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FOOD CONSUMPTION OF LARVAE OF THE COMMON ARMYWORM (*PSEUDALETIA CONVECTA* (WALK.))

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SUMMARY

The amount of green leaf of kikuyu grass (*Pennisetum clandestinum*) consumed per day by larvae of the common armyworm (*Pseudaletia convecta* (Walk.)) was negligible for up to 16 days after hatching but the final instar consumed 84% of the total food intake.

I. INTRODUCTION

The common armyworm (*Pseudaletia convecta* (Walk.)) often attacks cereal crops and pastures on the Darling Downs in late winter and spring. In very young crops relatively low numbers of larvae can cause serious reductions in plant stand and commonly in localized areas control measures are necessary. The need for the application of insecticidal control can be readily determined from the amount of damage and the number of larvae present.

When considering infestation in more mature crops, it is usually more difficult to decide whether control measures are, or are not, required. Consequently a study was undertaken to provide some basis for the evaluation of the relationships between larval numbers, age of larvae, and leaf area consumed.

II. MATERIALS AND METHODS

Newly hatched larvae were obtained from eggs laid during one night by a single female in captivity. The larvae were reared individually in plastic containers at $22 \pm 1^\circ\text{C}$ in darkness in the Entomology Laboratory at Toowoomba.

Measured lengths of leaf of kikuyu grass (*Pennisetum clandestinum*) were supplied every 1 or 2 days, uniformity in food quality being obtained by selecting the third lamina from the growing point on each occasion. Leaf consumption was assessed, at each change of food supply, by area measurement.

III. RESULTS

Mean consumption per day for 10 larvae reared to pupae is presented in Figure 1. The larval life of the 10 individuals ranged from 39 to 43 days with a mean of 41.3.

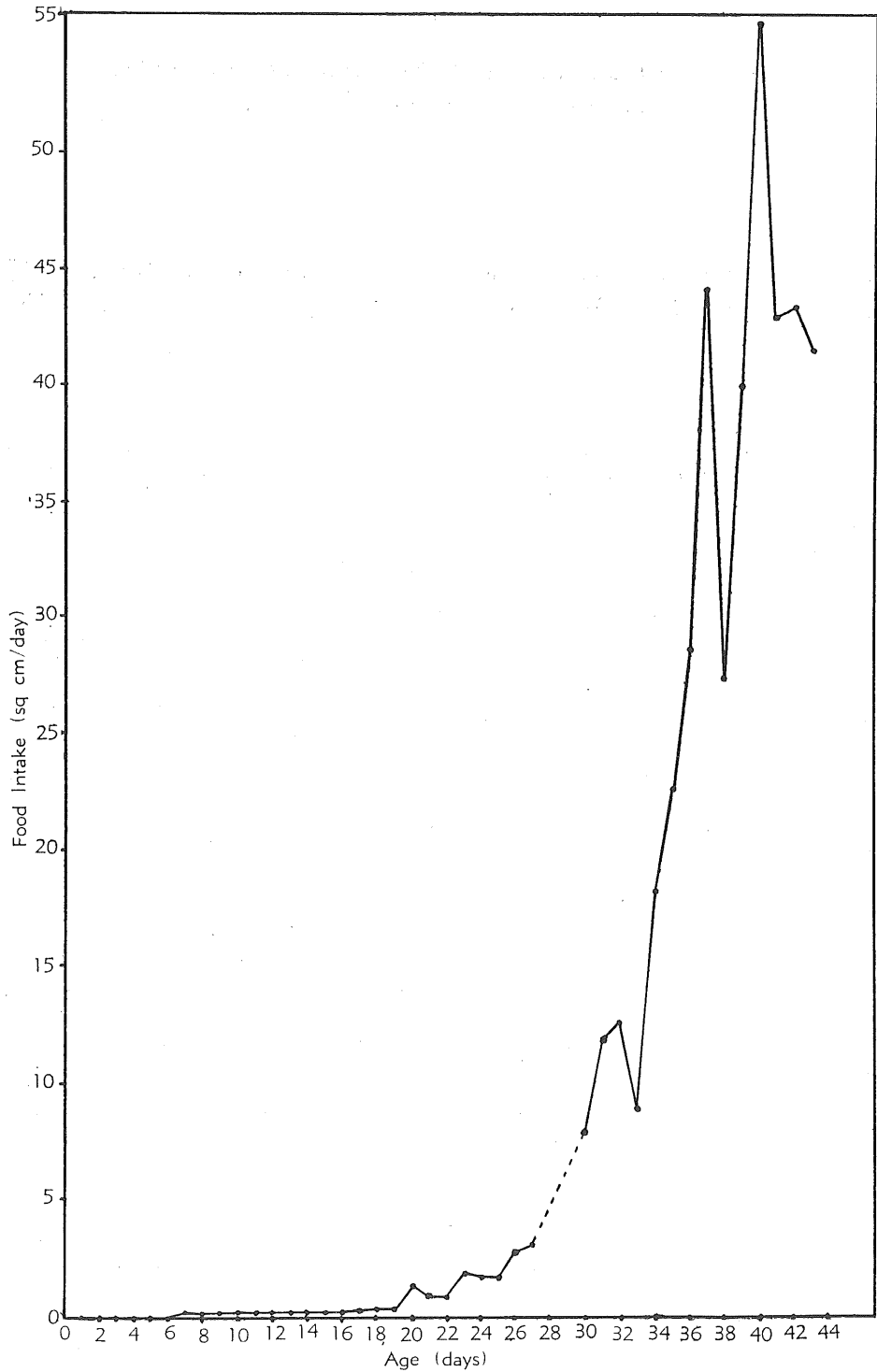


Fig. 1.—Food consumption of *Pseudaletia convecta* larva. The actual amounts for days 28 and 29 were not recorded.

IV. DISCUSSION

During the first 7 days of larval life the leaf surface was merely eroded and consumption of tissue during the following 13 days was negligible. A steady increase in food intake per day was then recorded, but 84% of the total food consumption occurred during the period from day 34 to pupation. As moulting to the final instar occurred at a mean of 33 days after hatching, it is concluded that the final instar is the stage of primary importance with regard to its capacity to cause rapid crop or pasture destruction.

These data allow a reasonably reliable judgment as to whether insecticidal control measures may be necessary when inspections of infested crops are being made. In most situations insecticide treatments may be withheld until the majority of larvae are approximately 3 weeks old. Withholding control measures may allow time for natural control factors to operate and in some situations obviate the necessity for application of artificial control measures.

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