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Feeding

Growing Turkeys

The sciences of nutrition and management have been incorporated with the practices of feeding and rearing turkeys. The progress made by the modern-day turkey breeder is matched by the nutritionist through intensive investigations in the field of turkey nutrition, which result in excellent growth, feed conversion and livability. The diets contained in this publication have given excellent performance in practical use.

Feeding Growing Turkeys

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A TURKEY PRESTARTER should be fed the first 3 weeks or until approximately 1 pound of feed per poult is consumed. The diets and recommended protein, energy, calcium and phosphorus levels are shown in Table 2.

Some producers prefer to separate the sexes, which may result in a potential feed-saving beginning with the 9th week. With this feeding program, a grower ration formulated to contain 24 percent protein should be used from the 9th through the 12th week inclusively and a 20 percent protein diet from the 13th week through the 16th week at which time a 15 percent diet can be fed until the hens are marketed. The toms should be fed an 18 percent protein diet from the 17th week to the 20th week and a 15 percent protein diet from the 21st week to market.

Vitamins, Antibiotics and Arsonics

The amounts of vitamins, listed in Table 1, should be made up in a 10-pound lot, and each 10 pounds should supply the amounts listed per ton of finished feed.

Minerals

Attention is particularly directed to the phosphorus levels of the diets shown in Table 2. The levels of phosphorus given are indicated as total and as inorganic phosphorus. Research data clearly show that lower levels of phosphorus than indicated in Table 2 are adequate, if birds are reared in small groups in batteries with raised screen floors during the early part of the growing period or in pens on litter. Under field conditions, such low levels have not proved to be sufficient.

It is extremely important to add manganese and zinc to all turkey feed formulas. Other trace minerals may be added at the discretion of the feed formulator.

*Respectively, assistant professor, professor and head, Department of Poultry Science.

TABLE 1. TURKEY FEEDS: VITAMINS AND OTHER MICRONUTRIENTS ADDED AS INDICATED ON A PER TON BASIS

Ingredients	Prestarter	Turkey starter	Turkey grower	Turkey finisher
Vitamin A (Stabilized IU)	12,000,000	9,000,000	6,000,000	4,000,000
Vitamin D ₃ (ICU)	4,000,000	3,000,000	2,000,000	2,000,000
Vitamin E (IU)	10,000	6,000	4,000	2,000
Riboflavin (gm.)	6	4	4	3
Calcium Pantothenate (gm.)	16	12	10	8
Niacin (gm.)	80	50	40	20
Choline Chloride (gm.)	1,000	800	600	400
Vitamin B ₁₂ (mg.)	16	12	12	10
Vitamin K (Menadione Sodium Bisulfite—gm.)	2	2	2	2
Antibiotic	100	20	20	10
Arsenic Acid (45 gms. 3-nitro-4-hydroxyphenyl-arsenic or 90 gms. arsanilic)				

Energy:Protein Relationships

Suggested Calorie:Protein ratios are outlined only as guides in the feed formulations. The Calorie:Protein ratios given in Table 2 are in agreement with published values.

CONCENTRATES

It has been repeatedly demonstrated during the past 7 years that turkeys can be grown most efficiently on a complete feed from 1 day of age to market. In many areas, economics dictate the use of a concentrate and grain. The grain can be ground and mixed with the concentrate on the premises of the grower or in a commercial feed mill. The choice will largely be determined by where the desired ration quality, uniformity of mixing and service can be obtained at the lowest cost. If a concentrate is to be used it should be mixed with the grain before the feed is placed before the turkeys.

TABLE 2. TURKEY PRESTARTER, STARTER AND GROWER RATIIONS AND CONCENTRATE

Ingredients	Prestarter 0-3 weeks 30% protein	Starter 4-8 weeks 28% protein	Grower 9-12 weeks 24% protein	Grower concentrate 9 weeks- market 40% protein	Rations using turkey concentrate				
					Grower 9-12 weeks 24% protein	Grower 13-16 weeks 20% protein	Grower 17-20 weeks 18% protein	Grower 21 weeks- market 15% protein	
					Pounds per ton				
Sorghum grain (9.5% protein)	703	836	1066		1050	1280	1440	1600	
Soybean oil meal (44% protein)	1050	930	700	1500					
Fish meal (60% protein)	100	100	100	200					
Dehydrated alfalfa meal (17% protein)	50	50	50	152					
Fermentation product	10	10	10	20					
Phosphorus source (18% P, 32% Ca)	70	60	60	100					
Salt	3	3	3	6					
Manganese Sulfate	0.50	0.50	0.50	1.50					
Zinc sulfate	$\frac{3}{8}$	$\frac{3}{8}$	$\frac{3}{8}$	1.25					
Vitamin-antibiotic-arsenic premix	10	10	10	20					
Fat	3								
Turkey grower concentrate					950	720	560	400	
Protein %	30	28	24	40.06	24.01	20.50	18.06	15.62	
Fat %	4.75	2	2.19	1.43	2.16	2.31	2.42	2.61	
Crude fiber %	4.55	4.36	3.92	6.50	4.24	3.75	3.40	3.06	
Calcium %	1.54	1.40	1.36	2.44	1.18	0.90	0.70	0.51	
Total phosphorus %	1.23	1.13	1.12	1.72	0.98	0.81	0.70	0.58	
Inorganic phosphorus %	0.80	0.71	0.71	1.24	0.62	0.45	0.35	0.25	
Calories (productive energy per pound)	838	862	902	676	899	947	903	1015	
Calorie per protein ratio	28:1	31:1	38:1	17:1	38:1	46:1	55:1	65:1	

One of a Series

This is one of a series of six leaflets on feeding poultry under Texas conditions. Titles of the leaflets are:

Feeding Broilers

Feeding Flock Replacements

Feeding Laying Hens (in process)

Feeding Chicken Breeders

Feeding Turkey Breeders

Feeding Growing Turkeys

Additional copies of the six leaflets will be available as issued from the offices of the extension agents located in each Texas county, or from the Agricultural Information Office, Texas A&M University, College Station, Texas.

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