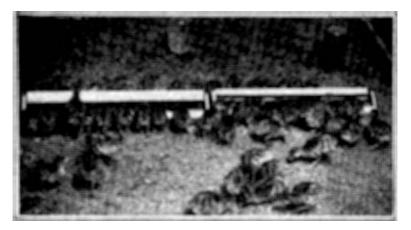
## OKLAHOMA AGRICULTURAL AND MECHANICAL COLLEGE AGRICULTURAL EXPERIMENT STATION

DEPARTMENT OF POULTRY HUSBANDRY C. P. BLACKWELL, Director

# **Growing Turkeys In Confinement**

### R. B. THOMPSON, E. E. SCHNETZLER and W. P. ALBRIGHT<sup>\*</sup> Poultry Department Oklahoma A. and M. College



Baby Turkeys Eating Mash from Feeders in Brooder House

These turkeys are three weeks old and the feeders are each two feet long. This clearly points out that not more than 12 turkeys this age can eat at one time from a two-foot feeder.

Experiment Station Bulletin No. 202

March, 1932

\*E. E. Schnetzler was in direct charge of these turkeys until August 1, at which time he resigned and W. P. Albright carried them through to maturity.

### TABLE OF CONTENTS

Selection of Breeders	9
Management of Breeders	10
Yards for Growing Poults	11
Hatching Poults	11
Brooding Poults	12

## **GROWING TURKEYS IN CONFINEMENT**

#### R. B. THOMPSON, E. E. SCHNETZLER AND W. P. ALBRIGHT

Development of turkey growing from an unorganized part of farm produce to an organized unit of agriculture has been in progress for several years. In the past three years the development has advanced rapidly. To give positive information based on record of facts has been impossible in many aspects of turkey growing. To contribute to the available record information, the Oklahoma Experiment Station organized turkey observations in 1928.

Observations of the habits of young and growing turkeys and limitations of confinement were made in 1928 and 1929. The observations of 1930 were confined to feeding and trapnesting practices. In 1931, three groups of poults were fed out and developed for market.

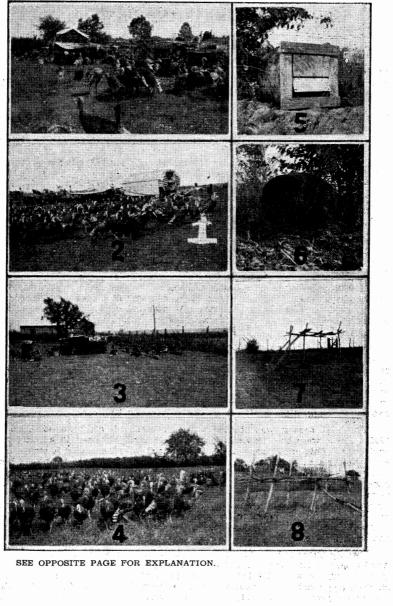
Preliminary observations determined that the habits of turkeys are not enough different from the habits of chickens to justify the use of radically different methods of brooding, feeding or management. More precision and attention is needed with the poults when they receive their first feed. It has been found necessary in some lots to attract the poults to the mash feeder with small amounts of finely chopped, hard-cooked eggs scattered over the mash. Other lots of poults would take the mash without inducement. The arrangement of light on the feed and the ease of getting to the feed in the feeders are factors that perhaps contributed to these differences.

Poults were handled in battery brooders with as much ease and satisfaction as chicks. Not more than three-fourths of a poult should occupy the space of one chick in batteries. At two weeks the proportion of one poult to the space of two chicks was a better equalization of space.

Crooked legs is an outstanding difficulty encountered in brooding poults. There seems to be no regularity of time or conditions which control the development of crooked legs. The condition was observed in 1931 to have appeared on turkeys as old as 20 weeks, which was 10 weeks after they were liberated in yards. The most prevalent time for the crippled condition to appear was from the first to the seventh weeks, with a few developments in the eighth to eleventh weeks. Many were found crippled in the incubator. No suggestion is offered as to the cause of this condition.

The 1931 season was started with six turkey hens, hatched April 17, 1930. These were the heaviest hens from 22 turkeys raised in a 16x16-foot enclosure. This enclosure was a wire-covered wire pen, with a small, covered shelter attached, and was moved each week. The first of the six hens to lay did so February 25, 1931, when 315 days old. These hens had poor care and attention through the winter which was perhaps equal to the normal attention received by average farm turkey hens. The weight of the first egg laid by this hen was 84.8 grams, or 2.64 ounces. It was 6.75 centimeters long and 4.86 centimeters wide. This hen laid 33 eggs between February 25 and May 10. They averaged 2.89 ounces each, 2.54 inches long and 1.92 inches wide.

Twenty-three pullets raised from poults hatched over a period beginning April 8 and ending June 5, and one old hen, were carried over for breeders in 1932. These were divided into two pens of 12 in each pen. A regular chicken egg mash and grain was fed to them during the fall and winter. Beginning December 1, 1931, their house was lighted from 4:30 a. m., till



SEE OPPOSITE PAGE FOR EXPLANATION. Nelio aporto do doda vil Stravitetta do la sectoria az Nelio do la sectoria

. T

daylight. No evening lights were used. The first turkey pullet to lay under these conditions did so on December 27, at an age of 248 days—she was hatched on April 22. On December 28, a pullet hatched on May 5 laid her first egg at an age of 237 days. Nineteen of the 23 pullets were in production before February 1, 1932.

The turkey hens in 1931 and 1932 laid their eggs in trapnests. Turkey hens take to trapnests readily and show strong preference for them over open nests. Most hens have a favorite nest and each is willing to patiently wait her turn for the nest.

Some difficulties appear with these early maturing pullets. The trouble of torn backs has been prevalent. Trimming the toe nails of the male does not correct the trouble because of the tender and soft skin of the female. A heavy muslin jacket to cover the back and tie around the wings and criss-cross under the body has demonstrated possibilities of value to prevent torn backs.

Some of the 1931 poults were carried in battery brooders for as long as seven weeks without apparent suffering or injurious effects. This is not a recommendation for general practice. The regular procedure was to put them in a colony brooder house before they were older than three weeks. A poult three weeks old will occupy a minimum of two inches of feeder space. To provide for three-fifths of the poults eating at a time, it is necessary to have not less than 10 feet of feeder space for 100 poults three weeks old.

The poults were fed the regular Oklahoma A. and M. Baby Chick mash:

- 25 lbs. bran
- 25 lbs. shorts
- 25 lbs. vellow commeal
- 7 lbs. alfalfa meal
- 5 lbs. meat scrap

- 5 lbs. cottonseed meal
- 5 lbs. dried buttermilk
  - ¾ lbs. salt
- 34 lbs. powdered limestone
- 1½ lbs. bonemeal

One-half per cent of fortified cod liver oil was used while poults were in the batteries. Pea green cured alfalfa hay was in wall racks and fresh green feed was supplied daily.

When 12 weeks old, 75 poults from the April 14 hatch were located in a yard 60x220 feet. The yard was divided into four equal pens and a house with a door opening into each pen was located in the center of the yard.

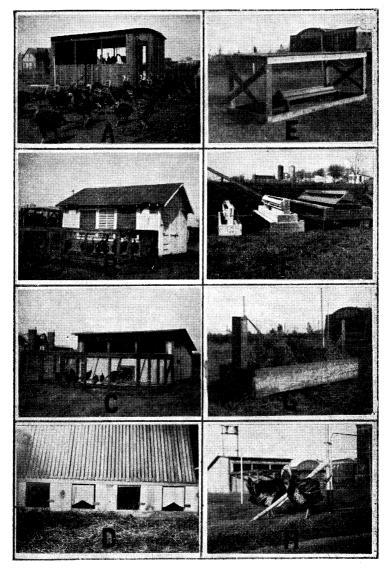
The yard was an old alfalfa field and had not had chickens on it for two years, but prior to that time had been heavily stocked and at one time had received heavy applications of chicken manure.

Twice during the time the poults were on this yard unmistakable symptoms of blackhead appeared. An outbreak of blackhead with death

 $5,\,6{\rm --Barrel}$  nest in breeding pens on a commercial turkey farm. Number five has a trapnest front attached.

7, 8—Roosts for turkeys in breeding pens. This turkey farm keeps several hundred breeding turkeys and does not use the same field for breeders two years in succession. More than 7000 poults were hatched on this farm in 1931.

<sup>1, 2, 3, 4—</sup>Field raised turkeys on an Oklahoma commercial turkey farm. Note the tandem of platform wagons for shade with a covered wagon for feed supply. Water barrels and tubs for drinking water. Row of trough feeders for grain and mash. These turkeys are on an alfalfa field and the wagons and feed troughs are moved about twice their length every second day. Fresh water is hauled to the field daily. The roosts are near the center of the field and the shade and water is kept near the edge of the field. One man cares for 1500 to 2000 turkeys after they are taken to the field.



SEE OPPOSITE PAGE FOR EXPLANATION.

loss also appeared in one of the houses with sun porch. The poults were put on a 20 per cent dried buttermilk mash at the first indication of the disease and responded with a return to normal in about 10 days. No other feed was given and only water to drink. The 20 per cent dried buttermilk mash is made of:

20	lbs.	dried buttermilk	10	lbs	shorts
40	lbs.	yellow cornmeal	20	lbs.	kafir or barley meal
10	lbs.	bran			

The regular Oklahoma A. and M. Baby Chick mash used as an all-mash ration to start the poults was used till the turkeys were ready for market. At 13 weeks the first group had grain—equal parts yellow corn, kafir, wheat and oats—added to their ration. The grain was fed in open feeders of the same size as those used for mash. Three weeks before marketing the grain was changed to yellow corn entirely, but the mash was still available. The resulting finish and quality was excellent.

Two 12x16 foot houses, each with a 12x16 foot concrete-floored sun porch, were used for smaller groups of turkeys. The same feeds and methods were used as with the yard turkeys, except fresh green feed was chopped and fed to house poults daily and the concrete porch scrubbed twice a week.

The yard with four pens, each 30x110 feet, was not large enough to satisfactorily care for 75 growing turkeys. Even by rotating into a different yard once a week, the alfalfa did not keep up with the turkeys. For the purpose of keeping the turkeys supplied with alfalfa, each turkey should have not less than 100 square feet of space in each of four pens or a total of 400 square feet of space. This space could be increased with better results than to decrease it. The climatic conditions, and stand and rate of growth of the alfalfa will also be factors of control in the area required for each turkey. In any yard plan the turkeys should be moved regularly once each week to a yard that has been vacant for three weeks.

With three years' experience it is conservative to say that a house 12x16 feet with a sun porch of the same size will satisfactorily grow 22 turkeys to 26 weeks of age. The house and porch must be thoroughly cleaned on a definite day each week.

A—The shelter house used for 75 turkeys on the 60x200-foot yard as reported in this circular. The shelter is 12x16 feet and open on north and south sides. Perches are level with the bottom of the openings. When winter weather appeared the north opening was covered with heavy muslin. The shelter has four doors, one opening into each quarter of the yard. The shelter is in the center of the yard with a dividing fence on each side. Water and feed is in the shelter as well as in each pen of the yard. The shelter has a concrete floor with four-inch washout drain in the center.

B, C—Two 12x16-foot houses with 12x16-foot concrete floor sun porches on the Oklahoma Experiment Station poultry farm. These houses are used to brood poults and grow 20 to 25 to maturity when brooding season is over.

D-Trapnests for turkey hens on the Oklahoma Experiment Station poultry farm.

E-Shade shelter for feeder. This shelter is three feet high, three feet wide and 10 feet long. During the summer a burlap curtain hangs on the south and west sides. The shelter is moved daily.

 ${\bf F}{-}{\bf Three}$  good feeders used for young turkeys. The large feeder is satisfactory for larger turkeys if the reel is removed.

 $G\mathrm{--}\mathrm{Trough}$  three feet long and one foot wide with wire rack in center to hold cured alfalfa hay. Used to supplement pasture and for turkeys in confinement.

H-The way toms spend too much time when in adjoining yards.

Hen No.	No. of eggs laid	Date of first egg	Age in days at first egg	Weight of first egg in ozs.	Weight of largest egg in ozs.	Weight of smallest egg in ozs.	Ave. weight of eggs in ozs.	Ave. length of eggs in inches	Ave. width of eggs in inches
H129	33	Feb. 25	315	2. <b>9</b> 8	3.42	2.47	2.89	2.54	1.92
<b>H126</b>	34	<b>Mch</b> . 2	321	2.66	3.33	2.38	2.95	2.64	1.89
H125	23	Mch. 7	323	3.00	3.08	2.69	2.89	2.17	1.90
H128	25	Mch. 9	327	2.68	3.09	2.65	2.81	2.54	1.87
H127	32	Mch. 14	332	3.21	3.47	2.28	3.03	2.54	1.95
H124	51	Mch. 16	334	2.80	3.28	2.31	2.94	2.55	1.90

# TABLE I—EGG PRODUCTION OF TURKEY HENS HATCHED APRIL 12 Weight and Measurements of Eggs

8

Band No.	Date of hatch	Date of first egg	Age at first egg	Weight of first egg	Weight of pullet
J1829	April 22, 1931	Dec. 26, 1931	248 days	70	13.8
J1821	April 14, 1931	Dec. 27, 1931	257 days	82	16.6
J1824	May 5, 1931	Dec. 28, 1931	237 days	66	13.0
J1832	April 14, 1931	Jan. 2, 1932	263 days	70	15.2
J1817	April 22, 1931	Jan. 10, 1932	263 days	76	16.3
J1811	April 14, 1931	Jan. 15, 1932	276 days	78	15.4
J1813	April 14, 1931	Jan. 15, 1932	276 days	76	16.0
J1830	April 14, 1931	Jan. 15, 1932	276 days	85	15.2
J1834	April 14, 1931	Jan. 15, 1932	276 days	82	17.0
J1818	April 14, 1931	Jan. 16, 1932	277 days	85	16.0
J1819	April 22, 1931	Jan. 16, 1932	269 days	79	15.2
J1825	April 14, 1931	Jan. 16, 1932	277 days	76	15.0
J1828	April 14, 1931	Jan. 16, 1932	277 days	94	15.0
J1827	April 14, 1931	Jan. 17, 1932	278 days	85	16.6
J1812	April 14, 1931	Jan. 18, 1932	279 days	80	17.2
J1816	April 14, 1931	Jan. 19, 1932	230 days	78	16.6
J1814	April 14, 1931	Jan. 24, 1932	285 days	90	16.5
J1815	April 14, 1931	Jan. 24, 1932	285 days	78	16.0
J1820	April 14, 1931	Jan. 26, 1932	287 days	88	16.0

TABLE II-AGE OF TURKEY PULLETS AT SEXUAL MATURITY

Turkeys 26 weeks old are at the approximate optimum development for market. After that age the rate of gain per unit of feed begins to diminish. At 26 weeks the feather development is correct for best picking and freedom from pin feathers. There are disadvantages present with these high quality, rapid-growing turkeys. It is not uncommon to have toms reach a weight of 22 to 24 pounds in 26 weeks. Turkeys this size are not ideal for the family market. There appears the necessity of developing markets for halved turkeys, or sending the turkeys to market as they reach a weight of 17 to 18 pounds. This plan of marketing at a fixed weight will necessitate opening turkey markets early in the fall, or eliminate the possibility of early hatching. February hatched turkeys will be ready for market by August, or it will be necessary to hold them over on the farm at a rapidly diminishing rate of growth and profit due to the increase in feed and decrease in rate of growth.

The breeding and selection of turkeys for early and increased egg production will certainly produce a surplus of turkey eggs. A better understanding of methods and systems of growing turkeys points to a possible overproduction and a corresponding lowering of price even below the level of the 1931 season. The increase in egg production no doubt will necessitate the disposal of turkey eggs by other means than by incubation.

Perhaps it is true that all progress brings added problems and there seems to be plenty not far distant on the turkey horizon.

#### Selection of Breeders

The kind of individual turkeys selected for use as breeders will largely determine the kind of market turkeys the grower has to sell.

Many poor market turkeys appear each season because of the practice of selling the largest and finest of the young crop on the Thanksgiving and Christmas markets. Before any sales are made the breeders of the next season should be selected.

Select breeders for health, vigor, growth and breed type. The turkey with bright eyes, clean and well groomed plumage, and a strong sturdy step is most certainly a healthy bird. Vigor is found in the turkeys with average length, strong, straight legs and with depth and width of body. The long-legged and knock-kneed turkey will probably have a long, narrow body and a long, weak head. It is possible to eliminate any of these weak characters by selecting as breeders turkeys that do not have them. Growth is paramount for profits with turkeys. Unless a turkey has a strong beak, a body with large feed capacity, and an inclination to eat well, it cannot make rapid growth. By selecting the early developing and rapid growing young turkeys to keep for breeders this characteristic of quick growth can be intensified in the flock. When the turkeys are 10 to 12 weeks old the largest and most alert ones should be marked for consideration as breeders.

It is not necessary to use only two- or three-year-old toms as breeders. Young toms of good quality and vigor are suitable for breeding when they are eight months old. Old toms are more likely to produce lower fertility and hatchability than young toms. This must not discourage the use of a good tom for more than one year especially where he is in an organized breeding pen for the purpose of concentrating his desirable qualities. In organized breeding it is possible and often desirable to mate an old tom to his own daughters.

In selecting breeders a goal of size should be established by each breeder. As a point of beginning a breeder might set a mark to use no turkey hen for breeding that did not weigh 11 pounds, and advance the goal each season till standard weights are reached.

Variety	Adult tom 2 yrs. old	Yearling tom more than 1 year old and less than 2	Ckl. less than 1 yr. old	Hen more than 1 yr. old	Pullet less than 1 yr. old
Bronze Naragansett White Holland Bourbon Red Black Slate	36 33 33 33 33 33 33	33 30 30 30 30 30 30	25 23 23 23 23 23 23	20 18 18 18 18 18 18	16 14 14 14 14 14

TABLE III—STANDARD WEIGHTS OF TURKEYS (1930 American Standard of Perfection)

#### **Management of Breeders**

Breeding turkeys should be separated from chickens. This is desirable for economic success. It is common to see, on general farms, turkeys running with the chickens. In most cases on these farms fewer than eight turkeys are marketed each year for each turkey breeding hen used. Where turkeys are separated from the chickens as many as 24 market turkeys have been raised for each turkey breeding hen. There will always be a few turkeys in every flock that will refuse to die even when kept under the most undesirable conditions; but the important question is not survival of the few fittest, but profitable growth of the greatest number of market turkeys from each breeding hen.

One desirable tom will fertilize 12 to 15 hens. There is so much of an individual consideration here that observation of fertility should be made of the first few eggs laid. If low fertility is noticed, change of toms perhaps will be needed. Some hens do not produce fertile eggs, and if detected should be marketed at once.

10

If more than one pen of turkey hens is used they should be separated at a distance from each other. A fence is not enough to separate breeding pens because the toms will spend too much of their time in walking along the fence and challenging each other. A vacant pen or yard should be between them, or better yet they should be separated at such a distance and in such a way as to not be able to see each other. If two pens are not available and more than 15 turkey hens are used for breeders it is possible to alternate the toms with the hens by days. This is sometimes done even with flocks of less than 15 hens. It is a safety measure to hold two good toms for breeders even for 10 hens.

#### **Yards for Growing Poults**

Free or open range is not necessary to grow turkeys. Clean ground that has not been used by chickens for two years is necessary for the maximum of success.

When raised in fenced yards of 400 to 600 square feet of area per turkey that area should be divided into four equal pens and the turkeys rotated and not allowed to remain in any one pen for more than seven days out of every 28 days. Turkeys will get along without shelter but must have shade, and their feed and drinking water must be protected from sun and rain whether they are in yards or open field. In yards without shelter, the roosts should not be higher than the fences, or else there will be a tendency to fly out of the yards.

On open fields the roosts should be within a wire fence or else night watching against predatory animals is desirable. Roosts for turkeys on open fields need not be moved more than four times during the growing season, but the feeding place must be changed at least at four-day intervals. The feeding place in open fields should be at a distance of not less than 100 yards from the roosting place. With this separation turkeys will not remain near the roosting place except during the time they are on the roosts.

Artificial shade of a portable nature should be provided for turkeys on open field. Not more than 75 turkeys should be expected to get water from one fountain or bucket. From 10 weeks to maturity, one foot of feeder space will do for not more than four turkeys.

Green pasture is highly desirable for growing turkeys. As many as 1500 turkeys on 20 acres of alfalfa have done no damage to the hay crop and over a period of three years with turkeys on the same field of alfalfa the yield of hay has increased.

#### **Hatching Poults**

The period of incubation of turkey eggs is 28 days. With good eggs and a good incubator there should be no greater difficulty in hatching turkey eggs than in hatching chicken eggs.

With small, lamp-heated incubators it is desirable to sometimes make slight alteration. This consists in lowering the egg tray a distance to equal the difference in thickness between chicken eggs and turkey eggs. This distance will average three-sixteenths to one-quarter of an inch. This is to adjust the egg tray so that the top of the turkey eggs will be in the same position to the source of heat for the incubator as were the chicken eggs for which the incubator was designed. Commercial chick hatcheries should experience no difficulty in hatching turkey eggs that are suitable for incubation.

Chicken hens should not be used to hatch or brood turkeys except possibly to start the eggs which later are transferred to a turkey hen after infertiles have been tested out. The use of turkey hens for incubation and brooding will lower the number of market turkeys possible to produce for each breeding hen kept on the farm.

In setting a turkey hen with eggs it is especially important that the nest be located on the ground as a means of controlling evaporation from the egg. The bottom of the nest needs only a light covering, one inch or so of nesting straw or hay. If trouble from rats or varmints is expected, the nest should have a wire or solid floor bottom with six or seven inches of damp earth on top of the nest floor. The turkey hens like seclusion while incubating eggs, but also must be permitted to get off the nest for feed and water in order to be in good physical condition to brood the poults. Remove lice from turkey hens before putting them on the eggs. Sodium fluoride dusted about the vent and on the abdomen will do this effectively. Mites and ticks or "Blue Bugs" have been known to kill a turkey hen setting on eggs. Destroy them by painting the nest and surrounding parts of the coop or house with Carbolineum. Be sure to allow the Carbolineum to dry before putting the hen on the nest.

#### **Brooding Poults**

The same practices used with success to brood chickens should be successful with turkeys. Turkeys do well in battery brooders for three to four weeks, but as a general practice should at that time be transferred to floor brooders. Poults are susceptible to all the vices and habits of chicks and perhaps others. They should have not less than 25 per cent more space than a baby chick.

Chicken hens should not be used to brood poults where the lowest death rate and best rate of growth is desired. Of course, some poults will live when brooded with hens but in the majority of cases there will be heavy loss and lower growth gains and profit.

A regular baby chick mash feed with not less than 17 per cent protein guaranteed on the feed sack tag, and not necessarily more than 19 per cent protein, is satisfactory for feeding poults. The guarantee for fiber is best for turkeys when not less than 6 per cent to 8 per cent of the mash.

The turkey mash should contain wheat bran, yellow cornmeal, alfalfa meal, dried buttermilk, meat scraps, bone meal, salt and vegetable protein, preferably cottonseed meal. Cod liver oil should be used while poults are in battery brooders or confined to the brooder house.

Poults started and fed grain without a high protein mash will not make the growth they are capable of making. The turkey is raised to sell by the pound and the more pounds put on the greater the return. The most rapid growth is made in the early life of the turkey and unless he has a quick start it is never possible for him to make the early quick growth he did not make.

Feed the poults all-mash chick feed for the first 10 weeks or so. Use open feeders and keep the mash before them all of the time. After the first week some turkey growers use a regular chicken laying or egg mash to replace the chick mash. When about 10 weeks old give the poults mixed grain in feeders equal in size to the mash feeders. Continue the hopper feeding of mash and grain of any mixture which has at least 20 per cent yellow corn till about three weeks before market time. At this time change the grain mixture to all yellow corn. For the first week, limit the amount of mash the turkeys eat to about two-thirds of what they have been eating, and then reduce the mash till they are on yellow corn for the last 10 days before marketing.

For range turkeys that have not had mash and grain feed it is difficult to offer an easy or quick finishing program. It is not desirable to attempt to bring turkeys into yards for one finish feeding. It is better to continue to feed them where they are accustomed to being on the range. Begin finish feeding open-range turkeys at least six weeks before marketing time. Carry yellow corn and mash to them and get them to full feed in the first three weeks of the six-week period. Feed open-range turkeys like field turkeys for the last three weeks.

The distinction between open-range and field-raised turkeys is that open-range turkeys have been expected to get considerable of their feed from pasture, waste grain, grasshoppers, etc. The open-range method does not make the best quality of market turkey but can be used if supplementary feeding of mash and grain is made throughout the growing season. Outside of green pasture the feed picked up by turkeys on the average farm range is largely imaginary. Green pasture is essential for best growth of turkeys, and if free range is the only way for them to get it then free range is justified. Dry stubble, corn fields or cotton fields do not, in the middle of summer, yield the green pasture needed by growing turkeys.

			Ave. weight	Ave. gain		Ave. weight	Ave. gain in lbs. of	Ave. weight in lbs. of	Ave. gain in lbs. of	Feed consu bird in	mption per pounds	fotal mash and grain consumed
	No. of males	in lbs. of males	in lbs. of males	No. of females	in lbs. of females	females	males and females	males and females	Mash	Grain	per bird in lbs.	
0	4	.13	The second second second second second	3	.12		.13					
1	38	.18	.05	36	.17	.05	.18	.05	.07		.07	
2	36	.30	.12	36	.28	.11	.29	.11	.20		.20	
3	38	.51	.21	36	.46	.18	.44	.15	.33		.33	
4	38	.80	.29	36	.72	.26	.76	.32	.63		.63	
5	38	1.13	.33	36	1.01	.29	1.07	.31	.99		.99	
6	38	1.57	.44	36	1.39	.38	1.48	.41	1.20		1.20	
7	38	2.00	.43	36	1.81	.42	1.91	.43	1.43		1.43	
8	38	2.79	.79	36	2.42	.61	2.61	.70	1.40		1.40	
9	38	3.54	.75	36	2.98	.56	3.26	.65	1.31		1.31	
10	37	4.27	.73	36	3.56	.58	3.92	.66	1.50		1.50	
11	38	4.79	.52	36	4.02	.46	4.41	.49	1.86		1.86	
$12^{$	37	5.40	.61	36	4.51	.49	4.96	.55	2.31		2.31	
13	38	6.13	.73	36	5.01	.50	5.57	.61	2.21		2.21	
14	38	6.92	.79	36	5.57	.56	6.25	.68	1.96	.11	2.07	
15	38	7.87	.95	36	6.20	.63	7.04	.79	1.98	.46	2.44	
16	38	8.58	.71	36	6.80	.60	7.69	.65	2.40	.58	2.98	
17	38	9.19	.61	36	7.06	.26	8.13	.44	2.21	.66	2.87	
18	38	10.45	1.26	36	7.90	.84	9.18	1.05	1.59	1.11	2.70	
19	38	11.44	.99	36	8.41	.51	9.93	.75	2.24	1.16	3.40	
20	37	12.10	.66	36	8.67	.26	10.39	.46	1.80	1.20	3.00	
21	37	12.75	.65	36	8.96	.29	10.86	.47	1.77	1.21	2.98	
22	37	13.56	.81	36	9.31	.35	11.44	.58	1.79	1.20	2.99	
23	37	14.19	.63	36	9.56	.21	11.88	.44	2.01	1.49	3.50	
24	37	15.17	. <b>9</b> 8	36	9.95	.36	12.56	.68	1.87	1.73	3.60	
25	37	15.97	.80	35	10.23	.28	13.10	.54	1.66	1.58	3.24	
26	37	16.91	.94	35	10.52	.29	13.72	.62	2.20	1.88	4.08	
27	37	17.43	.52	34	10.71	.19	14.07	.35	2.65	1.25	3.90	
28	37	18.51	1.08	34	11.11	.40	14.81	.74	3.71	1.94	5.65	
29	35	19.77	1.26	34	11.60	.49	15.69	.88	2.75	2.58	5.33	
30	35	20.30	.53	34	11.57	03	15.94	.25	2.61	2.51	5.12	
31	35	21.21	.91	34	12.02	.45	16.62	.68	2.27	2.72	4.99	

# TABLE IV—AVERAGE WEIGHT, GAIN IN WEIGHT AND FEED CONSUMPTION OF TURKEYS CONFINED TO YARD60x220 FEET DIVIDED INTO FOUR PENS, WITH 12x16 SHELTER

# TABLE V—AVERAGE WEIGHT, GAIN IN WEIGHT AND FEED CONSUMPTION OF TURKEYS CONFINED TO HOUSE12x16 FEET WITH 12x16 CONCRETE FLOOR SUN PORCH

-----

A	No. of	Ave. weight No. of in lbs. of	Ave. gain in lbs. of	No. of	Ave. weight in lbs. of	Ave. gain in lbs. of		of in lbs. of	Feed consumption per bird in pounds		Total mash and grain consumed per bird
Age in weeks	males	males	males	females	females	females	males and females	males and females	Mash	Grain	in lbs.
0	8	.13		19	.13		.13			and provide a process of the second	ALL BE FOR REAL PROPERTY.
1	8	.18	.05	19	.16	.03	.17	.04	.13		.13
2	8	.31	.13	19	.27	.11	.29	.12	.39		.39
3	8	.43	.12	19	.37	.10	.40	.11	.87		.87
4	8	.61	.18	19	.54	.17	.58	.18	1.04		1.04
5	8	.85	.24	19	.74	.20	.80	.22	.90		.90
6	8	1.18	.33	19	.97	.23	1.08	.28	1.03		1.03
7	8	1.48	.30	19	1.23	.26	1.36	.28	1.15		1.15
8	7	1.87	.39	19	1.57	.34	1.72	.36	.86		.86
9	7	2.40	.53	17	1.91	.34	2.16	.44	.98		.98
10	8	2.77	.37	13	2.38	.47	2.58	.42	1.36		1.36
11	8	3.31	.54	15	2.72	.34	3.02	.44	2.12		2.12
12	8	4.05	.74	15	3.19	.47	3.62	.60	1.81		1.81
13	8	4.95	.90	19	3.62	.43	4.29	.67	1.99		1.99
14	8	5.70	.75	19	4.18	.56	4.94	.65	2.00		2.00
15	8	6.30	.60	18	4.62	.44	5.46	.52	2.26		2.26
16	8	7.19	.89	18	5.16	.54	6.18	.72	2.46		2.46
17	7	8.24	1.05	17	5.63	.47	6.94	.76	2.74		2.74
18	6	9.03	.79	16	6.31	.68	7.67	.73	3.07		3.07
19	5	10.04	1.01	16	6.99	.68	8.52	.85	2.67	.45	3.12
20	5	10.84	.80	16	7.59	.60	9.22	.70	2.67	.55	3.22
21	5	11.98	1.14	16	8.13	.54	10.06	.84	2.65	.75	3.40
<b>22</b>	5	12.68	.70	15	8.71	.58	10.70	.64	2.17	1.15	3.32
23	5	13.38	.70	15	9.11	.40	11.25	.55	3.70	.71	4.41
24	5	13.98	.60	14	9.54	.43	11.76	.51	3.13	.73	3.86

### TABLE VI-AVERAGE WEIGHT, GAIN IN WEIGHT AND FEED CONSUMPTION OF TURKEYS CONFINED TO HOUSE

12x16 FEET WITH 12x16 CONCRETE FLOOR SUN PORCH

.

Age in	No. of	Ave. weight in lbs. of	Ave. gain in lbs. of		Ave. weight	Ave. gain in lbs. of	gain in lbs. of in lbs. of	Feed consu bird in	Total mash and grain consumed		
weeks	males	males	males	No. of females	in lbs. of females	in lbs. of females	males and females	males and females	Mash	Grain	per bird in lbs.
0	6	.12		7	.12	3	.12		· .		
1	6	.17	.05	7	.14	.02	.16	.04	.11		.11
2	6	.30	.13	7		.11	.28	.12	.20		.20
3	6	.51	.21	7	.42	.17	.47	.19	.33		.33
4	6	.83	.32	7	.68	.26	.76	.29	.63		.63
5	6	1.17	.34	7	.94	.26	1.06	.30	.99		.99
6	6	1.55	.38	7	1.26	.32	1.41	.35	1.20		1.20
7	6	2.13	.58	7	1.68	.42	1.91	.50	1.43		1.43
8	6	2.78	.65	7	2.19	.51	2.49	.58	1.40		1.40
9	5	3.31	.53	7	2.71	.52	3.01	.52	1.31		1.31
10	6	4.05	.74	7	3.12	.41	3.59	.58	1.50		1.50
11	6	4.63	.58	7	3.63	.51	4.13	.54	1.86		1.86
12 <sup>0</sup>	6	5.44	.81	7	4.15	.52	4.80	.67	2.04		2.04
13	6	6.14	.70	7	4.77	.62	5.46	.66	2.12		2.12
14	6	6.96	.82	7	5.32	.55	6.14	.68	2.50		2.50
15	6	7.72	.76	7	5.97	.65	6.85	.71	2.76		2.76
16	6	8.47	.75	7	6.69	.72	7.58	.73	3.16		3.16
17	6	9.35	.88	7	7.35	.66	8.35	.77	3.53		3.53
18	6	10.53	1.18	7	7.87	.52	9.20	.85	4.50		4.50
19	6	11.18	.65	7	8.43	.56	9.81	.61	3.01		3.01
20	6	11.75	.57	7	8.77	.34	10.26	.45	4.18		4.18
21	6	12.63	.88	7	9.09	.32	10.86	.60	4.13		4.13
22	6	13.37	.74	7	9.51	.42	11.44	.58	4.89		4.89
23	6	14.35	.98	7	10.06	.55	12.21	.77	2.36	1.85	4.21
24	6	15.03	.68	7	10.37	.31	12.70	.49	2.85	1.62	4.47
25	6	15.88	.85	7	10.77	.40	13.33	.63	2.43	2.11	4.54
26	6	16.30	.42	7	10.84	.07	13.57	.24	2.85	1.65	4.50
27	6	17.03	.73	7	10.94	.10	13.99	.42	3.15	1.23	4.38
28	6	17.53	.50	7	11.09	.15	14.31	.32	3.92	1.09	5.01

Tatal mash