TECHNICAL SERVICE BULLETIN

Dawe's

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FIRM-O-SHELL® IMPROVES LIVABILITY AND EGG SHELL QUALITY IN HEAT-STRESSED HENS

Heat stress frequently compromises egg production throughout the world. When older hens are subjected to elevated temperatures, the damage can be particularly severe. At such times, livability can suffer, as well as productivity.

In a recent test, 82-week old Hy-Line W-36 hens were subjected to 100° F temperatures for 9 hours each day during the first week, and then 95° F temperatures for 9 hours for the next four weeks. The temperature during nighttime hours was reduced to 80° F during the entire five week test. **FIRM-O-SHELL** was added to the feed at the rate of 5 pounds per ton for the first week, and then was reduced to 2.5 pounds per ton for the remaining four weeks.

As expected, the combination of hot temperatures and the age of the birds created stressful conditions for these hens. Livability for the Control birds was only 83.4%. Livability for the treatment receiving **FIRM-O-SHELL** was 90.9%.

The **FIRM-O-SHELL** advantage was equally dramatic for egg shell quality. The percentage of checks and cracks for the Control birds was 9.16%. The **FIRM-O-SHELL** treatment suffered only 7.2% checks and cracks. Egg weights actually increased for **FIRM-O-SHELL** hens, while they decreased for the eggs laid by Control birds.

The cost to feed **FIRM-O-SHELL** per 1000 hens for five weeks was $4.10. The economic value of greater livability plus more valuable eggs was $153.60 per 1000 hens. This resulted in an extraordinary Benefit:Cost ratio of 37.4 to 1.

Now is the time to begin considering the toll taken every summer by heat stress. This coming summer, consider stocking a supply of **FIRM-O-SHELL** in your feed mill. Hot weather comes too fast, and exacts too great a cost, for the poultryman to be unprepared.