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ANTICIPATORY FEEDING BY BROILERS
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Professor

The pattern of feed consumption — that is, the amount and the time that the birds eat — is an important consideration for broiler producers

and processors. Feed efficiency, clearance of the digestive tract before processing, and resistance to high temperature are associated with the pattern of feed intake. Restricting the length of time available for feeding often gives improved feed conversion,

but it also often leads to overconsumption that can hinder feed clearance from the gut in rapidly growing broilers.

Excessive amounts of feed in the digestive tract are detrimental to effective heat loss during high temperature exposure and may also cause problems at the processing plant.

Any factor that causes overconsumption may be detrimental to gut clearance. One of these factors is anticipatory feeding, which is defined as increased consumption of feed before a recurring period of feed unavailability. In other words, when birds become accustomed to periods when feed is not present (or at least not seen), such as periods of darkness, they consume extra amounts of feed ahead of time in anticipation of the non-feeding period.

Feed consumption prior to dark-

ness is often greater than that occurring after the dark period, according to May and Lott (1992), but anticipatory feeding does not occur when broilers are provided continuous, constant intensity light.

However, May and Lott (1994) point out that a number of factors may stimulate anticipatory feeding. Many commercial broiler and turkey houses are curtain-sided and therefore the birds are exposed to daily cycles of temperature and light intensity changes. Their studies show that if feed is available, bright periods of light (9.5-12.0 foot candles) followed by dim periods (0.5-1.5 foot candles) would stimulate birds to increase feed consumption in the hour before the light began to dim.

The effect was not as dramatic as when there was total darkness alternated with periods of light.

The researchers also showed that although birds ate more at lower temperatures, this was not considered anticipatory feeding, as the birds did not anticipate the onset of high temperature by beginning to eat just before temperature rose.

This research suggests that synchronization of the bird's biological clock to visually stimulated senses is an important cue to regulate feeding behavior. Regular periodic noises or appearances of caretakers may provide other cues.

For more information on anticipatory feeding, poultry producers should consult Dr. J. D. May, USDA-ARS, South Central Poultry Research Laboratory, Mississippi State, MS 39762.

References:
May, J. D. and B. D. Lott, 1992. POULTRY SCIENCE, 71:951.
May, J. D. and B. D. Lott, 1994. POULTRY SCIENCE, 73:1398

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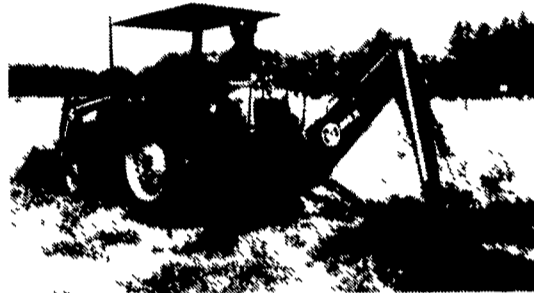


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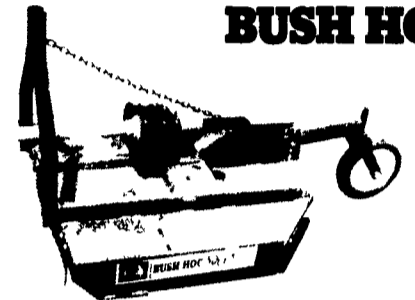
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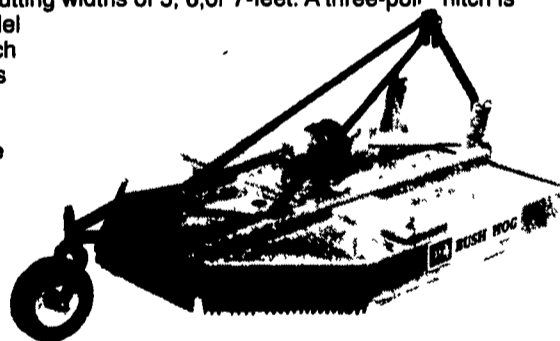
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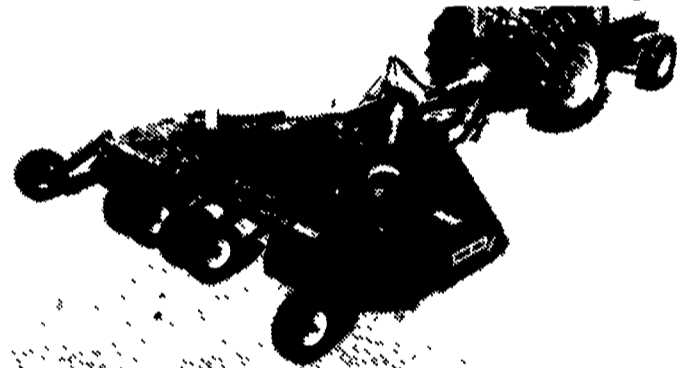
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