

Special Report

Lancaster Farming

POULTRY NOTES

RECYCLING POULTRY BY-PRODUCTS FROM SMALL-SCALE PROCESSING

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Processing game birds or specialty market stock such as holiday turkeys, black skin silkies, or ratites generates a by-product that may be increasingly difficult to dispose of.

Options for disposal include burial, incineration, rendering and most recently, composting. However, these traditional options may be less desirable in recent years because of concerns about water or air pollution and the cost versus the return of sending material to the renderer.

Facing higher rendering costs and excessive tipping fees at the local landfill, one such processor approached us for a solution. The offal and condemned birds from this small broiler plant had a nutrient profile that suggested it could contribute significantly to the energy, protein, calcium, and phosphorus quality of the diet. By recycling into the feed, we could

offset some ingredient costs and utilize a by-product that might otherwise be an environmental liability.

In one experiment, we blended ground offal and condemned birds with some inexpensive feed ingredients one might not usually see in a poultry diet (wheat middlings, barley, and cassava or feed grade tapioca). These wet and dry ingredients were combined at a 1:3 ratio and contained approximately 25 percent moisture when blended together. Using a Model 600 Insta Pro extruder, the mixtures were heated to 300 F. and dried to approximately 10 percent moisture during the process.

The three new ingredients were mixed into broiler diets at levels of 5, 10 and 20 percent and performance compared with a corn and soybean meal control. At one, two and three weeks of age, there were no differences in body weight as a result of the new feed ingredients. Neither were there differences in weight gain or feed consumption. Birds fed the control diet did have better feed conversion (feed/gain ratio) than those fed the diet with 20 percent extruded barley/by-product blend; however, all other new ingredient diets resulted in equal broiler performance at less



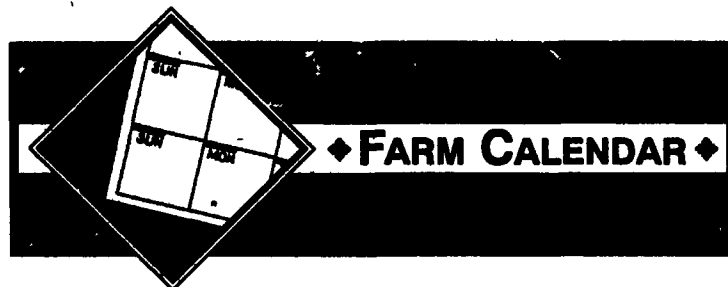
Dr. Paul H. Patterson

cost that birds fed the control diet.

In a second experiment, we attempted to keep the perishable poultry by-products free from spoilage using an old technology with a new application. Fermentation, is a process of ensiling or pickling a product by adding a fermentable sugar and allowing the "good" bacteria to ferment the sugars to an organic acid that preserves the by-product. As it turned out, we were able to keep the ground poultry by-products for a week by adding 10 percent sucrose and holding them in an air-tight barrel.

The poultry by-products took on a fermented silage smell which might otherwise have been very offensive. The fermentation would allow

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FARM CALENDAR

- (Continued from Page 1)
- N.Y., thru Oct. 20.
 - National Meeting on Poultry Health and Processing, Sheraton, Ocean City, Md., thru Oct. 20.
 - Friday, October 20
 - Uniontown Poultry and Farm Show, Uniontown, thru Oct. 22.
 - Tuesday, October 24
 - Lancaster County Poultry Association annual banquet, Willow Valley Resort, Willow Street, 6 p.m.
 - Wednesday, November 8
 - American Egg Board meeting, New Orleans, La., thru Nov. 10.
 - Monday, November 13
 - Poultry Management and Health Seminar, Kreider's Restaurant, Manheim, noon.
 - Tuesday, December 5
 - Mid-Atlantic Cooperative Extension Meeting (MACE), University of Delaware, Newark, Del., 8 a.m.-4 p.m.
 - 1996 Events
 - Saturday, January 6
 - Pennsylvania Farm Show, Farm Show Complex, Harrisburg, thru Jan. 11.

- Wednesday, January 24
- International Poultry Expo, Atlanta, Ga., thru Jan. 26.
- Sunday, February 11
- Pa. Game Bird Conference, Nittany Lion Inn, University Park, thru Feb. 13.
- Monday, February 12
- Poultry Management and Health Seminar, Kreider's Restaurant, Manheim, noon.
- Tuesday, February 20
- Midwest UEP Board meeting, Minneapolis, Minn., thru Feb. 21.
- Wednesday, February 21
- Midwest Poultry Federation Convention, Minneapolis, Minn., thru Feb. 23.
- Monday, March 11
- Poultry Management and Health Seminar, Kreider's Restaurant, Manheim, noon.
- Tuesday, April 2
- Poultry Sales and Service Conference, Nittany Lion Inn, University Park, thru April 3.
- Monday, May 13
- Poultry Management and Health Seminar, Kreider's Restaurant, Manheim, noon.
- Monday, June 10
- Poultry Management and Health Seminar, Kreider's Restaurant, Manheim, noon.

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