

DAQ41C A FIELD EVALUATION OF THE POTENTIAL OF EGG PARASITES FOR THE CONTROL OF *HELIOTHIS* SPP..

PERIOD: July 1991 - June 1992
ORGANISATION: QDPI
LOCALITY: Toowoomba
PROJECT SUPERVISOR: D.A.H. Murray

SUMMARY:

Techniques for mass rearing egg parasites on eggs of the factitious host *Sitotroga cerealella* (Angoumois Grain Moth - AGM) were further developed and refined. AGM egg production peaked at 330,000 per day during November 1991, but was inconsistent. An automated egg collection system was developed and constructed, and commenced operation in December 1991. A Morrison unit for rearing egg parasites was constructed in July and has the capacity to rear one million parasites per day, provided there are sufficient host eggs available.

Detailed field trials utilising egg parasites were not possible due to a lack of host material at critical times in the season. A single point release of approximately 16,000 female parasites was completed in a hectare of single skip row dryland cotton. Egg parasitism in the study block increased from 7% before the release to 34% two days after the release, demonstrating that inundative releases of egg parasites can increase levels of parasitism. The release rate of 0.2 females per plant per hectare was much less than the proposed rate (2.0 females/plant/hectare) due to a shortage of host material. Egg parasitism in an adjacent commercially managed block of cotton was 10% before the release and 11% after the release.

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