

## Del. Extension specialist stresses vitamins in swine

NEWARK, Del. — Vitamins are important for normal body metabolism in pigs, as well as people, says University of Delaware extension livestock specialist Richard Fowler.

The requirement is small, so hog producers sometimes overlook it. When this happens normal reproduction or bone growth may be critically affected before you realize it.

Some vitamins are produced in the pig's body. But many must be fed. The confinement-raised pig must rely heavily on dietary sources because there are no lush green pastures in the hog house.

There are two groups of vitamins that a hog needs — fat soluble and water soluble. The fat soluble ones include vitamins A, D, E, and K. The water soluble or B vitamins include riboflavin or B2, pantothenic acid, niacin, B12, and choline. Each has a specific function and is usually added to the swine diet in a crystalline or powder form. Vitamin A is present in corn, but this source isn't dependable.

What do these vitamins do? Deficiencies in vitamin A result in poor coordination, back weakness, partial or total blindness, poor conception rates, dead pigs at birth, boar sterility and deformities of newborn pigs.

Sows and pigs on starter diets (up to 60 pounds) should have 2000 International Units of vitamin A per pound of feed. The growing finishing pigs need 1200 IU per pound of feed.

It is assumed that breeding animals get 4-5 pounds of feed a day except during lactation when they get 9-12 pounds daily. Other pigs are all on self-feeders.

Vitamin D is known as the bone-growth factor. Pigs that have access to sunlight every day produce their own supply. But this vitamin must be fed to pigs in confinement, says Fowler.

Most natural feed ingredients are low in this vitamin. There are two sources of vitamin D — D<sub>2</sub>, which is found in plants, and D<sub>3</sub>, the animal source. Pigs can use both forms, but chickens can use only D<sub>3</sub>.

Deficiency of this nutrient causes rickets (deformed bones), stiffness, lameness, joint swelling, and poor growth rate. Mature animals' bones fracture easily without enough vitamin D. The requirement is 200 IU per pound of feed for the breeding herd and 120 IU for the growing finishing pig.

Confinement raising and artificial drying of grain have increased the incidence of vitamin E deficiency symptoms in hogs, says the specialist. This vitamin is related to the mineral selenium.

When selenium is low, there's an increase in the requirement for vitamin E. Signs of low vitamin E intake include sudden death, jaundice, edema (collection of fluids in body tissue), white muscles, and liver damage. Pregnant sows may lose their litters and pigs nursing deficient sows may show muscular incoordination. All pigs require 5 IU per pound of feed of this nutrient.

Blood clotting time is related to vitamin K. Though this vitamin is present in many feedstuffs and made by intestinal bacteria, deficiencies still occur, so diets should be supplemented with vitamin K. Tail biting problems

are complicated by insufficient K. Moldy feeds aggravate low levels of this nutrient.

Alfalfa meal is a good source of K and meets the needs of most pigs when included in the ration at 25 percent. A synthetic product — menadione sodium bisulfite — can do the job too, if added at the rate of 2 grams per ton of feed. The requirement is 1 milligram per pound of feed for all pigs.

Natural feed ingredients are poor sources of the fat soluble vitamins, so synthetic sources should be added. Vitamins for swine are available from commercial premix companies. They are added to corn and soybean

meal diets on the farm or are combined with the peroxide source in a complete supplement.

Most producers prefer either of these two ways of adding vitamins to making their own premixes on the farm. Commercial suppliers of vitamin premixes have better quality control and mixing facilities.

When buying a vitamin premix, limit the quantity to a three-month supply. Mix enough feed for three weeks only, because some vitamins lose potency when mixed with other ingredients.

Check the tag on the bag against the requirements of the pig. For

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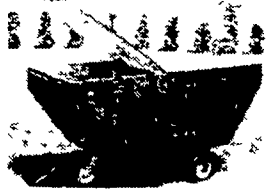
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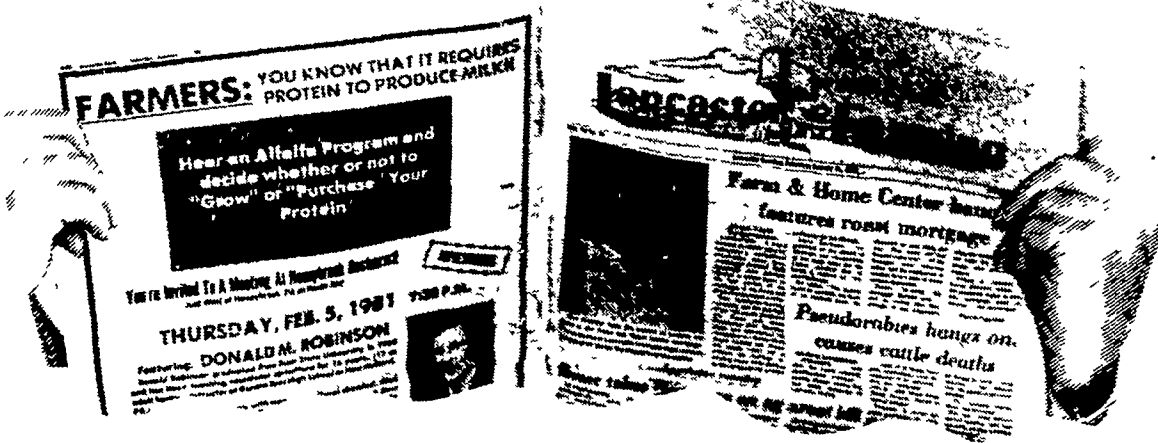
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