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Alfalfa for Poultry

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Recent research has indicated that the so-called "tonic" value of fresh green feed for poultry may be attributed to the fact that it is probably the original source of all known vitamins except D, and that it is valuable as a source of minerals and other factors yet unknown. As fresh green feed is available only part of the year, poultrymen have turned to dried green materials rich in green leaves, in which the desired nutrients are concentrated. Alfalfa is the chief crop used at present.

Extensive studies have been made on the effect of various curing factors on the nutritive value of alfalfa at the Colorado, California, Cornell, Idaho, Indiana, Ohio, and other agricultural experiment stations.

Cut in Blossom State

Vitamins that have been studied and found to be present in alfalfa in large amounts when it is properly dried and cured are as follows: Vitamin A, essential for resistance to disease, particularly nutritional roup; vitamin B, for normal condition of the nerves; vitamin E, for hatchability; vitamin G, for growth and hatchability; vitamin K, for normal clotting time of blood and probably some unknown factors essential for growth and hatchability.

Alfalfa leaves contain by far the major portion of the vitamins, minerals and proteins. Therefore, first-cutting alfalfa is less desired than later cuttings because it has more stem growth. Also, in any cutting, young immature alfalfa is richer since it has a greater proportion of leaf material. Alfalfa cut in the bud or

early blossom stage is preferred to that cut later,.. Unfortunately, there is some indication that alfalfa cut at such an immature stage will not be a profitable stand for as many years as otherwise, since the drain on root storage is too great. The present recommendation seems to be to cut alfalfa for poultry feeding in the blossom stage.

Vitamins Easily Destroyed

After alfalfa is cut, destruction of vitamin content proceeds at a rapid rate. Vitamin A is most easily destroyed of those studied destruction apparently being largely through oxidation. Warm, moist conditions favor slow drying and rapid oxidation, hence vitamin A destruction. Rain on cut alfalfa encourages oxidation and also leaches out some of the vitamin value.

The Rocky Mountain area is fortunate in having a dry climate with infrequent rainfall in the alfalfa-curing season. Hay in the swath dries quickly and should be stocked promptly to avoid over-exposure and heating in the hot sun. Excess sweating should be avoided by not cocking or stacking when the hay is too moist. Drying time is greatly lessened by running alfalfa from the cutter bar through rolls set just close enough to crush the coarse stem but not to squeeze it. Such alfalfa dried more rapidly, results indicating as much as one and three-quarters as much vitamin A as the uncrushed.

Alfalfa is prepared for poultry feeds by careful grinding in hammer mills. If a leafy, immature cutting is used, the protein content may often be high enough (20 per cent) and the fiber content low enough (18 per cent) to enable the product to pass as alfalfa leaf meal. If coarse, it may still be made a leaf meal by screening before fine grinding in order to remove some of the coarse stem particles, thereby concentrating the finer leafy particles, or

it may be sold without screening as alfalfa meal, usually containing about 13 per cent protein and about 30 per cent fiber. Alfalfa stem meal is of little value for poultry.

Prevent any Overheating

Since the vitamins, particularly A, are susceptible to destruction on heating, care must be used to keep the hammers and screens in the mills in good repair to prevent overheating of the meal.

Alfalfa meal loses about 50 per cent or more of its vitamin A potency in the hot summer months and relatively little in the colder winter months. It should, therefore, be stored in cool warehouses and not in uninsulated iron ones.

One can well question the accuracy of average figures for the vitamin A and G content of alfalfa products. However, analyses have indicated that certain figures can be quite safely used in calculating the nutritive value of rations. The average minimum units of vitamin a gram for good, green samples are as follows: Sun-cured alfalfa meal A-50 and G-11; sun-cured alfalfa leaf meal A-100 and G-14; dehydrated alfalfa, A-150 and G-16.

In selecting a good alfalfa product, those with the greener color and the lower amount of fiber tend to be richer in vitamins. Avoid meals with many light straw-colored particles. Because of the higher vitamin and protein and lower fiber content, alfalfa leaf meal is preferable to alfalfa meal.

Percentage for Mash

Since alfalfa is particularly rich in vitamins A and G, it is very desirable in poultry rations as they are more likely to be deficient in these than in most other factors. The amount of alfalfa leaf meal should be at least 5 per cent in chick and laying mash, 7.5 per cent in turkey starting mash, and 10 per cent in breeding mash. The amount of alfalfa ~~meal~~ leaf meal in poultry

rations should rarely run more than 10 percent, as this amount tends to make the ration slightly unpalatable, if the meal is ground too fine or if it is not high grade. As it is difficult to supply quite enough vitamin G from alfalfa in some mashes, 5 per cent of dried buttermilk, skim milk or whey in the chick starter and in breeding mashes, and 7 percent in the turkey starting mash, is recommended.

Can Feed Hay in Racks

Farmers who have excellent leafy, green alfalfa hay, can feed this to half-grown chicks, hens, and turkeys, by building an alfalfa rack in each pen and keeping it full. For chicks, the leaves which are found around the stack can be mixed in the mash as a real leaf meal. When feeding hay, alfalfa leaf meal may be omitted from the mash.

Vitamin A and G deficiencies are utterly inexcusable and yet are altogether too common, particularly in winter and early spring months, when fresh green feed is not available. Deficiency of Vitamin A results in untold loss from nutritional roup, lowered disease resistance, ~~poor~~^{poor} production, lower hatchability, and weak chicks subject to disease, while a vitamin G deficiency results in slower growth, lowered hatchability and smaller, ~~weaker~~^{weaker} chicks .. Common sense dictates "Alfalfa for Poultry. "