

FEEED RESTRICTION OF MALE AND FEMALE BROILER CHICKENS
WITH SEXES SEPARATED

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Reducing the feed intake of broilers by restricting their time of access to feed is a potential way to reduce cost of production. Even a 2% saving of feed, at 2 cents per bird, would represent a saving of more than \$300,000 per annum for the Queensland broiler industry.

From six to eight weeks of age, two groups of 170 broiler chickens of each sex, kept in deep litter pens, were denied access to feed for either 3, 8 or 16 hours each day or for one day every two days (skip-a-day). A further two groups were unrestricted.

Liveweight gains to eight weeks of age averaged 1.755, 1.778, 1.714, 1.716 kg respectively compared with 1.742 kg for the unrestricted birds (standard error of 0.009 kg). Gain on the severest restriction (skip-a-day) was significantly ($P < 0.01$) worse than that on the mild restriction (feed denial for 8 h per d) but tended to be slightly worse than that on the unrestricted treatment ($P < 0.10$). In the severely restricted groups females gained more slowly than males relative to the control groups.

Feed intake from day-old to eight weeks of age was depressed by the two most severe feed restrictions. The depression for the females was twice that of the males, however the sex by treatment interaction was not significant.

Consequently feed efficiency (total feed/liveweight gain) to eight weeks of age was significantly ($P < 0.01$) improved by 8 to 16 hours a day restriction (2.03) and further improved ($P < 0.01$) by the skip-a-day restriction (2.00) in the final two weeks, compared with the unrestricted treatment (2.06).

Mortality averaged 2.9% overall and was unaffected by level of feed restriction.

Dressing percentage was not detrimentally affected by restriction. Carcass dry matter content was higher for mild restriction and lower for severe restriction. Since carcass fat content is highly correlated with dry matter, this indicates slightly higher carcass fat content for the mild restriction and slightly lower for the severe restriction.

While restricting the time of access to feed of broilers in the last two weeks before marketing in some cases reduced growth and feed intake, in every instance feed efficiency was improved. The 1½ to 3% improvement in feed efficiency is comparable to that reported in the United States Poultry Press indicating 4-6% improvement in feed efficiency. This suggests that feed restriction may be a useful technique to reduce the cost of production of broilers.

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