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## Effect Of Form Of Feed On Turkey Performance

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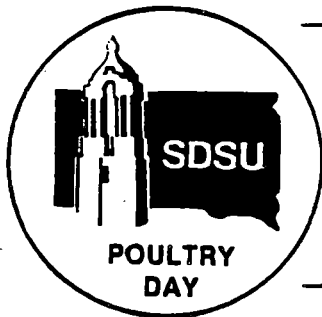
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## EFFECT OF FORM OF FEED ON TURKEY PERFORMANCE

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POULTRY 83-4

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Pelleting feed has been shown under some conditions to increase rate of gain and improve feed conversion in studies with poultry as it has for cattle and swine. Many investigators have reported that the principal effect of pelleting is to increase the density of the feed, thus allowing greater intake and consequently an increase in rate of growth. Efficiency of feed utilization also is frequently improved. To investigate this further, a factorial experiment was designed to evaluate the effect of forms of feed (original mash, firm pellet and poor pellet) on turkey performance (body weight, feed/gain, etc.) when a high level of fiber was included in the diet.

A total of 1200 day-old Nicholas White male poults were randomly assigned to 36 pens. The low protein series of Guenther et al. (1978) were used as control diets. The experimental diets to be pelleted were formulated with 20% wheat bran. All diets were reduced from 23% to 12% protein with age. Individual weight and group feed consumption data were obtained at 4-week intervals.

Table 1 shows the average body weight at 12, 20 and 24 weeks of age. At 12 weeks of age, turkeys on the mash diet with 20% wheat bran gained significantly ( $P < .05$ ) less than those fed the other forms of diet. Numerically, birds on firm pellets gained more than those on either poor pellets or the control diet. At 20 weeks of age, birds receiving the firm pellets showed significantly heavier body weights compared to those on either the mash diet (wheat bran) or poor pellets. Body weights for those on the firm pellet diets did not differ ( $P > .05$ ) from that of birds on the control (no wheat bran) diets. Also, at 24 weeks of age, feeding firm pellets produce significantly heavier birds over feeding the all-mash diet (wheat bran) or the poor pellet diet, but no significant differences were observed when compared to the control diet (no wheat bran).

Also shown are the effects of forms of feed on cumulative feed conversion. Birds on the control diet showed superior feed conversion, whereas those fed the mash diet with 20% wheat bran showed the poorest feed conversion value. Pelleting improved conversion and feeding firm pellets resulted in a lower feed requirement than feeding poor pellets.

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Table 1. Effect of Form of Diet on Performance of Turkeys

Treatment	Body weight (age, wk)			Feed/gain 0-24 wk
	12 kg	20 kg	24 kg	
1. Low protein	7.13 <sup>a</sup>	12.60 <sup>a</sup>	14.75 <sup>a,b</sup>	3.46
2. Low protein with 20% wheat bran	6.47 <sup>b</sup>	11.34 <sup>c</sup>	13.32 <sup>c</sup>	3.86
3. 2 as poor pellets	7.00 <sup>a</sup>	12.04 <sup>b</sup>	14.26 <sup>b</sup>	3.77
4. 2 as firm pellets	7.21 <sup>a</sup>	12.81 <sup>a</sup>	14.84 <sup>a</sup>	3.64

a,b,c Means with different superscripts are significantly different (P<.05).