

Zeranol, a New Growth Drug, Is Reported by Penn State

A new growth-promoting hormone, zeranol, is effective in increasing weight of lambs and cattle raised under various man-

agement systems, according to experiments at Pennsylvania State University. The findings were reported recently at the 63rd annual meeting of the American Society of Animal Science.

In one trial, weaning weights of steer calves were increased by 25 pounds, according to Dr Lowell L. Wilson, Penn State professor of animal science. He compared this with weight gains of 19 pounds for similar steer calves implanted with the common hormone stilbestrol. All of these calves averaged 87 days of age when implanted with the hormones.

The Penn State studies included 71 cattle and 122 lambs, of different ages and exposed to different types of management. Zeranol is one of several new compounds with growth-promo-

ting activities which has been isolated from *Gibberella Zeae*, a type of corn mold.

The studies involved implanting 36 milligrams of zeranol in cattle and 12 milligrams in sheep — under the skin at the base of the ear. Zeranol has little estrogenic or female hormone effects, as does stilbestrol, used for many years to increase growth rate in cattle and sheep.

In steers fed a post-weaning ration of either 9.5, 11, or 12.5 per cent protein, zeranol implanting increased rate of gain by 7.8 per cent. Feed efficiency was improved by about the same percentage.

In trials conducted with lambs, the use of the same dietary protein levels resulted in approximately the same results with regard to increased

rate of gain from zeranol implanting. However, zeranol did tend to increase rate of gain more within the 9.5 and 11 per cent protein diets than within the 12.5 per cent protein diets.

In an additional lamb feed-diet with an amino acid called methionine, supplementing the methionine-hydroxy-analog was studied in combination with zeranol implanting. The addition of methionine to the diets did not significantly increase gain, although it did increase feed efficiency. The addition of the amino acid may have reduced the acceptability of the ration.

In another trial with zeranol, rams, wethers, ewes and cryptorchids (rams with testicles restrained mechanically in the body cavity) were implanted with zeranol. Implanting with zeranol increased the average daily gain of rams, cryptorchids, wethers, and ewes by 10.9, 9.8, 12.5 and 7.9 per cent, respectively. This indicates that the use of zeranol may be expected to increase the rate of gain of lambs of different sex types.

In the latter trial the rams and cryptorchids were markedly leaner than were the wethers or ewes.

The use of zeranol had little observable effects upon carcass meatiness and quality.

Also involved in the research were M. L. Borger, M. C. Rugh, C. F. Orley, J. D. Sink and J. H. Ziegler, all of the Department of Animal Science at Penn State.

Crops Will Be Shown

A record number of field crop demonstration plots have been established for the 1971 Agricultural Progress Days to be held August 31, September 1-2 at the Penn State Rock Springs Agriculture Research Center.

Max Smith, Lancaster County ag agent points out that those attending the field days may inspect legume and grass varieties, forage crop management and rotation systems, corn hybrids for grain and silage, no-till corn planting, insect and weed control plots, and commercial grain sorghum.

The Rock Springs Agricultural Research Center is located three miles west of Pine Grove Mills on Route 45.

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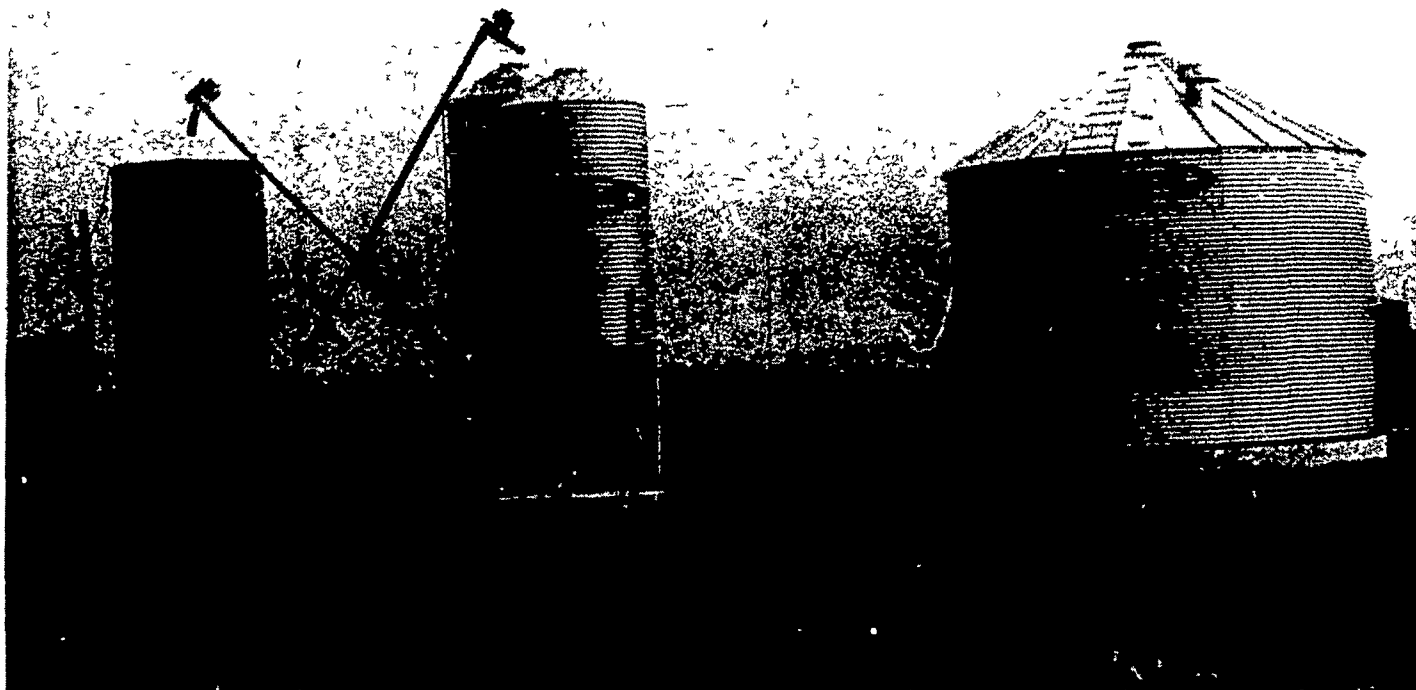
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