

Misc. Series 193

32-PERCENT-PROTEIN SUPPLEMENTS FOR POULTRY RATIONS

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With the present shortages of protein, vitamin, and mineral supplements commonly used in poultry rations, most poultrymen and farmers who have been home-mixing are being forced to turn to commercial feeds. In some cases this will be beneficial because some poultrymen and farmers have been using inadequate formulas, ingredients of variable quality, or improper mixing technique. In many cases, however, this will discourage poultry and egg production because of increased costs. This is particularly true for farmers with plenty of home-grown grain and for large commercial poultrymen who are buying grains in bulk quantities, both groups grinding and mixing grain in home-prepared mashes.

The commercial feed industry is presented with an opportunity for real service in serving the needs of this class of farmers and poultrymen to increase egg and poultry production by making available to them the protein, vitamin, and mineral supplements in a single properly formulated and thoroughly mixed supplement. Such a preparation should include all the essential ingredients to supplement adequately any mixture of home-grown grains and should contain no "fillers." Feed manufacturers can utilize the newer and more potent ingredients, such as D activated animal sterol, riboflavin, high-potency vitamin A and D oils, and manganese in these supplement mixtures and thus keep the cost at a minimum. Furthermore, the customer may be assured of a highly efficient mixture which serves the important purpose of intelligently conserving limited supplies of certain critical feed ingredients. A supplement containing 32 percent protein appears to be most adaptable to this need. A number of such mixtures are already commercially available.

A supplement suitable for laying and growing mashes cannot be economically used for starting mashes since it contains more phosphorus than is necessary for

that purpose. A laying mash requires more of this element and more vitamin D than does a starting mash. A starting mash requires more riboflavin than is required for a laying mash.

The formulas presented here are low in animal protein and high in soybean oil meal. The laying and breeding mashes made with these formulas, according to directions, will conform very closely in animal protein content to the levels adopted by the Feed Industry Council. The animal protein will be about 2.6 percent in the laying mashes and not more than 4.3 percent in the breeding mashes.

EXAMPLE OF 32% POULTRY LAYING AND GROWING SUPPLEMENT

	<u>No. 1</u>	<u>No. 2</u>	<u>No. 3</u>	<u>No. 4</u>
	<u>lbs.</u>	<u>lbs.</u>	<u>lbs.</u>	<u>lbs.</u>
Dried buttermilk.....	-	50	-	50
*Dried whey.....	50	-	50	-
Alfalfa leaf meal.....	300	300	-	-
Alfalfa meal.....	-	-	300	300
Soybean oil meal.....	1100	1100	1100	1100
Meat and bone scrap.....	250	225	250	225
Shorts.....	-	-	75	100
**Steamed bonemeal.....	150	150	150	150
Pulv. limestone.....	75	100	-	-
***Manganese sulphate.....	10 oz.	10 oz.	10 oz.	10 oz.
***Salt, iodized.....	75	75	75	75
****D Activated animal sterol(2000D)	2	2	-	-
Fish oil (400D, 2000A).....	10	10	20	20
Total.....	2012	2012	2020	2020

\*Can substitute sufficient distillery or fermentation by-products to supply equivalent riboflavin, making suitable adjustments in the shorts to compensate for weight differences.

\*\*Can substitute defluorinated phosphate, or 100 pounds of pulverized treble superphosphate (containing not over one percent of fluorine) and 50 pounds of pulverized limestone for each 150 pounds of steamed bonemeal.

\*\*\* Can supply iodine and manganese in iodized manganized calcium carbonate if desired.

\*\*\*\* Can use an equivalent amount of vitamin D in oil form (10 pounds of 400D oil.)

Note: In mixing, pour fish oil on soybean oil meal for premix in order to better protect the vitamin A & D.

Suggestion: Omit D Activated animal sterol in the summer and replace the 400D 2000A fish oil with a high potency vitamin A oil to supply an equivalent amount of vitamin A.

Approximate Analysis: At least 32 percent protein and 3.5 percent fat, not more than 9 percent fiber, and about 1.9 percent phosphorus, and 13,500 units of vitamin A, 1,800 units of vitamin D, and 2,550 units of riboflavin per pound.

Suggested Uses of 32% Poultry Laying & Growing Supplement

	<u>No. 1</u>	<u>No. 2</u>
<u>Laying &amp; Growing Mash</u>	<u>lbs.</u>	<u>lbs.</u>
Laying & growing supplement.....	40	40
Bran.....	10	-
Grey shorts.....	10	-
Ground yellow corn.....	20	-
Pulv. barley.....	20	20
Ground wheat.....	-	20
Ground milo.....	-	20
<u>Total.....</u>	<u>100</u>	<u>100</u>

Approximate Analysis: 20 percent protein, 5,400 units of vitamin A, 720 units of vitamin D, and 1,200 units of riboflavin per pound.

Breeder Mash #1

In Lay Mash #1, add 4 pounds dried buttermilk or 5 pounds dried whey, or an equivalent amount of riboflavin supplement in place of an equal amount of shorts.

Breeder Mash #2

In Lay Mash #2, add 5 pounds dried buttermilk, or 6 pounds dried whey, or an equivalent amount of riboflavin supplement in place of an equal amount of ground grain.

Note: The grains used in these mashes may consist of approximately equal proportions of any two or more available ones (except rye).

Feeding Directions

Chicks: Feed Starting Mash alone the first 4 to 6 weeks, then allow the chicks access to grain so that grain consumption gradually increases up to 50 percent at 10 to 12 weeks of age. At 10 weeks, change from starting mash to laying mash. Have limestone grit or crushed oystershell available after 10 weeks of age.

Laying & Breeding Flocks: Allow birds free choice between laying or breeding mash and grain in equal number of feeders but maintain about equal consumption of each. Have limestone grit or crushed oystershell available at all times.