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"Vapona"* affecting color of a lepidopteron

Sumario. El color de un esfingido se encontró que cambiaba cuando estaba expuesto a emanaciones de "Vapona".

In a Black Light trap run at the University of Maryland, Eastern Shore, Princess Anne, Maryland, it was found that *Enmorpha pandorus* (Hubner) (Lepidoptera, Sphingidae) showed considerable color variations. The killing agent used was a strip of "Vapona" at the bottom of the trap.

Specimens of this sphingid collected alive near security lights and the light trap all had the same green color. Wings from one side of field collected specimens were removed and placed in a box with a strip of the insecticide and the other pair used as a control. After overnight exposure the green color had changed to a mixture of olive green and orange, on exposure for 48 hours the lighter greens had completely bleached while the darker shades had turned to a bright orange.

Specimens of *Manduca sexta* (L.), *M. quinquemaculata* (Haworth), *Agrius cingulatus* (F.), *Dolba hyloeus* (Drury), *Ceratonia catalpae* (Bdv.) and *Xylophanes tersa* (L.) collected alive and compared to those found in the light trap did not show any changes in their colors.

* 2,2 - dichlorovinyl dimethyl phosphate. (Trade Mark. Shell Chemical Co.)

Over a two year period a total of 20 different species of sphingidae were collected at the location in Maryland.

The use of this pesticide in collections, because of its corrosive properties and the possible effect on the colors of the preserved material, should be carefully evaluated before it is used routinely.

Abstract The color of a sphingid was found to change when exposed to "Vapona".

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Studies on the growth of *Gossypium barbadense* cottons in India. III. Uptake of major, secondary and micro-nutrients.

Sumario. Una comparación de absorción de nutrimentos por 'Sujata', (un algodón desarrollado mediante selección del 'Karnak' de Egipto) y los dos cultivares creados en la India, 'Suvin' y 'PSH', mostró que durante la floración y fructificación, en la parte vegetativa de 'Sujata' permanecía más nitrógeno, fósforo y potasio. En 'Suvin' estos nutrimentos fueron utilizados rápidamente para el crecimiento reproductivo. Tanto el calcio como el magnesio mostraron una tendencia a elevarse en las partes fruteras desde la formación de los "squares" hasta la floración plena. Durante el crecimiento del cultivo, se encontró la máxima concentración de manganeso, de 140 ppm, en las hojas contra 28 ppm en el tallo. A la formación de los "squares" el contenido de zinc fue máximo (70 ppm) y después declinó rápidamente. En las partes fruteras, tanto el zinc como el manganeso mostraron una tendencia decreciente: el primero algo más rápida, alcanzando 30 ppm a la madurez. El contenido de cobre de las hojas y del tallo fue ligeramente más alto durante los primeros 30 días, pero permaneció en 13 ppm en el tallo, 12 ppm en las hojas y 6 ppm en las partes fruteras hasta la madurez. El cultivar enano y compacto 'PSH', sobre la base de unidad de área, removió apreciablemente menores cantidades de nitrógeno, fósforo, potasio, calcio, magnesio, manganeso y zinc, exceptuando el cobre, y tuvo una más alta eficiencia en nitrógeno.

The uptake of nutrients by American cottons (*G. hirsutum*) at different stages of growth have been studied by many workers notably Dastur and Ahad (10), Olsen and Bledsoe (18), and Eaton and Ergle (12) who reported periodic changes in nutrient contents in relation to growth. Bhatt and coworkers (1, 3) have shown how nutrient uptake in cotton is related to plant architecture. In Egyptian cottons Crowther (7) made detailed studies on nitrogen content and its distribution in different plant parts. Jewitt (14) determined major nutrients and calcium content of Egyptian variety 'Sakel' in the Sudan at one stage only and found the yield to