

greatly. In a young, tender pepper this took about two to four minutes. In older, tougher fruit as much as 14 minutes was spent in this process. As soon as the hole is finished, normally, the female turns, inserts the ovipositor and in from one to two minutes deposits an egg. At times a female seems unable to find the hole and the egg is deposited on the surface of the fruit. On one occasion a female inserted her ovipositor in the hole and remained in that position for 11 minutes. She then withdrew her ovipositor and immediately deposited an egg on the surface of the fruit. She again inserted her ovipositor in the hole and remained thus for about five minutes. The ovipositor was withdrawn and a second egg which she ate was deposited on the surface. Unfertilized females deposited their eggs on the surface even though they drilled a hole in the fruit. They usually made normal ovipositions after they had been mated.

When the egg has been deposited, the female withdraws her ovipositor and secretes a clear, brownish fluid which turns dark on drying and seals the hole. Some time may then be spent in cleaning the ovipositor by rubbing it on the surface of the pepper or scraping it with her hind legs.

Females were kept in petri dishes in the insectary and a small pepper was placed in the dish each day. After being left one day these peppers were taken out and examined for the number of eggs. The average oviposition period for nine females was found to be 30 days and the average number of eggs laid 198. In studies carried on in California (1) the average length of the oviposition period was found to be 72 days and the average number of eggs deposited 341. Further confirmation of the work here in Florida is needed before the results can be fully accepted. Possibly the petri dish formed an unfavorable cage. Moisture was not observed to collect on the dish but the humidity was probably higher than it would have been in a screened cage.

In the California experiments the average number of eggs laid per day was 4.7 and it was stated that occasionally a female deposited 20 or more eggs in 48 hours. The average number of eggs per day here in Florida was 6.6 and as many as 41 eggs were laid in 48 hours, and 20 eggs in that length of time was quite common. This larger number of eggs in the same unit of time would lead one to think that the period of oviposition might be shorter than in California.

For determining time of oviposition the day was divided into three periods: 4 a. m. to 12 noon, 12 noon to 8 p. m. and 8 p. m.