

# New Feed For Animals

Organic refuse such as food and fiber processing waste, and poultry waste, is suitable for cattle feed, according to animal scientists at The Pennsylvania State University. Several Penn State researchers have been successful in feeding products

such as apple pomace, paper, sawdust, and poultry waste to cattle.

The findings show that most organic wastes possess some nutritional value. Generally, such wastes must be supplemented with other nutrients

such as protein, energy, minerals, and vitamins, state Dr. T. A. Long and Dr. Lowell L. Wilson of the Department of Animal Science.

Prior to World War II, apple pomace was acceptable as a feed for cattle and sheep. However, the spraying of orchards with DDT and similar insecticides made apple pomace unfit for animal feed. Such pesticides are no longer used in orchards, making apple pomace acceptable again as a livestock feed.

Results from digestion trials using sheep show apple waste to be 60 per cent digestible. Results from cattle feeding trials indicate apple pomace is a satisfactory energy source for ruminants when fed at levels supplying one-half of the total energy intake. The pesticide level was acceptably low for all animals in the feeding trials. However, because of the zero tolerance for

DDT in milk, apple pomace should not be fed to any type of milk-producing animals.

Waste paper such as newsprint, when ground up into fine pieces and used as an absorbent for molasses, was acceptable as a carrier for feeds such as molasses. One pound of paper absorbed up to three pounds of black strap molasses. When dried, the paper-molasses combination was eaten readily by dairy cows and dairy heifers.

The Penn State scientists claim such organic wastes will become increasingly important as sources of animal feeds. Wastes will increase, they affirm, and the world food shortage will become more severe. Livestock fed such wastes can produce valuable nutritious food for humans.

"Perhaps the greatest problem is in convincing the consumer that the quality of the end product is not lowered by the use of organic wastes in such feeds," Dr. Long and Wilson point out.

They claim the technology to convert waste materials into usable animal feeds is available in most cases. Equally important, the value of these processed wastes as feeds will more than pay the processing costs.

In other studies, Hereford steers were fed rations containing oak sawdust at 5 and 15 per cent levels with three particle sizes—fine, medium, and coarse. The results showed that sawdust can be used as a roughage substitute up to 15 per cent of the ration.

In additional studies, steers were fed finishing rations having all of the supplemental nitrogen provided by soybean meal, steam-sterilized poultry waste, and heat-dried poultry waste.

## Milking Short Course Set

A three-day Milking School will be held at The Pennsylvania State University, March 29, 30, and 31, (according to) Max Smith, Lancaster County Ag Agent.

Members of the Extension staff and faculty of the College of Agriculture will instruct in a wide variety of subjects which are aimed at improving the techniques and skills of milkers.

The subjects that will be taught during the three-day school are: Wednesday, March 29 - The Dairy Industry Today; The Development of the Mammary Gland; How the Milking Machine Works; Cow Handling Psychology; and Practice Milking.

Thursday, March 30 - Anatomy of the Udder; Air Flow and Vacuum; Hormonal Control of Lactation; Milking Labor Studies; Hormonal Control of Let Down; Milking Routines; Mastitis - The Disease; and Practice Milking.

Friday, March 31 - Milking Systems; Maintenance of Equipment; Cleaning Principles; and Summary and Questions.

Most of the classes will be held in Borland Laboratory. Registration fee for the course is \$10 dollars.

For further information, contact the Agricultural Conference Coordinator, 410 J. O. Keller Building, The Pennsylvania State University, University Park, Pa. 16802.

The various rations were eaten readily by the steers. There were no appreciable differences in rate of gain, feed efficiency, carcass characteristics, or meat quality, compared with steers fed routine rations.

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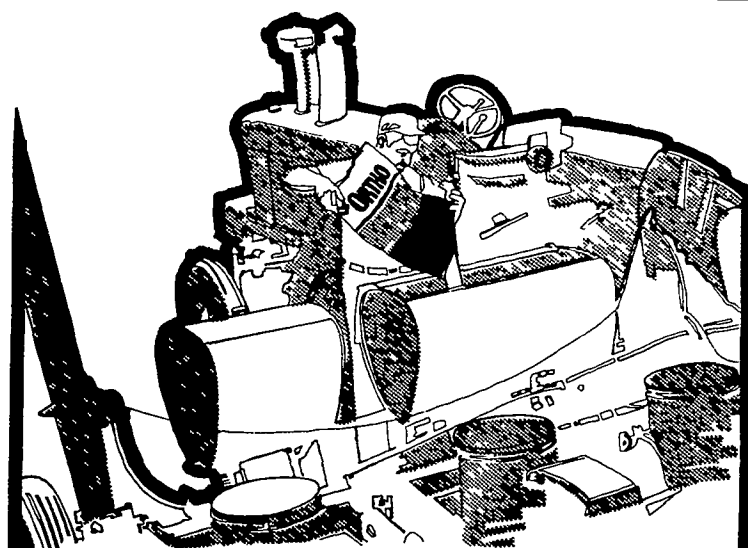
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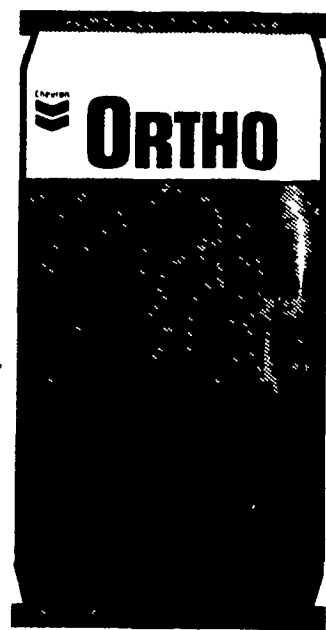
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