

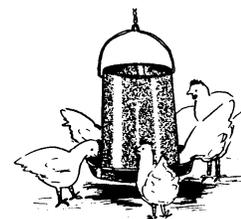


*The University of Georgia*

**Cooperative Extension Service**

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## ***BACKYARD FLOCK TIP . . .***

### **VITAMINS AND MINERALS IMPORTANT TO POULTRY**

Achieving maximum health and performance of poultry requires nutritionally balanced diets. One of the common issues with regard to back yard flocks relates to poor or inadequate feeding programs that can lead to vitamin and mineral deficiencies for the birds. Vitamins and minerals are very important components of a chickens diet and unless a formulated ration is feed, it is likely that deficiencies will occur.

Poultry require all known vitamins except C. Some vitamins are soluble in fats, while others are soluble in water. Some of the symptoms of a vitamin deficiency are as follows:

#### **FAT SOLUBLE VITAMINS**

Vitamin A	Decreased egg production, weakness and lack of growth.
Vitamin D	Thin shelled eggs, reduced egg production, retarded growth, rickets.
Vitamin E	Enlarged hocks, encephalomalacia (crazy chick disease)
Vitamin K	Prolonged blood clotting, intramuscular bleeding.

#### **WATER SOLUBLE VITAMINS**

Thiamine (B1)	Loss of appetite and death.
Riboflavin (B2)	Curly-toe paralysis, poor growth and poor egg production.
Pantothenic Acid	Dermatitis and lesions on mouth and feet.
Niacin	Bowed legs, inflammation of tongue and mouth cavity.
Choline	Poor growth, fatty liver, decreased egg production.
Vitamin B12	Anemia, poor growth, embryonic mortality.
Folic Acid	Poor growth, anemia, poor feathering and egg production.
Biotin	Dermatitis on feet and around eyes and beak.

Minerals are also important to the health and well being of poultry. The following are some of the important minerals and symptoms of mineral deficiencies:

#### **PUTTING KNOWLEDGE TO WORK**

The University of Georgia and Ft. Valley State College, the U.S. Department of Agriculture and counties of the state cooperating.  
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## MINERALS

Calcium	Poor egg shell quality and poor hatchability, rickets.
Phosphorus	Rickets, poor egg shell quality and hatchability.
Magnesium	Sudden death.
Manganese	Perosis, poor hatchability.
Iron	Anemia.
Copper	Anemia
Iodine	Goiter.
Zinc	Poor feathering, short bones.
Cobalt	Slow growth, mortality, reduced hatchability.

As indicated above, vitamin and mineral deficiencies can produce numerous health problems for chickens including in some cases death. Thus, to prevent nutritional deficiencies, or when deficiency symptoms are noted, feeding a balanced poultry ration with the required vitamins and minerals should be practiced.



Dan L. Cunningham  
Extension Coordinator

Extension County Coordinator/Agent

“Your local County Extension Agent is a source of more information on this subject.”