



The University of Georgia

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HATCHERY/BREEDER TIP . . .

EGG REMOVAL SYSTEMS MAY IMPROVE HATCHERY AIRFLOW PERFORMANCE, HATCHABILITY AND CHICK QUALITY

There has been interest over the last several years regarding the removal of clear eggs at the time of transfer. Embrex has developed an egg remover to be used just prior to *in ovo* vaccinations and transfer of eggs from setter to hatcher trays. Preliminary investigations by Embrex, (Williams *et al.*, 2002), have revealed encouraging results which are presented in this newsletter. Their results show several advantages from clear egg removal:

Marek's vaccine was saved by not vaccinating clear eggs.

1. By removing all clears there are fewer eggs per hatching tray, resulting in better airflow around each egg. This helps to remove excess heat, moisture, and carbon dioxide more efficiently than when clears are not removed.
2. Sanitation was improved by the removal of clear eggs, some of which contain early embryo mortality and others contain contamination. The improvements in hatcher airflow and the removal of contaminated and dead embryos led to better hatchability and chick quality.

A summary of the Embrex trials follows in the tables and graph. Note the improvements in hatchability and chick quality (as measured by 7 day mortality after hatch and placement on farms). In addition to the data presented in the tables and graph, the study reported a reduction in embryo temperature in the hatcher trays due to improved airflow after egg removal.

At the time of this writing, none of the egg remover machines are located in Georgia. The machines, however, are newly developed and more field results are needed to reliably assess their effectiveness. Should these positive preliminary results continue to be produced in future trials and in the industry, the egg remover machines may soon be an integral part of day-to-day hatchery operations.

PUTTING KNOWLEDGE TO WORK

Hatchability results by flock age and egg remover treatment

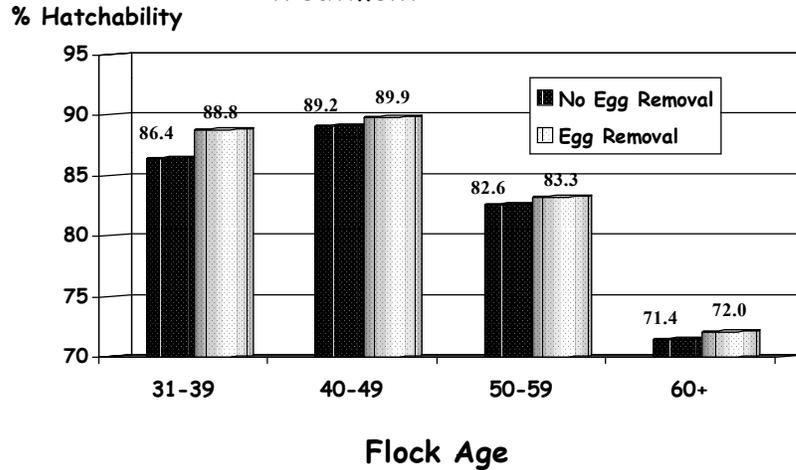


Table 1. Hatchability comparisons in 15 flock by egg remover treatment

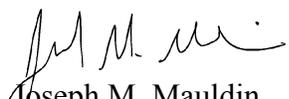
Hatchability Performance of Egg Remover Vs No Egg Remover	# Flocks	%
Better	11	73
Same	1	7
Worse	3	20

Table 2. Chick quality as measured by 7 day mortality after placement on farm

Treatment	# Chicks Placed	% 7 Day Mortality
Egg Remover	97,500	1.99
No Egg Remover	97,200	2.28

Source:

Williams, C. J., A. T. Radford, L. E. Shepherd, and D. R. Richardson, 2002. The effects of automated clear egg removal prior to transfer and in ovo vaccination. Embrex a Research Publication


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Consult with your poultry company representative before making management changes