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ITEMS OF INTEREST TO MINNESOTA'S EGG INDUSTRY

Melvin L Hamre

Melvin L. Hamre, Professor and Extension Poultry Specialist

Egg Outlook

Prospects for a profitable 1978 for egg producers are not very favorable. Production so far is up from last year and will continue higher most of the year. With this increase in production, egg prices will average below levels of a year earlier. The following production and price information appeared in the March issue of USDA's Poultry and Egg Situation.

Egg production in January was 5 percent above a year earlier. Layer numbers were up 2 percent and output per hen was up 3 percent. The laying flock will likely average around 2 to 3 percent above 1977 during the first quarter of 1978. The hatch of egg-type chicks and the placement of pullets in broiler hatchery supply flocks point to about the same number of replacement chicks as a year earlier in January-March. Weekly reports in January-February indicate the slaughter of mature chickens through federally inspected plants was running above a year earlier. March's slaughter will likely be below 1977 because of the relatively high slaughter levels in March 1977 and because Easter fell in March this year. Also, the laying flock is younger this year and producers will be very reluctant to get rid of their layers until they have finished their normal laying cycle.

The younger age of the flock is reflected by the inventory. The December 1, 1977 inventory of hens and pullets of laying age showed that pullets under 1 year of age made up almost 59 percent of the laying flock. This compares with 57.4 percent on December 1, 1976 and an average of 56.8 percent for December 1, 1971-75.

Another indication of the younger age of the flock is the smaller percentage of force-molted birds. On February 1, 1978, 17 of the states reported that 11.9 percent of their layers had completed at least one molt. This compares with 14.4 percent a year earlier and 14.5 percent on February 1, 1976. The relatively young flock not only means that producers will be reluctant to cull, but it also means that there will be higher output per hen in 1978. This, plus the larger flock size, points to a 4- to 5-percent increase in egg production from a year earlier in the first quarter of 1978.

Egg production in the second quarter may slip to only 2 to 3 percent above 1977. The laying flock should see a gradual shrinkage in the margin of increase over 1977. There will be around a 7-percent decline in replacement layers. Egg production in the second half of 1978 should gradually slip back closer to 1977 levels and could drop below by fall 1978. The hatch of chicks in the first half of 1978 for second-half replacement pullets will be below 1977. This would tend to reduce layer numbers and egg production. However, both layer numbers and egg production could stay high if producers force-molt heavily following Easter. The period following Easter until early summer is usually the lowest period for egg prices. Many producers could decide to force-molt their birds after Easter hoping that when they begin laying 6 to 8 weeks later, egg prices will be rising seasonally.

The price for cartoned Grade A large eggs in New York averaged 63 cents a dozen in 1977, down 7 cents from 1976. However, the price in the fourth quarter of 1977 was over 19 cents below October-December 1976. Prices did show fairly strong seasonal strength in December but once again dropped sharply in January. Cartoned eggs in New York averaged 57 cents a dozen in January, 24 cents below the unusually high levels of a year earlier. Some strength has occurred in recent weeks and prices moved up to 68 cents in mid-February. However, this strength was probably the result of difficulties in delivering eggs to some markets because of heavy snows. This strength was only temporary and prices are dropping again. Cartoned Grade A large eggs in New York probably will average around 60 cents a dozen in the first quarter, compared with the unusually high 75 cents in January-March 1977. Increased production is expected to result in egg prices dropping to the high 40's in the second quarter. April-June prices last year averaged 58 cents a dozen.

Cage Size and Shape, Bird Density

At the Midwest Poultry Federation, Michigan Extension Specialist Cal Flegal reviewed the many experiments relating to cage size and shape and bird density. He also presented the results of a Michigan trial where recycled molted laying hens were kept for an additional 168 days of egg production in conventional (12 x 16 inch) or shallow (16 x 12 inch) cages housed at either three or four birds per cage. Egg production per bird during 140 days, averaged 78 and 74.6 for birds kept in conventional cages, at three or four birds per cage, respectively. During this same period, the birds kept in the shallow cages produced 83.7 and 74.3 eggs per bird when housed at three or four birds per cage. Average egg weights were heavier from eggs produced by birds in conventional cages than the egg weights from eggs produced by birds in the shallow cages (64.8 versus 63.3 grams). Shell weight was heavier for eggs produced from hens housed in the shallow cages. Cage shape had no effect on cracked or soiled eggs; however, there were 3 percent less cracked and soiled eggs from birds housed three birds per cage than from those housing four birds. Birds housed at three birds per cage in the shallow cage had the most efficient feed conversion of all treatments tested. Flegal pointed out these results were those of a single trial and management and housing conditions in a small facility can have an influence on the findings. The results of more than one study are needed to evaluate bird performance under different cage systems.

The Importance of Water

Water is such a commonplace commodity that it is usually the most ignored or taken-for-granted aspect of poultry production, according to Michael Hart of Hart Manufacturing Company. In remarks prepared for the Midwest Convention program he

pointed out the following factors which influence the amount of water chickens drink: the amount and kind of feed consumed, the environmental temperature, the temperature of the water itself, the size of the bird, the rate of lay and activity of the bird. He rates environmental temperature and the stage of production of the bird as the two most important factors in water consumption.

Layers consume about twice as much water at 90°F as they do at 70°F. At 100°F they consume three times as much. Due to the high water content of the egg, water consumption rates increase as egg production increases. He reported figures on water consumption for one flock as 4.1 gallons per 100 birds and water consumption at 10 percent production, 5.1 gallons at 40 percent, 6.1 gallons at 70 percent, and 6.8 gallons at 90 percent production. Water consumption also bears a direct relationship to feed consumption. If feed consumption goes up, water intake increases correspondingly. Conversely, if birds cannot get enough water, they also won't eat enough feed and production will suffer.

Birds deprived of water may recover completely or suffer long-lasting effects. The producer should be familiar with signs of dehydration which birds may show. These signs are most evident on the legs, head, and face. The large tendon on the back of the leg tends to stand out prominently as the tissues around it shrink from lack of water. The comb and wattles will shrink and the face becomes sunken. The combs may appear bluish. Droppings may be off-color. Behavioral problems may be noticeable, even after the birds have been returned to water after a period of restriction. Dizziness, convulsions, and even mortality may result in cases of severe deprivation. For the first few hours restrict the amount available to birds that have been deprived of water so that they don't drink too much after the water supply returns to normal.

Water quality is also important and can influence consumption. Water troughs should be thoroughly cleaned three times weekly, according to Hart, more often if slime in the trough builds up quickly. Cup and nipple systems usually don't require cleaning. Suspension agents in the water should be used to keep minerals from separating out and building up in watering cups. Regular checking of the water system for leaks and dry cups should be a part of a good management program.

When installing new facilities, it is important to have an adequate number of waterers for the number of birds. Height, location, and ease of access are important considerations. Raising pullets on the same type of watering system which will be used in the egg production facility should be taken into account when planning rearing and management programs. Then stress will be lessened at housing time and the birds will adapt much more readily to the watering system.

Egg Grading School

An egg grading school is being planned during May. This two-day school will provide training in egg grading and information on factors affecting egg grades. Attendance will be limited to the first 40 people registerd. If you are interested in attending or sending some of your employees, contact me for further information: Melvin L. Hamre, Extension Poultry Specialist, University of Minnesota, St. Paul, Minnesota 55108.

In Memoriam

Cora Cooke, Poultry Extension Specialist, University of Minnesota from September 1921 to June 1958, died March 17, 1978 after an extended illness. She was well known in the poultry industry for her work with egg institutes. She developed these county programs to encourage the production of better quality eggs in Minnesota. Cora will be remembered for her dedicated service to the egg industry.

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