



## **PROTEK-ALL® IMPROVES PERFORMANCE OF HEAT-STRESSED BIRDS**

**PROTEK-ALL®** is a soluble multi-vitamin supplement, added to drinking water when poultry are stressed by placement, vaccination, debeaking, disease, etc. **PROTEK-ALL** has consistently improved the performance of young chicks grown in a research facility with brooders set at 33 degrees C, and the room itself at 22 degrees C (see Technical Service Bulletins 272E and 277E).

Because hot weather also can stress birds, a test was conducted recently to determine whether **PROTEK-ALL** is effective under hot summer conditions.

### **MATERIALS AND METHODS**

As in prior tests, one-day old Ross/Ross males were received from a commercial hatchery where they had been Mareks-vaccinated. The chicks were weighed individually and allotted so the replicate groups weighed approximately the same. There were 18 replicates per treatment, with 10 chicks per replicate.

The day-old chicks were placed in Petersime brooding batteries, and offered a 22.5% protein, 3128 M.E. Cal/kg. broiler diet ad libitum. Fresh water was offered daily to both control and treatment groups.

The control group received untreated fresh water. From the 8<sup>th</sup> through the 14<sup>th</sup> day of life, the treatment group received water including **PROTEK-ALL**, at the rate of 100 gm per 850 L. The test ended at 17 days of age.

Throughout this test, brooders were maintained at 39 degrees C, and the room was held at 29 degrees C. Ross Breeders' recommended brooding area and house temperatures are 31 and 26 degrees C, respectively, on Day 1 and 25 and 24 degrees C on Day 17.

### **RESULTS**

As in all previous tests, chicks receiving **PROTEK-All** out-performed control birds for the full 17-day period:

TREATMENT	GAIN/BIRD GRAMS	FEED/GAIN
CONTROL	366.7	1.37
TREATMENT	371.9	1.33
% IMPROVEMENT	1.4	2.9

The strong results on feed/gain showed a definite trend toward significance, with  $P < .12$ .

### DISCUSSION

During the first 17 days of life, the comfort zone for broilers declines more than 5 degrees C. Throughout this trial, temperatures were kept constant. Therefore the excessive heat load on the chicks steadily increased during the test.

Because the breeder's recommended temperature decreases another 4 degrees C as broilers mature beyond 17 days of age, it may well be that the improved performance in this test would become even more marked if the test temperatures were maintained for an entire grow-out period.

This trial marks the third consecutive test demonstrating the benefits of using **PROTEK-ALL**:

<b>TSB</b>	<b>AGE OF CHICKS DURING TREATMENT</b>	<b>GAIN/ BIRD IMPROVEMENT</b>	<b>FEED/GAIN OVER CONTROL</b>
<b>272</b>	<b>1-5 days</b>	<b>2.4%</b>	<b>0.7%</b>
<b>277</b>	<b>1-17 days</b>	<b>13.0%</b>	<b>1.3%</b>
<b>280</b>	<b>8-14 days</b>	<b>1.4%</b>	<b>2.9%</b>

Whether added to drinking water on the first day or the eighth; whether the treatment is for 5, 7, or 17 days; and whether the temperature is moderate or elevated, **PROTEK-ALL** has repeatedly improved the performance of young, growing poultry. **PROTEK-ALL** can be a tool of considerable importance for poultry producers who are building profit.