

# FACT SHEET

L-1767

## IMPROVE EFFICIENCIES IN EGG PRODUCTION

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Inefficiency has a tendency to accompany prosperity — particularly in the egg industry. Extended periods of profit too often lead to production inefficiencies. Earning ability of layer flocks is controlled primarily by rate of production, high feed efficiency and yield of “Grade A Large” eggs. Field observations indicate avoidable economic losses from ½ to as much as 2 cents per dozen occurring in these areas. Elimination of such losses is important for producers to maximize profits during good price periods or to break even during periods of depressed prices.

Even small improvements in performance can prove profitable. For example, a 1 percent increase in marketable eggs for a 420-day laying period means an extra four eggs per hen, or more than 100 cases of eggs per 10,000 layers. An improvement of 1/10 pound of feed per dozen can reduce feed requirements by 2 pounds per hen, or 10 tons per 10,000 layers, over the course of a laying period.

### Waste Equals Money Lost

Many areas of inefficiencies caused by such problems as pullet quality and flock health require time to correct, but others often can be eliminated or reduced rapidly. These areas include feed wastage, egg breakage and house environment. Preventable feed wastage and egg breakage during collection usually result from poor supervision of labor. Observations indicate many laborers fail to equate feed waste and egg damage with money. Management must strive to orient labor to a concept of “wasted feed and checked and broken eggs equal dollar bills.”

Excessive feed wastage can occur easily in hand-fed operations. Often troughs for hand feeding are too

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small for once-a-day feeding. Feeding twice daily may increase production slightly and reduce waste of feed billed from troughs. Feed caked to troughs reduces trough capacity and can cause intestinal problems. Holes in troughs can be expensive. Failing to stop the feed cart before filling the last several feet of trough at the end of each cage row results in spilled and billed-out feed. These problems can be eliminated easily.

### Prevent Feed Loss

Feed loss is low for most mechanical feeders if they are kept in proper repair and adjustment. However, a malfunction or a feeder leak can go unnoticed if houses are not closely monitored.

Unchecked or unnoticed feed wastage into manure collection areas is most prevalent in high density, triple-deck houses and on farms with water pits beneath cages. In both situations, the amount of wasted feed may not be readily visible to the hurried efforts of supervisory personnel.

The farm manager may not correlate a small but continual feed waste with significant sums of money. As an example, one small feeder leak was monitored for more than 12 months in a laying house with liquid manure pits beneath the cages. During this time, the leak of 106.9 grams of feed per minute of trough operation dumped 14.09 pounds of feed per hour, 112.7 pounds per 8 hours of running time each day, or 20.57 tons of feed during the year. The \$2,600 in feed was distributed via honey wagon on nearby pastureland. Net cost was increased by almost ½ cent per dozen eggs produced as a result of this small leak for this particular 30,000-bird house.

Rodents also waste considerable amounts of feed in addition to destroying the effectiveness of insulation. They contribute to disease and parasite prob-



lems and damage equipment such as hoses, egg belts and wiring. A rat will consume at least 1 ounce of feed daily, or 23 pounds per year. Five hundred rats in a 10,000 bird house will consume 1.15 pounds per hen per year — more than 5.75 tons of feed. This loss can be eliminated with the proper use of an effective and proven rodent control program. (See Extension leaflet L-1351 *Rodent Control on Poultry Farms.*)

### **Remove Culls and Reduce Egg Damage**

Periodic walk-through culling every 6 to 8 weeks can reduce feed requirements in older flocks. Visual detection and removal of culls and obvious non-layers can reduce monthly feed requirements by at least 5 pounds per bird removed with no loss of production after 6 or more months of lay. Walk-through culling can be done even by inexperienced labor. Less than 3 hours of labor is generally required per 10,000 layers to detect and remove obvious non-layers.

Egg damage is a costly problem which often can be alleviated by proper maintenance of equipment, training and supervision of employees. More frequent gathering can reduce egg density on egg belts and roll out or collection areas. Extension studies in Texas have shown checks decrease dramatically when eggs are gathered two to three times a day rather than once a day. Extension field studies have shown an increased yield of 6 to 12 marketable eggs per hen is easily within the reach of most operators.

### **Increase Insulation Efficiency**

Housing environment is another cost inefficiency which can be corrected easily. Tight houses with roof insulation decrease heat loss and feed requirements in winter. Evaporative pads must be covered and curtains well-fitted and maintained to eliminate air leakage. In summer, optimum production, shell strength

and egg size are dependent on mechanical ventilation and evaporative cooling. Roof insulation is required to block radiant heat from the sun. Roof insulation is essential for evaporative-cooled houses.

Fans must be properly adjusted and cleaned. Pads must be in place and in good shape and the water nozzles operational. Nozzles and pads should be checked each spring. Damaged pads should be replaced and nozzles cleaned. Inexpensive treatment systems can be installed if sulfur or iron and accompanying bacterial growth are causing problems in nozzles or pads. Several chemicals are available to control algae in pads. Housing air leaks must be eliminated so that air will be directed through the pads for greatest benefits from evaporative cooling.

### **Improve Employee Training**

Below par employee performance is a costly problem which has a direct effect on each of the previously mentioned inefficiencies. Often an employee has not received sufficient instructions to know how to do his work properly, or is unaware of the importance of his job to the operation. Each employee should receive a written list of duties so he knows what is expected of him. Discuss duties in detail with the employee. Give each employee detailed instruction and frequent supervision during the first days of employment and periodic follow-up supervision. Supervisors should emphasize the economic importance attributed to each job, such as feeding properly to reduce feed wastage, proper handling to reduce egg breakage, detecting and reporting malfunctions and proper maintenance of equipment. A greater understanding of what is expected, coupled with follow-up supervision, can do much to prevent problems and improve performance, thereby reducing production costs.

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