara, CA
- Peter Platinum, 1414 Dogwood St, Santa Cruz, CA
- Quinn Silver, 1515 Redwood St, Santa Clara, CA
- Rachel Gold, 1616 Cypress St, Santa Cruz, CA
- Samuel Iron, 1717 Juniper St, Santa Cruz, CA
- Tina Lead, 1818 Fir St, Santa Cruz, CA
- Uma Zinc, 1919 Hemlock St, Santa Cruz, CA
- Victor Tin, 2020 Spruce St, Santa Cruz, CA
- Wendy Nickel, 2121 Cedar St, Santa Cruz, CA
- Xavier Copper, 2222 Pine St, Santa Cruz, CA
- Yara Silver, 2323 Oak St, Santa Cruz, CA
- Zoe Gold, 2424 Elm St, Santa Cruz, CA

3. The third part of the document is a list of names and addresses.

The third part of the document is a list of names and addresses. It contains the same information as the second part, but with some additional details. The names are listed in alphabetical order, and the addresses are listed in the same order. The names are: John Doe, Jane Smith, Bob Johnson, Alice Brown, Charlie Davis, Eve White, Frank Green, Grace Black, Henry Gold, Ivy Silver, Jack Copper, Karen Iron, Liam Lead, Mia Zinc, Noah Tin, Olivia Nickel, Peter Platinum, Quinn Silver, Rachel Gold, Samuel Iron, Tina Lead, Uma Zinc, Victor Tin, Wendy Nickel, Xavier Copper, Yara Silver, and Zoe Gold. The addresses are: 123 Main St, New York, NY; 456 Elm St, Los Angeles, CA; 789 Oak St, Chicago, IL; 101 Pine St, San Francisco, CA; 202 Cedar St, Boston, MA; 303 Birch St, Philadelphia, PA; 404 Spruce St, Houston, TX; 505 Willow St, Phoenix, AZ; 606 Ash St, San Diego, CA; 707 Hickory St, Dallas, TX; 808 Walnut St, San Antonio, TX; 909 Chestnut St, Fort Worth, TX; 1010 Maple St, Austin, TX; 1111 Poplar St, San Jose, CA; 1212 Sycamore St, San Luis Obispo, CA; 1313 Magnolia St, Santa Barbara, CA; 1414 Dogwood St, Santa Cruz, CA; 1515 Redwood St, Santa Clara, CA; 1616 Cypress St, Santa Cruz, CA; 1717 Juniper St, Santa Cruz, CA; 1818 Fir St, Santa Cruz, CA; 1919 Hemlock St, Santa Cruz, CA; 2020 Spruce St, Santa Cruz, CA; 2121 Cedar St, Santa Cruz, CA; 2222 Pine St, Santa Cruz, CA; 2323 Oak St, Santa Cruz, CA; and 2424 Elm St, Santa Cruz, CA.

Las determinaciones de energía se hicieron mediante un calorímetro adiabático marca Parr.

### Diseño experimental

#### Tratamientos:

Los tratamientos fueron dos:

1. Animales en estabulación permanente (Tratamiento 1)
2. Animales bajo pastoreo-estabulación (Tratamiento 2)

#### Arreglo de campo:

Se usó un diseño de "change over" en el que cada animal recibió los dos tratamientos en forma sucesiva, siendo su propio testigo (observaciones pareadas). Los animales entraban a uno de los tratamientos a los 70 kilos de peso y luego de permanecer por 7 semanas (Período I) pasaban al otro tratamiento por otro período igual de 7 semanas (Período II), formándose dos grupos de 11 animales cada uno. En el grupo A los animales entraron inicialmente al tratamiento 2 a los 70 kilos y luego de 7 semanas pasaron al tratamiento 1 por otras 7 semanas. Los animales del grupo B entraron inicialmente al tratamiento 1 y luego de 7 semanas pasaron al tratamiento 2 (cuadro 4).

1. The first step in the process of identifying a problem is to determine the nature of the problem. This involves gathering information about the problem and its context. The next step is to identify the causes of the problem. This involves analyzing the information gathered in the first step and identifying the factors that are contributing to the problem. The final step is to develop a solution to the problem. This involves identifying the most effective way to address the problem and implementing the solution.

### Problem Identification

#### Problem Statement

The problem is that the system is not working.

The system is not working because the hardware is outdated.

The system is not working because the software is buggy.

#### Problem Analysis

The problem is that the system is not working. The causes of the problem are:

1. The hardware is outdated.

2. The software is buggy.

3. The system is not properly configured.

The solution to the problem is to update the hardware, fix the software bugs, and properly configure the system.

The first step is to update the hardware. This involves replacing the old hardware with new hardware.

The second step is to fix the software bugs. This involves identifying the bugs and fixing them.

The third step is to properly configure the system. This involves setting up the system correctly.

After the hardware is updated, the software bugs are fixed, and the system is properly configured, the system should be working again.

The solution to the problem is to update the hardware, fix the software bugs, and properly configure the system.

11/17/14



Cuadro 4. Distribución de los tratamientos de acuerdo a los grupos y períodos experimentales.

PERIODOS	GRUPOS	
	A	B
I	T 2	T 1
II	T 1	T 2

**Parámetros:**

Se estimaron los siguientes parámetros:

1. Pesos semanales de todos los animales después de un ayuno de 20 horas.
2. Consumo diario de las raciones concentradas por los animales de cada clase en los dos tratamientos.

**Análisis estadístico:**

En los cuadros 5 y 6 se describe el análisis de la variancia utilizado para comparar el aumento de peso diario de los animales de cada tratamiento (6). Los aumentos de peso diario fueron calculados por regresión, con los pesos semanales de cada animal. Las tres fuentes de variabilidad examinadas por el análisis de variancia (cuadro 5) son: a) tratamientos, b) períodos y c) diferencias entre animales.

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Cuadro 5. Esquema del análisis de la variancia.

Fuente de variación	Descripción	G.L.	Sub-total
Períodos	(P - 1)	1	1
Individuos:			
Animales en grupo A	(A - 1)	10	
Animales en grupo B	(B - 1)	10	
Grupos	(G - 1)	1	21
Interacciones:			
Período x grupo A	(P - 1)(A - 1)	10	
Período x grupo B	(P - 1)(B - 1)	10	
Período x grupos	(P - 1)(G - 1)	1	21
<b>Total</b>	<b>G (A + B) - 1</b>	<b>43</b>	<b>43</b>

El error estimado para medir la significancia de la variabilidad debida al efecto de los tratamientos se obtiene separando las interacciones entre período y terneras tal como aparece en el cuadro 6.

Cuadro 6. Esquema del análisis para efectos de cada tratamiento.

Fuente de variación	G.L.
Período x terneras en grupo A	10
Período x terneras en grupo B	10
Error	20
Período x grupos	1

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BUREAU OF LAND MANAGEMENT

Section	Acres	Section	Acres
31	360	32	360
33	360	34	360
35	360	36	360
37	360	38	360
39	360	40	360
41	360	42	360
43	360	44	360
45	360	46	360
47	360	48	360
49	360	50	360
51	360	52	360
53	360	54	360
55	360	56	360
57	360	58	360
59	360	60	360
61	360	62	360
63	360	64	360
65	360	66	360
67	360	68	360
69	360	70	360
71	360	72	360
73	360	74	360
75	360	76	360
77	360	78	360
79	360	80	360
81	360	82	360
83	360	84	360
85	360	86	360
87	360	88	360
89	360	90	360
91	360	92	360
93	360	94	360
95	360	96	360
97	360	98	360
99	360	100	360

Section 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100.

Section	Acres	Section	Acres
1	360	2	360
3	360	4	360
5	360	6	360
7	360	8	360
9	360	10	360
11	360	12	360
13	360	14	360
15	360	16	360
17	360	18	360
19	360	20	360
21	360	22	360
23	360	24	360
25	360	26	360
27	360	28	360
29	360	30	360
31	360	32	360
33	360	34	360
35	360	36	360
37	360	38	360
39	360	40	360
41	360	42	360
43	360	44	360
45	360	46	360
47	360	48	360
49	360	50	360
51	360	52	360
53	360	54	360
55	360	56	360
57	360	58	360
59	360	60	360
61	360	62	360
63	360	64	360
65	360	66	360
67	360	68	360
69	360	70	360
71	360	72	360
73	360	74	360
75	360	76	360
77	360	78	360
79	360	80	360
81	360	82	360
83	360	84	360
85	360	86	360
87	360	88	360
89	360	90	360
91	360	92	360
93	360	94	360
95	360	96	360
97	360	98	360
99	360	100	360

RESULTADOS Y DISCUSION

Consumo de alimentos

Como se puede apreciar en los cuadros 7 y 8, las diferencias en consumo de concentrado entre tratamientos fueron muy pequeñas. En cuatro de las cinco clases el consumo por los animales en estabulación completa fue ligeramente mayor.

Cuadro 7. Consumo diario de concentrados, kilogramos de materia seca.

CLASE	ESTABULACION COMPLETA			PASTOREO-ESTABULACION		
	Concentrado 1	Concentrado 2	Total	Concentrado 1	Concentrado 2	Total
1	1,46	0,50	1,96	1,32	0,47	1,79
2	1,33	0,80	2,13	1,30	0,79	2,09
3	1,24	1,63	2,87	1,26	1,63	2,89
4	0,67	2,20	2,87	0,64	2,15	2,79
5	0,44	2,67	3,11	0,43	2,56	2,99

El consumo total de concentrado durante todo el experimento fue de 2.614 y 2.526 kilogramos de materia seca para los animales de estabulación completa y de pastoreo-estabulación respectivamente. Esto representa el 81 y 77% del concentrado ofrecido a los animales de cada tratamiento, respectivamente. Estos resultados

QUESTIONNAIRE

1. Name of the respondent: \_\_\_\_\_

2. Address of the respondent: \_\_\_\_\_

3. Telephone number: \_\_\_\_\_

4. Occupation: \_\_\_\_\_

5. Age: \_\_\_\_\_

6. Sex: \_\_\_\_\_

7. Education: \_\_\_\_\_

8. Marital status: \_\_\_\_\_

9. No. of children: \_\_\_\_\_

10. No. of dependents: \_\_\_\_\_

11. No. of persons in the household: \_\_\_\_\_

12. No. of persons in the family: \_\_\_\_\_

13. No. of persons in the village: \_\_\_\_\_

14. No. of persons in the district: \_\_\_\_\_

15. No. of persons in the state: \_\_\_\_\_

16. No. of persons in the country: \_\_\_\_\_

17. No. of persons in the world: \_\_\_\_\_

18. No. of persons in the universe: \_\_\_\_\_

19. No. of persons in the galaxy: \_\_\_\_\_

20. No. of persons in the universe: \_\_\_\_\_

21. No. of persons in the universe: \_\_\_\_\_

22. No. of persons in the universe: \_\_\_\_\_

23. No. of persons in the universe: \_\_\_\_\_

24. No. of persons in the universe: \_\_\_\_\_

expresados en por ciento de peso vivo, fueron 2,7 y 2,6 para los dos tratamientos, en el mismo orden indicado (cuadro 8). El peso promedio de los animales en cada clase se encontró promediando los pesos semanales de los animales de cada una de las clases.

Cuadro 8. Consumo total de concentrado por cada 100 kilogramos de peso vivo, kilogramos de materia seca.

CLASE	ESTABULACION COMPLETA		PASTOREO-ESTABULACION	
	Peso promedio del animal Kgs	Consumo/100 Kgs	Peso promedio del animal Kgs	Consumo/100 Kgs
1	74,9	2,6	73,4	2,4
2	86,9	2,5	84,5	2,5
3	95,5	3,0	96,6	3,0
4	107,5	2,7	105,0	2,7
5	116,2	2,8	112,6	2,7
Promedio		2,7		2,6

El resultado de las pruebas de digestibilidad llevadas a cabo con cada uno de los concentrados aparece en el cuadro 9.

La comparación entre la composición teórica de los concentrados usada en la formulación de las raciones y la composición que resultara de las pruebas de digestibilidad aparece en el cuadro 10. Como puede observarse, el concentrado 1 resultó considerablemente inferior a lo calculado teóricamente tanto para NDT como para

1. The first part of the document discusses the importance of maintaining accurate records of all transactions. This is essential for ensuring the integrity of the financial statements and for providing a clear audit trail.

2. The second part of the document outlines the various methods used to collect and analyze data. These methods include direct observation, interviews, and the use of statistical techniques.

3. The third part of the document describes the results of the study and the conclusions drawn from the data. It highlights the key findings and discusses their implications for practice.

4. The final part of the document provides a summary of the research and offers suggestions for further study.

Year	Q1	Q2	Q3	Q4	Total
2018	120	150	180	210	660
2019	130	160	190	220	700
2020	140	170	200	230	740
2021	150	180	210	240	780
2022	160	190	220	250	820
2023	170	200	230	260	860
2024	180	210	240	270	900
2025	190	220	250	280	940
2026	200	230	260	290	980
2027	210	240	270	300	1020
2028	220	250	280	310	1060
2029	230	260	290	320	1100
2030	240	270	300	330	1140

The data presented in the table above shows a consistent upward trend in the values recorded over the period from 2018 to 2030. This trend is observed across all four quarters of each year, as well as in the total annual values.

The increase in values is most pronounced in the final years of the period, with the total annual values rising from 660 in 2018 to 1140 in 2030. This represents a 73% increase over the 12-year period.

The reasons for this increase are not explicitly stated in the document, but they could be related to a variety of factors such as population growth, economic expansion, or changes in the underlying data collection process.

Further research is needed to investigate the causes of this trend and to determine its long-term implications.



Cuadro 9. Análisis proximal, digestibilidad y energía digestible de los concentrados, por ciento base seca.

NUTRIMENTO	CONCENTRADO 1		CONCENTRADO 2	
	Composi- ción	% digesti- bilidad	Composi- ción	% digesti- bilidad
Materia seca	88,15	72,30	88,05	73,94
Proteína cruda	17,50	61,53	19,30	70,02
Extracto etéreo	4,15	61,00	5,75	85,50
Fibra cruda	8,03	39,38	12,06	55,47
E.L.N.	63,38	80,15	52,89	79,40
Ceniza	6,94		10,00	
N D T**	74,00		78,10	
N D T	70,40		73,20	
E. D.	68,40		72,80	
Calorías/Kg NDT**	4.135		4.286	

E L N Extracto libre de nitrógeno.

NDT\*\* Nutrimientos digestibles totales con valor calórico de la proteína de 1,36 Cal/gramo.

NDT Nutrimientos digestibles totales con valor calórico de la proteína de 1,00 Cal/gramo.

E.D. Energía digestible.

proteína digestible. El concentrado 2 resultó con valores similares para NDT y superiores para proteína digestible. La causa para haber obtenido valores inferiores a los esperados en el concentrado 1,



parece originarse en la calidad del maíz y la torta de semilla de algodón. Estos ingredientes formaron el 57 y 22% del concentrado 1, respectivamente (cuadro 2).

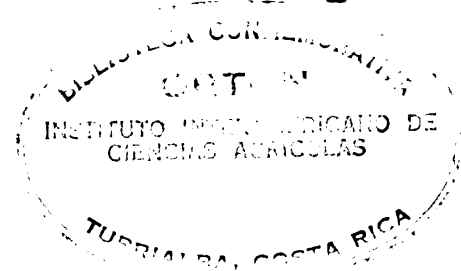
Cuadro 10. Comparación entre la composición teórica y la composición real de los concentrados.

CONCENTRADO	% N D T			% PROTEINA DIGESTIBLE		
	E	O	O/E	E	O	O/E
1	87,0	70,4	,81	15,0	10,8	,72
2	73,0	73,2	1,00	9,6	13,5	1,40

E = Valores esperados según cálculo teórico.

O = Resultado de las pruebas de digestibilidad.

Las terneras de las clases con menor peso fueron las que recibieron una mayor proporción del concentrado 1. Por lo tanto, como puede verse en los cuadros 11 y 12, las terneras de las clases 1 y 2, hasta los 90 kilos de peso, no recibieron todos sus requerimientos de la ración concentrada como se esperaba. El pequeño déficit se compensa con los consumos de las clases 3, 4 y 5, de modo que en promedio, tanto para NDT (cuadro 11) como para proteína digestible (cuadro 12), los consumos estuvieron alrededor de los requisitos propuestos por el NRC, siendo ligeramente mayores para el tratamiento de estabulación completa y para proteína.



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Cuadro 11. Cantidad de NDT consumido y requerido de acuerdo con el NRC, kilogramos diarios.

CLASE	ESTABULACION COMPLETA			PASTOREO-ESTABULACION		
	Consumido	Requerido	C/R*	Consumido	Requerido	C/R
1	1,40	1,46	0,96	1,27	1,43	0,89
2	1,53	1,66	0,92	1,50	1,62	0,93
3	2,06	1,81	1,14	2,08	1,83	1,14
4	2,08	2,00	1,04	2,02	1,96	1,03
5	2,26	2,14	1,06	2,17	2,08	1,04
Promedio		1,01				0,98

\* C/R = Consumido/Requerido.

Cuadro 12. Cantidad de proteína digestible consumida y requerida de acuerdo con el NRC, gramos diarios.

CLASE	ESTABULACION COMPLETA			PASTOREO-ESTABULACION		
	Consumido	Requerido	C/R	Consumido	Requerido	C/R
1	225	239	0,94	205	237	0,86
2	252	257	0,98	247	254	0,97
3	354	267	1,33	356	268	1,33
4	369	280	1,32	359	277	1,30
5	408	290	1,41	392	285	1,38
Promedio			1,13			1,10

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Con referencia al consumo de pasto, se debe anotar lo siguiente. La calidad del pasto de corte, en las condiciones de Turrialba y bajo el sistema de manejo de pastos del Departamento de Zootecnia, es baja. De Alba y Semple (1), en datos compilados de varios estudios en la Zona de Turrialba, Costa Rica, reportan que el contenido de NDT para el pasto Elefante (Pennisetum purpureum) es de alrededor de 35% y para el pasto Imperial (Axonopus scoparius) de 45%. Estos valores pudieron ser aún menores en el presente experimento. La calidad del pasto Pangola (Digitaria decumbens) ha sido estudiada por Louis (26) en Turrialba, usando animales fistulados para obtener las muestras de pasto consumido. Este investigador encontró que el promedio de NDT a través del año fue de 59,2%. Este porcentaje pudiera ser mayor en el presente experimento si se considera que las terneras seleccionan la dieta consumiendo pasto de mejor calidad que los animales adultos (19). Se estimó que en estabulación los animales consumieron alrededor de 1,5 kilogramos de materia seca en pasto por 100 kilogramos de peso vivo. Con los animales en pastoreo no se hizo estimación directa de la cantidad de pasto consumido sino que se observó únicamente como distribuyeron los animales el tiempo durante las seis horas y media que permanecieron pastoreando. Sin embargo, se estimó que el 60% del tiempo de pastoreo los animales permanecieron consumiendo forraje.

#### Aumento de peso diario

Como se puede observar en los cuadros 13, 14, 15 y 16, el au-





mento de peso diario de los animales en estabulación completa fue superior en 42% al de los animales en el tratamiento de pastoreo-estabulación ( $P \leq 0,01$ ). La diferencia debido a los dos periodos, así como las diferencias entre grupos, independientemente de los tratamientos, no fueron significativas.

Cuadro 13. Aumento diario de peso en cada tratamiento y periodo, gramos.

Animal Nº	G R U P O A		Animal Nº	G R U P O B	
	T 1	T 2		T 1	T 2
	II	I		I	II
1	543	308	12	669	313
2	395	- 17	13	345	243
3	553	560	14	578	313
4	558	456	15	655	- 1
5	233	361	16	587	252
6	568	485	17	556	332
7	670	339	18	517	571
8	648	301	19	461	526
9	878	269	20	558	468
10	854	310	21	435	257
11	622	354	22	614	223

The first part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that every entry should be supported by a valid receipt or invoice. This ensures transparency and allows for easy verification of the data.

Additionally, it is noted that regular audits are essential to identify any discrepancies or errors early on. This proactive approach helps in maintaining the integrity of the financial statements and prevents any potential issues from escalating.

The document also highlights the need for clear communication between all parties involved. Regular meetings and reports should be provided to keep everyone informed about the current status and any changes that may occur.

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The second section focuses on the implementation of internal controls. These controls are designed to minimize the risk of fraud and ensure that all operations are conducted in accordance with established policies and procedures.

Key elements of these controls include segregation of duties, where no single individual has control over all aspects of a transaction. This reduces the opportunity for any one person to manipulate the records.

Furthermore, access to financial systems should be restricted to authorized personnel only. This helps in preventing unauthorized changes to the data and ensures that only those with the necessary knowledge and authority are able to interact with the system.

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The third part of the document addresses the role of technology in financial management. Modern accounting software offers a range of features that can significantly improve efficiency and accuracy.

Automated data entry and reconciliation are just a few examples of how technology can streamline the accounting process. This not only saves time but also reduces the risk of human error, which is a common issue in manual systems.

However, it is important to ensure that the chosen software is secure and reliable. Regular updates and security checks should be performed to protect the sensitive financial data from any potential threats.

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The final section discusses the importance of staying up-to-date with the latest regulations and industry standards. The financial landscape is constantly evolving, and organizations must adapt to these changes to remain compliant.

Regular training and education for the accounting staff are essential to ensure they have the necessary skills and knowledge to handle any new requirements. This helps in maintaining the highest standards of professional conduct and accuracy.

In conclusion, the document provides a comprehensive overview of the key areas that need to be addressed to ensure the reliability and integrity of the financial reporting process.

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Como se puede ver en el cuadro 14, los animales en el trata miento de estabulación completa tuvieron un aumento de peso diario de 568 gramos, lo cual supera los 450 gramos referidos por el NRC (30) y los 390 gramos indicados por Swanson (37) para razas "pequeñas". Sin embargo, los animales del presente experimento recibieron mayor cantidad de principios nutritivos que los recomendados (30), si se considera conjuntamente el consumo de concentrado y de pasto. Las terneras en pastoreo-estabulación del presente estudio solo alcanzaron ganancias de peso diarias de 329 gramos, recibiendo básicamente la misma alimentación, o mejor, que las terneras en estabulación completa, pues los animales en pastoreo pueden escoger lo que comen. Esa ganancia de peso diaria es inferior a la referen cia del NRC (30) y de Swanson (37). Promediando los aumentos de peso diario de todas las terneras en las 14 semanas del experimento resultó en 448 gramos, lo que es similar a lo referido por el NRC (30). Por consiguiente se pudiera pensar que las condiciones ambien tales de Turrialba son bastante severas para terneras que pastorean en etapas de crecimiento entre 70 y 120 kilogramos de peso.

Cuadro 14. Promedio de aumento diario de peso de los animales en cada tratamiento, gramos.

Grupos	Estabulación completa	Pastoreo estabulación	Promedio grupos
A	593 (II)	339 (I)	466
B	543 (I)	318 (II)	431
Promedio tratamientos	568	329	

The first part of the document discusses the importance of maintaining accurate records of all transactions and activities. It emphasizes that proper record-keeping is essential for ensuring transparency and accountability in the organization's operations. This section also outlines the various methods and tools used to collect, store, and analyze data, highlighting the role of technology in streamlining these processes.

The second part of the document focuses on the implementation of internal controls and risk management strategies. It details how these measures are designed to prevent fraud, minimize errors, and protect the organization's assets. The text provides a comprehensive overview of the different types of risks faced by the organization and the specific controls in place to mitigate them.

The third part of the document addresses the organization's financial performance and budgeting. It includes a detailed analysis of the current financial state, comparing actual results against the budget and identifying areas for improvement. This section also discusses the long-term financial goals and the strategies being implemented to achieve them.

The fourth part of the document covers the organization's human resources and talent management. It highlights the importance of attracting, developing, and retaining top talent to drive the organization's success. The text describes the various HR initiatives and programs in place, such as training, performance management, and employee engagement.

The fifth part of the document discusses the organization's marketing and sales strategies. It outlines the key marketing objectives and the tactics being used to reach the target audience and generate leads. This section also provides an overview of the sales process and the performance of the sales team.

The sixth part of the document focuses on the organization's legal and compliance requirements. It details the various laws and regulations that apply to the organization's operations and the steps being taken to ensure full compliance. This section also discusses the organization's policies and procedures related to data privacy and security.

The seventh part of the document covers the organization's environmental, social, and governance (ESG) initiatives. It highlights the organization's commitment to sustainability and social responsibility, and the various programs and initiatives in place to address these issues. This section also discusses the organization's approach to stakeholder engagement and reporting.

The eighth part of the document provides a summary of the organization's overall performance and outlook for the future. It includes a final assessment of the organization's strengths and weaknesses, and a clear statement of the organization's vision and mission. This section also outlines the key priorities for the coming year and the actions being taken to achieve them.

Item	Description	Value	Unit
101	Office Supplies	150	USD
102	Travel Expenses	250	USD
103	Utilities	300	USD
104	Insurance	400	USD
105	Professional Fees	500	USD
106	Marketing	600	USD
107	Research & Development	700	USD
108	Salaries	800	USD
109	Benefits	900	USD
110	Depreciation	1000	USD
111	Interest	1100	USD
112	Income Tax	1200	USD
113	Other	1300	USD
114	Revenue	15000	USD
115	Net Income	10000	USD

En el cuadro 15 se determina la significancia de los efectos debidos a el período y a las diferencias entre terneras.

Cuadro 15. Análisis de la variancia para los aumentos de peso diario.

Fuente de variación	G.L.	C.M.
Períodos	1	0,00230 N.S.
Individuos:		
Terneras en grupo A	10	0,02951
Terneras en grupo B	10	0,01290
Grupos	1	0,01370
Total individuos	21	0,02084 N.S.
Interacciones:		
Período x terneras en grupo A	10	0,02584
Período x terneras en grupo B	10	0,02209
Período x grupo	1	0,63220
Total interacciones (Error)	21	0,05292

N.S. = No significativo.

Debido a la naturaleza reversible del diseño, el efecto de los tratamientos es la interacción entre período y grupo (cuadro 16).

1. The first part of the document is a list of names and titles, including "The Hon. Mr. Justice G. D. C. O'Connell, Chief Justice of the Supreme Court of the State of New South Wales."

2. The second part of the document is a list of names and titles, including "The Hon. Mr. Justice G. D. C. O'Connell, Chief Justice of the Supreme Court of the State of New South Wales."

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Cuadro 16. Análisis para diferencias en aumentos de peso entre tratamientos.

Fuente de variación	G.L.	C.M.
Período x terneras en grupo A	10	
Período x terneras en grupo B	10	
Error	20	0,02396
Período x grupos	1	0,63220**

\*\* Significativo  $P \leq 0,01$ .

Según puede verse en el cuadro 17 en las dos primeras semanas del tratamiento de pastoreo-estabulación las terneras tuvieron menor aumento de peso que durante el tiempo subsecuente. Aunque en el tratamiento de estabulación completa ocurrió algo similar, la diferencia no fue tan pronunciada. Parecería que las terneras al comenzar un período de semi-pastoreo obtuvieron un menor aumento de peso diario por estar menos aclimatizadas al nuevo ambiente. Este criterio concuerda con Broster et al. (7), quienes sugieren que, durante el verano en las regiones templadas, el período crítico de aclimatización de las terneras que ingresan al pastoreo es de dos semanas. Si solo se hubiese computado las últimas 5 semanas de cada período, las diferencias en aumentos de peso entre los dos tratamientos se hubieran reducido en un 12%. Esto indicaría que al menos en las primeras

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semanas del experimento las terneras en pastoreo-estabulación se vieron más afectadas por el cambio de manejo. Sin embargo, no se pudo distinguir crecimiento compensatorio en aquellos animales que pasaron de pastoreo-estabulación a estabulación completa.

Cuadro 17. Aumento diario de peso en las diferentes semanas de cada tratamiento. Promedio de los dos períodos, gramos.

Semana	Estabulación completa	Pastoreo estabulación
1	422	253
2	455	- 6
3	546	474
4	701	390
5	533	370
6	526	357
7	747	383

Resulta difícil atribuir al consumo de alimentos y a los problemas de aclimatación toda la diferencia en aumento diario de peso entre los dos tratamientos. Sin embargo, se desconoce el requisito energético de los animales pastoreados. Aunque los animales permanecieron en pastoreo por solo seis horas y media diariamente, el gasto de energía debido a la actividad de pastoreo pudo ser considerable, especialmente por tratarse de animales jóvenes. Así, Lambourne

1. The first part of the document is a letter from the author to the editor, dated 10/10/1964. The letter discusses the author's interest in the subject of the journal and the author's hope that the journal will be a valuable contribution to the field.

2. The second part of the document is a letter from the editor to the author, dated 10/10/1964. The editor expresses his interest in the author's work and his hope that the author's work will be a valuable contribution to the field.

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7. The seventh part of the document is a letter from the author to the editor, dated 10/10/1964. The author discusses the author's interest in the subject of the journal and the author's hope that the journal will be a valuable contribution to the field.

y Reardon (25) encontraron que con solo una hora y media en pastoreo ovejas livianas gastaron 110% más de energía en mantenimiento, en comparación con la energía gastada en mantenimiento en corral. Otros investigadores (20, 34) confirman que el gasto de energía bajo el sistema de estabulación es muy inferior al gasto de energía bajo pastoreo libre. Sin embargo, Broster y otros (7) encontraron mayor ganancia de peso en terneras bajo un regimen de pastoreo con el sistema de pastoreo en "franjas". Hay que anotar que en el presente experimento se observó que las terneras en pastoreo jugaban y caminaban bastante, lo cual, de acuerdo con Grimes (15) hace que el gasto de energía sea mayor. Por otra parte, los animales pastorearon durante las horas de más intenso calor y sometidos directamente a la irradiación solar o la lluvia. La temperatura ambiental pudo haber estado a una temperatura superior a la temperatura crítica, especialmente si se considera que animales bien alimentados, como los del presente estudio, bajan su temperatura crítica (14). Esto pudiera resultar en una pérdida de la eficiencia del alimento (3) por el aumento de la producción de calor. Aún más, animales en período de aclimatización al calor disminuyen la función de la glándula tiroides y hacen menos ganancia de peso (22, 24).

#### Consideraciones económicas

En la evaluación económica del experimento se asumió que todos los costos de manejo fueron iguales para los dos tratamientos, y que la única diferencia en costos se debió al corte y acarreo del pasto

The first part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that every entry should be supported by a valid receipt or invoice. This ensures transparency and allows for easy verification of the data.

In addition, the document outlines the procedures for handling discrepancies. If there is a difference between the recorded amount and the actual amount received or paid, it is crucial to investigate the cause immediately. This could be due to a clerical error, a missing receipt, or a more serious issue like fraud.

The document also covers the process of reconciling accounts. This involves comparing the internal records with the bank statements to ensure they match. Any differences should be identified and explained. Regular reconciliation helps in detecting errors early and maintaining the integrity of the financial data.

Furthermore, it discusses the role of internal controls. These are policies and procedures designed to prevent and detect errors and fraud. Examples include requiring two signatures for large payments and separating the duties of recording transactions from handling cash.

The document concludes by stating that a strong system of internal controls and accurate record-keeping is essential for the success of any business. It provides a clear framework for how these systems should be implemented and maintained.

Internal Control Procedures

The following procedures should be followed to ensure the accuracy and reliability of the financial records:

- 1. All transactions must be supported by a valid receipt or invoice.
- 2. Discrepancies should be investigated immediately.
- 3. Accounts should be reconciled regularly.
- 4. Internal controls should be strictly followed.

desde el campo a los corrales. En vista de que se desconoce el consumo de pasto por los animales en pastoreo, se asumió tres posibles situaciones: situación A, que el consumo de pasto fue igual para los dos tratamientos; situación B, que el consumo de pasto fue proporcional a los aumentos de peso; y situación C, que el valor del pasto consumido por los animales de pastoreo-estabulación fue nulo. Como se puede ver en el cuadro 18, el costo marginal medio por unidad de aumento de peso resultó menor en el tratamiento de estabulación permanente, aún en el caso extremo en que se asumió que el valor del pasto consumido por las terneras del tratamiento de pastoreo-estabulación fue nulo.

Cuadro 18. Costos de los tratamientos.

RUBROS	Estabulación permanente	Pastoreo-estabulación		
		A	B	C
Concentrado consumido, kg.	2.614	2.526	2.526	2.526
Pasto consumido, kg.	1.481	1.481	837	-
Costo del concentrado*	₡ 1.240	1.187	1.187	1.187
Costo del pasto**	₡ 219	219	125	-
Costo del corte y acarreo***	74	-	-	-
Costo total	₡ 1.533	1.406	1.312	1.187
Aumento de peso, kgs.	605	342	342	342
Costo por 1 kg de aumento	2,53	4,11	3,84	3,47
$\frac{\Delta C^+}{\Delta P}$		0,48	0,84	1,32

- \* ₡0,55/1 kilo de MS de concentrado 1 y 0,40 de concentrado 2.
- \*\* ₡0,15/1 kilo de MS de forraje.
- \*\*\* ₡0,05/ corte y acarreo de 1 kg de MS de pasto.
- + Incremento del costo/incremento de 1 kilo en estabulación.

1. The first step in the process of identifying a problem is to recognize that a problem exists. This often involves comparing current performance against a desired state or goal.

2. Once a problem is identified, the next step is to define the problem clearly. This involves specifying the scope, nature, and impact of the problem.

3. After defining the problem, the next step is to analyze the causes. This involves identifying the underlying factors that contribute to the problem.

4. The fourth step is to generate potential solutions. This involves brainstorming and evaluating different options that could address the problem.

5. The fifth step is to select the best solution. This involves comparing the potential solutions against the problem's requirements and constraints.

6. The final step is to implement the chosen solution. This involves putting the solution into action and monitoring its progress.

7. After implementation, it is important to evaluate the results. This involves assessing whether the solution has effectively addressed the problem and if any adjustments are needed.

8. The process of problem-solving is often iterative, meaning that it may be necessary to revisit previous steps as more information is gathered or as the situation evolves.

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The following table provides a summary of the key steps in the problem-solving process:

Step	Description
1	Recognize the problem
2	Define the problem
3	Analyze the causes
4	Generate potential solutions
5	Select the best solution
6	Implement the solution
7	Evaluate the results

Understanding these steps can help individuals and organizations approach problems more effectively and find solutions more quickly.

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In conclusion, the problem-solving process is a systematic approach to identifying, defining, analyzing, and resolving issues. By following these steps, individuals and organizations can improve their ability to tackle challenges and achieve their goals.

### Consideraciones generales

En observaciones posteriores al experimento por un período de tres meses, ninguna de las terneras experimentales tuvo que recibir tratamiento médico-veterinario ni sufrieron una pérdida pronunciada de peso al ser sometidas a pastoreo total. Hay que aclarar que por tratarse de observaciones pareadas, todos los animales pasaron por el período de pastoreo-estabulación durante el experimento. El aumento de peso diario para el período post-experimental fue alrededor de 350 gramos, lo que pudiera considerarse aceptable para terneras en pastoreo en el ambiente de Turrialba. Este valor compara con ven taja, a pesar de los mayores aumentos de peso que se pueden obtener en estabulación permanente, con los 240 gramos de aumento diario de peso que han tenido como promedio en varios años las terneras del hato de lechería del Departamento de Zootecnia que han salido directamente a pastorear sin el período intermedio de semi-pastoreo\*. Además estos últimos animales requirieron constante atención veterinaria y tuvieron un alto índice de mortalidad. De lo que se deduce que las terneras quedan mejor preparadas para un pastoreo total si se les adapta gradualmente mediante un período previo de semi-pastoreo.

Con el manejo dado en el experimento y con el desarrollo post-experimental observado, se espera que las terneras alcancen los 200 kilos de peso para la pubertad a la edad de 16 meses, sin mayores

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\* R. Fuentes. Comunicación personal.

1. The first part of the document discusses the importance of maintaining accurate records of all transactions. This is essential for ensuring the integrity of the financial statements and for providing a clear audit trail. The records should be kept up-to-date and should be accessible to all relevant personnel.

2. The second part of the document outlines the procedures for handling cash and other assets. It is important to ensure that all cash receipts are properly recorded and that there is a clear separation of duties between those responsible for collecting cash and those responsible for recording it. This helps to prevent fraud and ensures that the assets are protected.

3. The third part of the document discusses the importance of regular reconciliations. This involves comparing the company's records with the bank statements and other external records to ensure that they are in agreement. This process helps to identify any discrepancies and to correct them as soon as possible.

4. The fourth part of the document outlines the procedures for handling expenses. It is important to ensure that all expenses are properly documented and that there is a clear approval process in place. This helps to ensure that the company is only paying for legitimate expenses and that the records are accurate.

5. The fifth part of the document discusses the importance of maintaining accurate records of all liabilities. This includes accounts payable, loans, and other obligations. It is important to ensure that these records are up-to-date and that the company is aware of its obligations at all times.

6. The sixth part of the document outlines the procedures for handling payroll. It is important to ensure that all payroll transactions are properly recorded and that there is a clear approval process in place. This helps to ensure that employees are paid accurately and that the records are accurate.

7. The seventh part of the document discusses the importance of maintaining accurate records of all fixed assets. This includes property, plant, and equipment. It is important to ensure that these records are up-to-date and that the company is aware of its assets at all times.

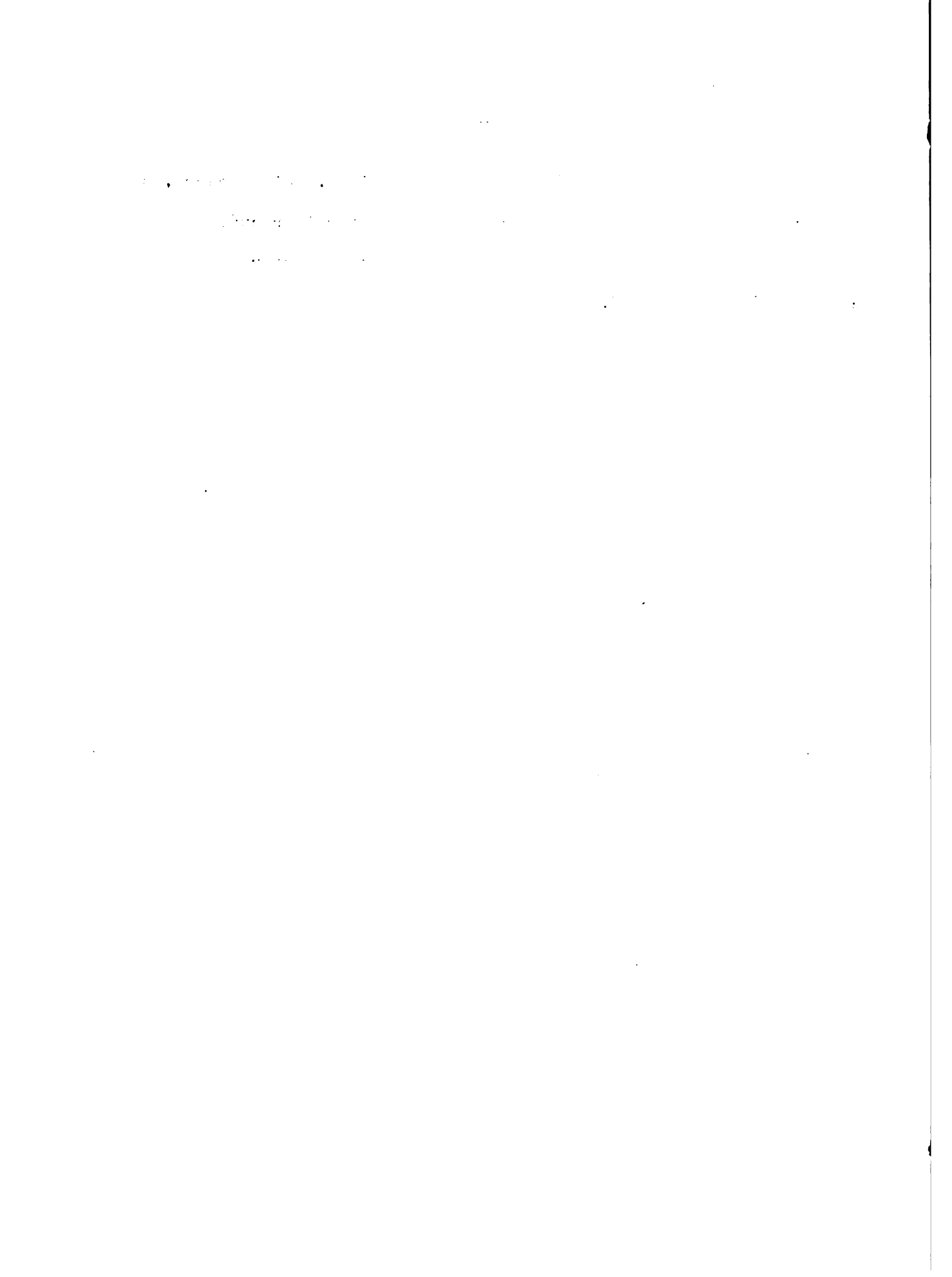
8. The eighth part of the document outlines the procedures for handling inventory. It is important to ensure that all inventory transactions are properly recorded and that there is a clear approval process in place. This helps to ensure that the company's inventory is accurately valued and that the records are accurate.

9. The ninth part of the document discusses the importance of maintaining accurate records of all other transactions. This includes interest income, dividends, and other non-operating items. It is important to ensure that these records are up-to-date and that the company is aware of all its income and expenses.

10. The tenth part of the document outlines the procedures for handling the closing process. This involves preparing the financial statements and ensuring that all transactions are properly recorded. It is important to ensure that the closing process is completed accurately and that the records are up-to-date.



gastos en medicamentos ni pérdidas por mortalidad. Sin embargo, se debe continuar con las investigaciones para determinar cuál es la edad más adecuada para que las terneras salgan al pastoreo en los climas "cálido-húmedos".



## CONCLUSIONES

Con base en los resultados obtenidos en esta investigación, se pueden hacer las siguientes conclusiones:

1. Los aumentos de peso diario mayores y más económicos en el período posterior al destete se obtuvieron con un régimen de estabulación completa, con pasto Elefante e Imperial, en comparación con un régimen de pastoreo-estabulación con pasto Pangola.
2. Con un período de semi-pastoreo antes del pastoreo total los aumentos de peso durante el período inicial de pastoreo total son superiores y se reduce la incidencia de enfermedades y el índice de mortalidad.

The first part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that every entry should be supported by a valid receipt or invoice. This ensures that the financial statements are reliable and can be audited without issue.

In the second section, the author outlines the various methods used to collect and analyze data. This includes both primary and secondary research techniques. The primary research involves direct observation and interviews, while secondary research involves the use of existing data sources.

The third section details the results of the data analysis. It shows that there is a significant correlation between the variables being studied. This finding is supported by statistical tests and is consistent with previous research in the field.

Finally, the document concludes with a series of recommendations for future research. It suggests that further studies should be conducted to explore the underlying causes of the observed trends. Additionally, it recommends that practitioners should take note of the findings and apply them to their own work.

## RESUMEN

El presente estudio se llevó a cabo en el Departamento de Zootecnia del Instituto Interamericano de Ciencias Agrícolas de la OEA, en Turrialba, Costa Rica. Su objetivo fue evaluar dos sistemas de manejo, en la etapa inmediata al destete, en terneras de 70 a 120 kilos de peso, uno de completa estabulación y otro de pastoreo-estabulación.

Se utilizaron 22 terneras de las razas Jersey y Criollo y cru-  
zas de Jersey x Criollo, con un peso inicial de 70 kilos. Se usó un  
diseño de "Change over" con dos tratamientos que consistieron en el  
manejo de los animales bajo un sistema de estabulación completa  
(T 1) y bajo pastoreo-estabulación (T 2). Las terneras se alterna-  
ron en cada tratamiento en períodos de 7 semanas, siendo así su pro-  
pio testigo. Los requisitos nutritivos fueron cubiertos en los dos  
tratamientos mediante la administración de alimentos concentrados.  
Además, las terneras en T 1 recibieron pasto cortado de las especies  
Elefante (Pennisetum purpureum) e Imperial (Axonopus scoparius) ad  
libitum, mientras que los animales en T 2 fueron pastoreados desde  
las 9 am hasta las 3:30 pm en potreros de pasto Pangola (Digitaria  
decumbens).

El consumo de concentrado fue de 2,7 y 2,6 kilos de materia se-  
ca por 100 kilos de peso vivo para T 1 y T 2 respectivamente, sufi-  
ciente para cubrir los requisitos nutritivos de los animales estabu-

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lados. No se midió el consumo de pasto, pero se estimó que fue de 1,5 kilos de MS/100 kilos de peso vivo para T 1. Las terneras en T 2 gastaron el 60% del tiempo en el potrero en la actividad del pastoreo. El aumento de peso diario en las terneras T 1 fue de 568 gramos y en las terneras T 2 de 329 gramos, diferencias que fueron significativas ( $P \leq 0,01$ ) y atribuidas fundamentalmente a los efectos de la irradiación solar y al mayor gasto de energía en la actividad de pastoreo de los animales en T 2.

Se concluyó que aunque el aumento de peso diario fue mayor y más económico en los animales estabulados, la práctica de semi-pastoreo antes de un pastoreo total parece ser ventajosa para la adaptación al potrero y para reducir la incidencia de enfermedades y la mortalidad durante el período inicial de pastoreo total.

The first part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that every entry should be supported by a valid receipt or invoice. This ensures transparency and allows for easy verification of the data.

In the second section, the author details the various methods used to collect and analyze the data. This includes both manual and automated processes. The goal is to ensure that the data is as accurate and reliable as possible.

The third part of the document focuses on the results of the analysis. It shows a clear upward trend in the data over the period studied. This indicates that the measures taken have had a positive impact on the overall performance.

Finally, the document concludes with a series of recommendations for future actions. These are based on the findings of the analysis and aim to further improve the system and its efficiency.



SUMMARY

The present study was carried out in the Department of Animal Production of the Inter-American Institute of Agricultural Sciences of the OAS, Turrialba, Costa Rica. The objective of this investigation was to compare two specific management systems, one of permanent stabling and the other of semi-stabling immediately after weaning, in dairy heifers weighing from 70 to 120 kilograms.

Twenty two heifers of Jersey, Criollo and Jersey x Criollo breeding with initial weights of 70 kilograms were used in a change over design with two treatments that consisted in the management of the animals under a system of permanent stabling (T 1) and under semi-stabling (T 2). Animals were alternately assigned to each treatment and switched once through treatments at seven weeks periods. In both treatments nutritional requirements were filled with concentrates. Besides, T 1 heifers received out pasture of the species Elephant (Pennisetum purpureum) or Imperial (Axonopus scoparius) ad libitum, while T 2 heifers were grazed from 9 am to 3:30 pm on Pangola grass (Digitaria decumbens).

Dry matter consumption of concentrates was 2,7 and 2,6 kilos per 100 kilos of liveweight for T 1 and T 2, respectively. That amount was enough to fullfill the nutritional requirements of the stabled animals. Forage consumption was estimated to be 1,5 kilos of dry matter for 100 kilos of liveweight for T 1 heifers. T 2

1. The first part of the document discusses the importance of maintaining accurate records of all transactions and activities. It emphasizes that proper record-keeping is essential for transparency and accountability, particularly in financial matters. This section also highlights the need for regular audits and reviews to ensure that all data is up-to-date and correct.

2. The second part of the document focuses on the implementation of internal controls. It outlines various measures that can be taken to prevent fraud and errors, such as segregation of duties, authorization requirements, and regular reconciliations. The document stresses that these controls are not just for compliance but are also crucial for the overall health and stability of the organization.

3. The third part of the document addresses the role of technology in modern record-keeping. It discusses how digital tools and software can streamline processes, reduce the risk of human error, and provide real-time access to data. However, it also notes the importance of cybersecurity and data protection measures to safeguard sensitive information.

4. The fourth part of the document discusses the importance of training and education for staff. It suggests that regular training sessions and workshops can help employees understand the importance of record-keeping and the correct procedures to follow. This section also mentions the need for ongoing education to keep staff updated on the latest industry standards and regulations.

5. The fifth part of the document concludes with a summary of the key points discussed. It reiterates that maintaining accurate records is a continuous process that requires attention and resources. The document ends with a call to action, encouraging all stakeholders to take responsibility for their part in maintaining the organization's records.

animals spent around 60% of the grazing time in the activity of grazing. Daily weight gain for T 1 animals was 568 grams and for T 2 animals 329 grams. These differences were highly significant ( $P \leq 0,01$ ). This difference was mainly attributed to the effects of solar irradiation and the greater waste of energy in the grazing activity of T 2 animals.

It was concluded that although the daily weight gain was greater and more economic in stabled animals, semi-stabling before total grazing management seems to be advantageous in reducing mortality and diseases during the initial period of total grazing.

The following table shows the results of the survey conducted in the year 1995. The data is presented in the form of a table with columns for the different categories and rows for the different years. The table is as follows:

Year	Category 1	Category 2	Category 3
1995	120	150	180
1996	130	160	190
1997	140	170	200
1998	150	180	210
1999	160	190	220
2000	170	200	230
2001	180	210	240
2002	190	220	250
2003	200	230	260
2004	210	240	270
2005	220	250	280
2006	230	260	290
2007	240	270	300
2008	250	280	310
2009	260	290	320
2010	270	300	330
2011	280	310	340
2012	290	320	350
2013	300	330	360
2014	310	340	370
2015	320	350	380
2016	330	360	390
2017	340	370	400
2018	350	380	410
2019	360	390	420
2020	370	400	430
2021	380	410	440
2022	390	420	450
2023	400	430	460
2024	410	440	470

LITERATURA CITADA

1. ALBA, J. DE y SEMPLE, A. T. Investigación sobre forrajes en Turrialba. Instituto Interamericano de Ciencias Agrícolas. Publicación Miscelánea no. 33. 1965. 33 p.
2. ANTIPIN, D. N. et al. Parasitology and parasitic diseases of livestock. Trad. del Ruso por A. Birron, H. G. Hechter y J. I. Lengy. Washington D. C., The National Science Foundation, 1960. 523 p. ✓
3. ARMSTRONG, D. G. et al. Heat production and heat emission of two breeds of sheep. Journal of Agricultural Science 55(3): 395-401. 1960.
4. ASOCIACION VETERINARIA BRITANICA, LONDRES. Manual veterinario de enfermedades tropicales. México, D. F., Pax-México, 1967. 250 p.
5. ASSOCIATION OF OFFICIAL AGRICULTURAL CHEMISTS. Methods of Analysis. 9th. ed. Washington, D. C., 1960. 832 p.
6. BRANT, A. E.. Test of significance in reversal or swithback trials. Agricultural Experiment Station. Iowa State College of Agricultural and Mechanics Arts. Research Bulletin 234, 1938. 56 p.
7. BROSTER, W. H., TUCK, V. J. y BALCH, C. C. Effect of rationing grass on the growth rate of dairy heifers and on output per acre, with a note on its significance in the experimental design. Journal of Agricultural Science 60(3):371-379. 1963.
8. CLARK, R. D. y TOUCHBERRY, R. W. Effect of bodyweight and age at calving on milk production in Holstein cattle. Journal of Dairy Science 45(12):500-510. 1962.
9. COOP, I. E. y HILL, M. K. The energy requirements of sheep for maintenance and gain. II. Grazing sheep. Journal of Agricultural Science 58(2):187-199. 1962. ✓
10. CRICHTON, J. A., AITKEN, J. N. y BOYNE, A. W. The effect of plane of nutrition during rearing on growth, production, reproduction and health. I. Growth to 24 months. Animal Production 1:145-162. 1959.

1. The first part of the document discusses the importance of maintaining accurate records of all transactions and activities. It emphasizes that proper record-keeping is essential for transparency and accountability, particularly in financial matters. The text notes that without clear documentation, it becomes difficult to track expenses and revenues, which can lead to misunderstandings and disputes.

2. The second section focuses on the role of technology in modern record-keeping. It highlights how digital tools and software can significantly improve the efficiency and accuracy of data collection and storage. The author suggests that organizations should invest in reliable systems to ensure that their records are secure, accessible, and easy to manage. This not only saves time but also reduces the risk of human error.

3. The third part of the document addresses the challenges of data security and privacy. In an era where information is highly valued, protecting sensitive data is a top priority. The text discusses various security measures, such as encryption and access controls, that can help safeguard records from unauthorized access and potential breaches. It also touches upon the importance of staying up-to-date with the latest security protocols and regulations.

4. The final section discusses the long-term benefits of a well-maintained record-keeping system. It points out that consistent and accurate records can provide valuable insights into an organization's performance over time. This data can be used for strategic planning, identifying trends, and making informed decisions. Additionally, having a complete and organized record-keeping system can be a significant asset in legal and regulatory contexts, where documentation is often required.

- 11. CRICHTON, J. A., AITKEN, J. N. y BOYNE, A. W. The effect of plane of nutrition during rearing on growth, production, reproduction and health. II. Growth to maturity. *Animal Production* 2:45-57. 1960. ✓
12. DAVIS, H. P. y WILLET, E. L. Relation between rate of growth and milk and fat production. *Journal of Dairy Science* 21(10):637-642. 1938.
13. ECKLES, C. H. Dairy cattle and milk production. 3rd. ed. New York, MacMillan, 1939. 520 p.
14. GRAHAM, N. M. et al. Environmental temperature, energy metabolism and heat regulation in sheep. *Journal of Agricultural Science* 52(1):13-24. 1959.
15. GRIMES, R. C. An estimate of the energy required for maintenance and live weight gain by young grazing sheep. *Journal of Agricultural Science* 66(2):211-215. 1966.
16. HARDISON, W. A. et al. Degree of herbage selection by grazing cattle. *Journal of Dairy Science* 37(1):89-102. 1964.
17. HAWK, H. W., TYLER, W. J. y CASIDA, L. E. Some factors affecting age at puberty in Holstein-Friesian heifers. ✓  
*Journal of Dairy Science* 37(3):252-258. 1954.
18. HERNANDEZ, D. Efectos de la melaza sobre el consumo y digestibilidad de raciones balanceadas para bovinos en el trópico. Tesis Mag. Sc. Turrialba, Costa Rica, Instituto Interamericano de Ciencias Agrícolas, 1968. 56 p. (Mimeografiada)
19. HOLMES, W., JONES, J. y DRAKE-BROCKMAN, R. M. The feed intake of grazing cattle. *Animal Production* 3(3):251-260. 1961.
20. \_\_\_\_\_ y OSMAN, H. The feed intake of grazing cattle. I. Feed intake of dairy cows on strip and free grazing. *Animal Production* 2:131-139. 1960.
21. INSTITUTO INTERAMERICANO DE CIENCIAS AGRICOLAS. Registro de nacimiento de terneras lecheras. Turrialba, Costa Rica. 1967. (Sin publicar). ✓
- 22. JOHNSON, H. D. y RAGSDALE, A. C. Effects of constante environmental temperature of 50° and 80°F on the growth responses of Holstein, Brown Swiss, and Jersey calves. Missouri Agricultural Experiment Station. Research Bulletin 705, 1959. 32 p.

The first part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that every entry should be supported by a valid receipt or invoice. This not only helps in tracking expenses but also ensures compliance with tax regulations.

In the second section, the author outlines the various methods used for data collection and analysis. These include surveys, interviews, and focus groups. Each method has its own strengths and weaknesses, and the choice depends on the specific research objectives.

The third section delves into the statistical analysis of the collected data. It covers topics such as descriptive statistics, inferential statistics, and regression analysis. The goal is to identify patterns and trends in the data that can inform decision-making.

Finally, the document concludes with a summary of the findings and recommendations. It highlights the key insights gained from the research and provides practical advice for implementing these findings in a business context.



23. JOUBERT, D. M. The influence of high and low nutritional planes on the oestrous cycle and conception rate os heifers. *Journal of Agricultural Science* 45(2):164-172. 1954.
- 24. KIBLER, H. H. Energy metabolism and cardiorespiratory activities in Shorthorn, Santa Gertrudis and Brahman heifers during growth at 50° and 80°F temperatures. *Missouri Agricultural Experiment Station. Research Bulletin* 643, 1957. 32 p.
25. LAMBOURNE, L. J. y REARDON, T. F. Effect of environment on the maintenance requirements of Merino wethers. *Australian Journal of Agricultural Research* 14(2):272-292. 1963.
26. LOUIS, S. Estimación del consumo y digestibilidad de forrajes tropicales en pastoreo directo. Tesis Mag. Sc. Turrialba, Costa Rica, Instituto Interamericano de Ciencias Agrícolas, 1967. 58 p. (Mimeografiada).
27. MARSHALL, S. P. White clover-pangolagrass and White Clover-Coastal Bermuda grass pasture for dairy heifers. *Florida Agricultural Experiment Station. Bulletin* 613, 1959. 22 p. ✓
28. MAYNARD, L. A. y LOOSLI, J. K. *Animal nutrition*. 5th. ed. New York, McGraw-Hill, 1962. 533 p.
29. MORRISON, F. K. *Feeds and feeding; a handbook for the student and the stockman*. 22th. ed. Ithaca, N. Y., Morrison, 1956. 1050 p.
- 30. NATIONAL RESEARCH COUNCIL. *Nutrients requirements of dairy cattle*. Washington, 1958. 30 p.
31. OLDS, D., TROUTMAN, E. C. y SEATH, D. M. The effect of age and size on the fertility of dairy heifers. *Journal of Dairy Science* 35(7):620-622. 1952.
32. REED, O. E., FITCH, J. B. y CAVE, H. W. The relation of feeding and age of calving to the development of dairy heifers. *Kansas Agricultural Experiment Station. Bulletin* 233, 1924. 38 p.
33. REID, J. T. et al. Causes and prevention of reproductive failures in dairy cattle. IV. Effect of plane of nutrition during early life on growth, reproduction, production, health and longevity of Holstein cows. 1. Birth to fifth calving. *Cornell Agricultural Experiment Station. Bulletin* 987, 1964. 31 p.

1. The first part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that every entry should be supported by a valid receipt or invoice. This ensures transparency and allows for easy verification of the data.

2. The second section covers the process of reconciling accounts. It explains how to compare the internal records with the bank statements to identify any discrepancies. Regular reconciliation helps in catching errors early and prevents them from escalating.

3. The third part of the document addresses the issue of budgeting. It provides guidelines on how to set realistic financial goals and allocate resources accordingly. A well-defined budget is essential for controlling costs and maximizing efficiency.

4. The fourth section discusses the role of technology in financial management. It highlights the benefits of using accounting software to automate routine tasks and generate reports. This not only saves time but also reduces the risk of human error.

5. The fifth part of the document focuses on the importance of staying up-to-date with the latest financial regulations and tax laws. It advises consulting with a professional advisor to ensure full compliance and to take advantage of any available tax incentives.

6. The sixth section covers the topic of financial reporting. It explains how to prepare clear and concise reports that provide a comprehensive overview of the organization's financial health. These reports are crucial for informed decision-making by management and stakeholders.

7. The seventh part of the document discusses the importance of maintaining a strong credit record. It provides tips on how to manage credit lines effectively and avoid late payments, which can negatively impact the organization's credit rating.

8. The eighth section covers the topic of risk management. It explains how to identify potential financial risks and implement strategies to mitigate them. This is particularly important in today's volatile economic environment.

9. The ninth part of the document discusses the importance of having a contingency plan in place. It explains how to set aside funds to cover unexpected expenses or downturns in revenue, ensuring the organization's financial stability.

10. The final section of the document provides a summary of the key points discussed and offers some concluding thoughts on the importance of sound financial management for long-term success.

34. REID, J. T., SMITH, A. M. y ANDERSON, M. J. Difference in the requirements for maintenance of dairy cattle between pasture and barn feeding conditions. In Nutrition Conference for Feed Manufacturers, Proceedings. Cornell. 1958: 88-94. ✓
35. SALISBURY, G. W. y VANDEMARK, N. L. Physiology of reproduction and artificial insemination of cattle. San Francisco, W. H. Freeman. 1961. 639 p.
- 36. SORENSEN, A. M. et al. Causes and prevention of reproductive failures in dairy cattle. I. Influence of underfeeding ✓ and overfeeding on growth and development of Holstein heifers. Cornell Agricultural Experiment Station. Bulletin 936, 1959. 51 p.
- ⊕ 37. SWANSON, E. W. Optimum growth patterns for dairy cattle. ✓ Journal of Dairy Science 50(2):244-252. 1967.
- 38. \_\_\_\_\_. Effect of rapid growth with fattening of dairy heifers on their lactational ability. Journal of Dairy ✓ Science 43(3):377-387. 1960.
- 39. \_\_\_\_\_, y SPANN, T. R. The effect of rapid growth and fattening upon lactation in cattle and rats. Journal of ✓ Animal Science 13(4):1032. 1954.
40. THOMAS, J. W., SYKES, J. F. y MOORE, L. A. Production and growth of dairy cows reared on silage or hay rations. Journal of Dairy Science 42(12):1949-1954. 1959.
41. WICKERSHAW, E. W. y SCHULTZ, L. H. Influence of age at first breeding on growth, reproduction and production of well-fed ✓ Holstein heifers. Journal of Dairy Science 46(6):544-549. 1963.
42. WILK, J. C., YOUNG, C. W. y COLE, C. L. Genetic and phenotypic relationships between certain body measurements and first lactation milk production in dairy cattle. Journal of Dairy Science 46(11):1273-1277. 1963.

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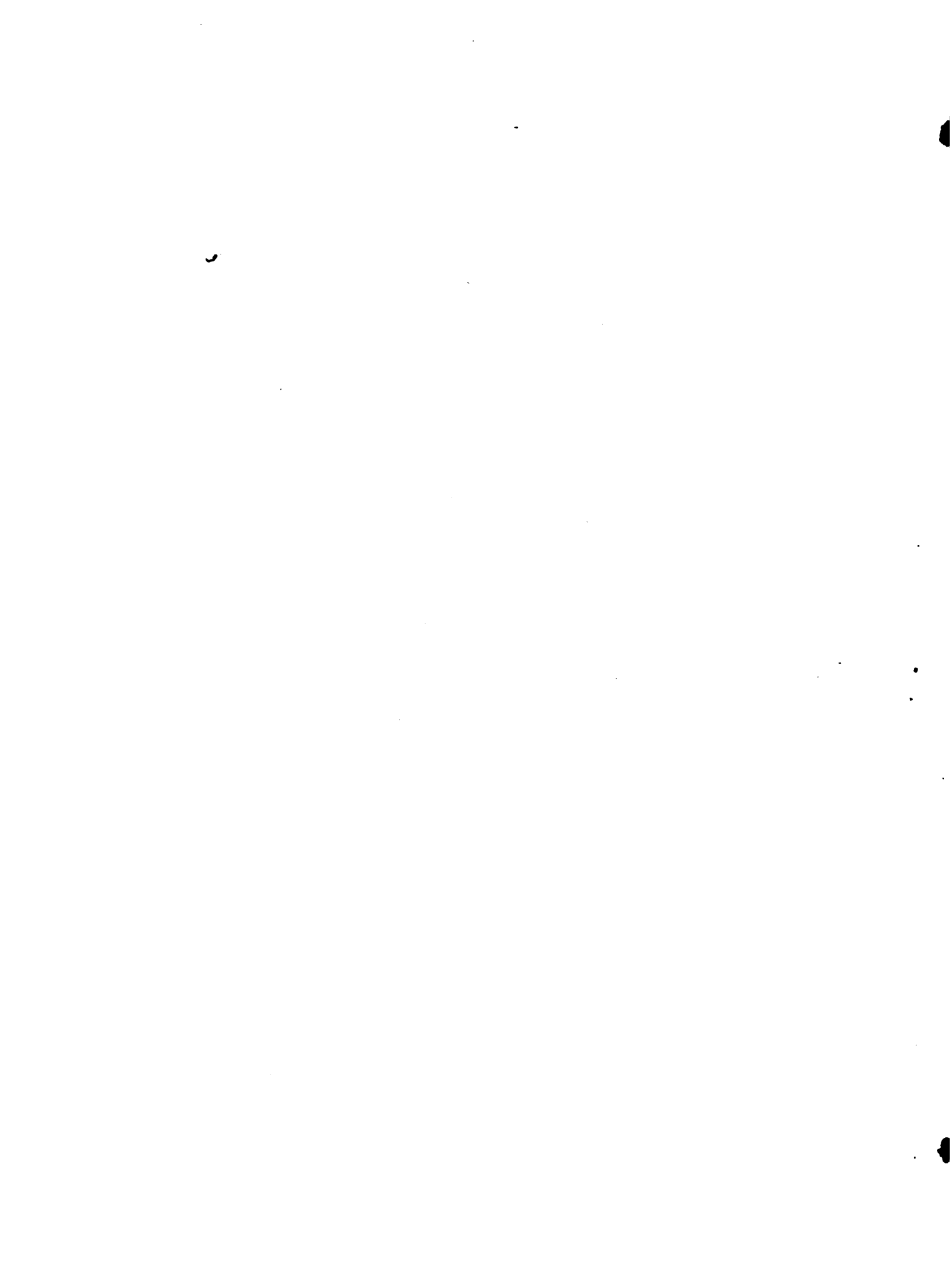
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A P E N D I C E



Apéndice 1. Pesos semanales de las terneras en el tratamiento de pastoreo-estabulación (T 2), durante el primer período (Grupo A), kilogramos.

Animal	Peso inicial	S e m a n a s							Aumento total
		1	2	3	4	5	6	7	
1	68	69	65	67	73	75	77	83	15
2	74	78	71	74	75	73	76	73	- 1
3	68	70	72	74	85	85	88	95	27
4	70	69	74	77	81	83	87	91	21
5	69	64	67	70	72	80	80	82	13
6	67	67	75	77	77	83	87	90	23
7	69	70	71	75	80	82	84	82	13
8	70	71	71	80	80	82	83	82	12
9	73	75	73	78	80	82	84	85	12
10	71	75	72	78	80	82	84	86	15
11	70	77	75	70	76	74	83	95	25
Promedio	69,9	71,4	71,5	74,5	78,1	80,1	83,0	85,8	15,9
Aumento semanal		1,45	0,09	3,09	3,55	2,00	2,91	2,82	

The following table shows the results of the experiment. The data is presented in a table format with columns for the different variables and rows for the different trials. The table is divided into two sections by a horizontal line.

Series	Time	Temperature	Pressure	Volume	Mass	Distance	Speed	Acceleration
Series 1	0	20	1013	100	100	0	0	0
	1	21	1012	101	100	10	10	10
	2	22	1011	102	100	20	20	20
	3	23	1010	103	100	30	30	30
	4	24	1009	104	100	40	40	40
	5	25	1008	105	100	50	50	50
	6	26	1007	106	100	60	60	60
	7	27	1006	107	100	70	70	70
	8	28	1005	108	100	80	80	80
	9	29	1004	109	100	90	90	90
Series 2	0	20	1013	100	100	0	0	0
	1	21	1012	101	100	10	10	10
	2	22	1011	102	100	20	20	20
	3	23	1010	103	100	30	30	30
	4	24	1009	104	100	40	40	40
	5	25	1008	105	100	50	50	50
	6	26	1007	106	100	60	60	60
	7	27	1006	107	100	70	70	70
	8	28	1005	108	100	80	80	80
	9	29	1004	109	100	90	90	90

The data shows a clear trend of increasing temperature and pressure over time, while volume and mass remain constant. The distance and speed also increase linearly over time, indicating a constant acceleration. The acceleration values are consistent across all trials, suggesting a uniform force is applied.



Apéndice 2. Pesos semanales de las terneras en el tratamiento de estabulación permanente (T 1), durante el segundo período (grupo A), kilogramos.

Animal	Peso inicial	S e m a n a s							Aumento total
		1	2	3	4	5	6	7	
1	83	82	89	92	96	102	105	106	23
2	73	82	88	86	89	93	94	95	22
3	95	104	108	110	118	120	121	123	28
4	91	97	104	107	111	113	113	122	31
5	82	83	87	86	89	90	94	92	10
6	90	93	96	103	102	109	110	116	26
7	82	86	91	97	98	96	107	121	39
8	82	83	89	90	94	93	107	117	35
9	85	87	88	97	116	118	118	121	36
10	86	91	90	102	114	117	121	123	37
11	95	92	97	105	108	112	115	124	29
Prome- dio	85,8	89,1	93,4	97,7	103,2	105,7	109,5	114,5	28,7
Aumento semanal		3,27	4,27	4,36	5,45	2,55	3,82	5,00	

1. The first part of the document discusses the importance of maintaining accurate records of all transactions and activities. It emphasizes the need for transparency and accountability in financial reporting.

2. The second part of the document outlines the various methods and techniques used to collect and analyze data. It includes a detailed description of the experimental procedures and the tools used for data collection.

3. The third part of the document presents the results of the study. It includes a series of tables and graphs that illustrate the findings of the research. The data shows a clear trend in the relationship between the variables being studied.

4. The fourth part of the document discusses the implications of the findings. It highlights the potential applications of the research in various fields and the need for further investigation in this area.

5. The fifth part of the document concludes the study. It summarizes the key findings and provides a final statement on the overall significance of the research. The authors express their gratitude to the funding agencies and the participants who made the study possible.

6. The sixth part of the document includes a list of references and a list of figures. The references cite the works of other researchers in the field, and the figures provide a visual representation of the data presented in the text.

7. The seventh part of the document contains a list of appendices. These appendices provide additional information and data that are not included in the main body of the document. They are intended to provide a more complete picture of the study.

8. The eighth part of the document is the index. It provides a quick reference to the various sections and subsections of the document. This is particularly useful for researchers who are looking for specific information within the document.

9. The ninth part of the document is the glossary. It defines the key terms and concepts used throughout the document. This is helpful for readers who may not be familiar with the terminology used in the study.

10. The tenth part of the document is the conclusion. It provides a final summary of the study and its findings. The authors reiterate the importance of the research and the need for continued exploration in this field.

Apéndice 3. Pesos semanales de las terneras en el tratamiento de estabulación permanente (T 1), durante el primer período (grupo B), kilogramos.

Animal	Peso inicial	S e m a n a s							Aumento total
		1	2	3	4	5	6	7	
12	68	75	74	78	86	90	92	100	32
13	68	75	72	75	77	78	85	87	19
14	69	72	70	73	80	82	88	100	31
15	73	74	78	83	90	90	99	104	31
16	69	63	74	75	77	85	90	94	25
17	69	70	74	76	77	87	91	95	26
18	68	68	68	76	81	88	85	90	22
19	69	70	72	77	77	81	88	91	22
20	71	76	81	85	91	93	94	99	28
21	71	76	79	83	83	87	86	97	26
22	70	75	75	72	82	94	96	97	27
Promedio	69,5	72,2	74,3	77,5	81,9	86,8	90,4	95,8	26,3
Aumento semanal		2,64	2,09	3,27	4,36	4,91	3,55	5,46	

1. The first part of the document discusses the importance of maintaining accurate records of all transactions. This is essential for ensuring the integrity of the financial statements and for providing a clear audit trail. The records should be kept up-to-date and should be accessible to all relevant parties.

2. The second part of the document outlines the procedures for handling cash receipts and payments. It is important to ensure that all receipts are properly recorded and that payments are made in a timely and accurate manner. This helps to prevent errors and ensures that the company's cash flow is well-managed.

3. The third part of the document discusses the process of reconciling bank statements. This involves comparing the company's records with the bank's records to ensure that they match. Any discrepancies should be investigated and resolved as soon as possible to avoid any potential issues.

4. The fourth part of the document outlines the procedures for preparing the financial statements. This includes calculating the profit and loss, the balance sheet, and the cash flow statement. It is important to ensure that these statements are prepared accurately and in a timely manner.

5. The fifth part of the document discusses the process of auditing the financial statements. This involves an independent review of the company's records to ensure that they are accurate and in accordance with the relevant accounting standards. The auditor's report provides an opinion on the reliability of the financial statements.

6. The sixth part of the document outlines the procedures for handling tax matters. This includes calculating the company's tax liability and ensuring that it is paid in a timely manner. It is also important to keep up-to-date with any changes in tax law and to seek professional advice if necessary.

7. The seventh part of the document discusses the process of preparing the annual financial statements. This involves gathering all the necessary information and preparing the statements in a clear and concise manner. The statements should be reviewed and approved by the relevant authorities before being published.

Apéndice 4. Pesos semanales de las terneras en el tratamiento de pastoreo-estabulación (T 2), durante el segundo período (grupo B), kilogramos.

Animal	Peso inicial	S e m a n a s							Aumento total
		1	2	3	4	5	6	7	
12	100	104	108	109	112	116	113	116	16
13	87	86	89	91	93	95	98	96	9
14	100	97	99	99	107	111	108	112	12
15	104	110	100	103	104	102	107	105	1
16	94	93	94	101	99	95	100	110	16
17	95	97	97	100	99	108	110	109	14
18	90	98	94	97	100	108	110	123	33
19	91	83	88	90	90	100	111	110	19
20	99	100	92	108	115	115	116	116	17
21	97	109	107	113	112	113	112	114	17
22	97	100	107	104	104	107	108	110	13
Prome- dio	95,8	97,9	97,7	101,3	103,2	106,4	108,5	111,0	15,2
Aumen- to se- manal		2,09	-0,18	3,55	1,91	3,18	2,09	2,55	

DATE DUE

-4 NOV 1992

219 APR 1994

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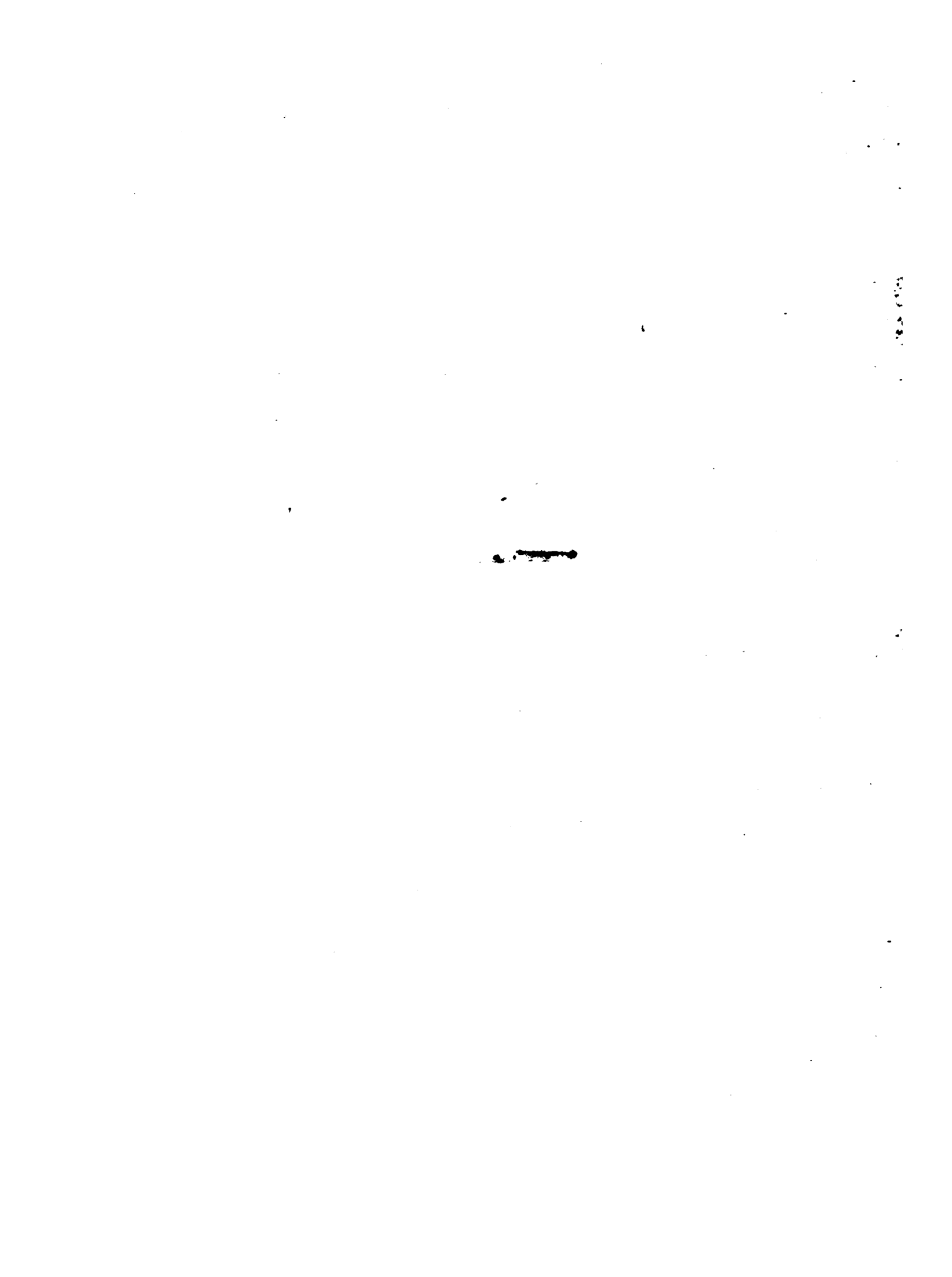
HADAD, CAMILO  
Estabulación permanen-  
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ción en el....

DATE	ISSUED TO
122 JUL-1	152 APR-24
197 OCT-12	28 NOV-28
212 JAN-2	182 JAN-2
297 NOV-2	188 MA
297 JAN-18	50
172 MAY-23	?
172 MAY-31	
172 JUN-23	
297 OCT-10	
297 OCT-	
297 NOV	
199	

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## ACCOMPRESS®

### SCORED HINGE BINDER

BFS 2507 RED	BSS 2507 TURQUOISE
BGS 2507 BLACK	BOS 2507 PALM GREEN
BDS 2507 GREY	BXS 2507 EXECUTIVE RED
BFS 2507 GREEN	BZS 2507 DARK GREEN
BUS 2507 BLUE	BAS 2507 TANGERINE
BYS 2507 YELLOW	BBS 2507 ROYAL BLUE
2507 SH.D50	ASSORTED DISPLAY

