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EXTENSION CIRCULAR 1410-37 AUGUST 1937

# ESSENTIALS IN TURKEY RAISING

## Questions and Answers



THE UNIVERSITY OF NEBRASKA AGRICULTURAL COLLEGE EXTENSION SERVICE  
AND UNITED STATES DEPARTMENT OF AGRICULTURE COOPERATING  
W. H. BROKAW, DIRECTOR, LINCOLN.



# Essentials In Turkey Raising

J. R. REDDITT

**T**HE future of the turkey industry in Nebraska looks bright, but much depends upon the extent to which improved methods of production are carried out. Much also depends upon efficient marketing, but perhaps more depends upon the willingness and ability of the growers to work together.

Just as the field of production has been thoroughly studied and tested, so have problems of marketing been investigated, largely through the co-operative efforts of producers. Marketing studies and demonstrations have covered assembling, processing, grading, packing, shipping, and selling, with complete records of all transactions.

In producing only 2.5 per cent of the nation's turkey crop, Nebraska is overlooking one of her most profitable agricultural possibilities. These possibilities have been sufficiently demonstrated to warrant a materially expanded turkey industry. Natural advantages, the fine quality of turkeys produced, and profitable returns to producers all warrant an increase in turkey production.

1. **Where are most of the nation's turkeys produced?** Leading states, in their order of production, are: Texas, California, Minnesota, North Dakota, Oklahoma, Oregon, Virginia, Kentucky, South Dakota, Colorado.
2. **Where does Nebraska rank among the states raising turkeys and what part of the total does this state produce?** Nebraska ranks 16th in turkey production and is credited with producing about 2.5 per cent of the total.
3. **Is it true that Nebraska offers a certain natural and economic advantage to turkey production?** Yes, the abundance of sunshine promotes health and rapid growth. The dry summer weather reduces disease hazards. The cool fall weather insures good market finish (fattening and feather growth). Abundant home-grown grain insures low feeding costs. Excellent transportation facilities afford ready outlets to markets. Combined, these features make Nebraska an ideal place to raise high-quality turkeys at low cost. For these reasons, turkey production in Nebraska should be increased.
4. **Has the trend in turkey production been toward an increase or decrease?** Turkey production has shown marked increase during the past ten years.
5. **How is this rapid increase accounted for?** Successful turkey raising has been a highly profitable enterprise.
6. **Can turkeys be raised successfully in Nebraska?** Yes, provided certain conditions of management are met.
7. **What are these conditions?** (1) Artificial incubation and brooding; (2) adequate sanitary equipment; (3) clean ground; (4) clean feed

and water; (5) clean management; and (6) keeping turkeys and chickens apart.

8. **Why are artificial incubation and brooding recommended?** (1) We can more intelligently manage and control hatching and brooding, and as a result, have greater success. (2) Poults can also be had when wanted and in numbers wanted. (3) Artificial methods permit more sanitary management and reduce disease hazards and lice infestation. (4) Successful turkey production is less risky. (5) Large-scale production is more economical and efficient.
9. **Why is it so important that turkeys and chickens be separated?** Blackhead germs so fatal to turkeys are often present—though harmless—in chickens. Ground used by chickens is usually infested with the germs of this disease and is therefore unsafe for turkeys.

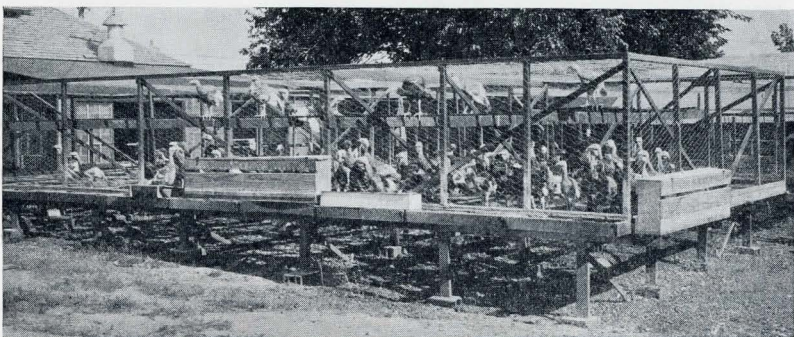


FIG. 1.—A practical and efficient way to prevent the spread of such filth-borne diseases as cholera, black-head, typhoid, and many others is to keep young turkeys off the ground until they are old enough to go on range. Note sanitary feeders and waterers suspended from the fence.

10. **Explain what is meant by clean management.** In addition to clean, chicken-free ground, turkeys must be protected from filth-borne diseases and parasites such as blackhead, fowl typhoid, pullorum disease, cholera, coccidiosis, and roundworms and tapeworms through the use of filth-proof feeders and waterers and feeding practices.
11. **In case of outbreaks of any of these diseases, what treatments are recommended?** More rigid sanitation. Remove and isolate all birds affected and thoroughly clean and disinfect (with phenol disinfectants) all equipment. Burn the litter. Medicines are of no value whatsoever.
12. **What is recommended for the control of roundworms and tapeworms?** **For lice?** For roundworms and tapeworms more rigid sanitation and use of filth-proof equipment and practices—nicotine sulfate capsules and tobacco dust for roundworms chiefly, and kamala tablets or capsules for tapeworms. For lice use nicotine sulfate or sodium fluoride. (Directions for use are printed on containers.)
13. **Describe filth-proof equipment and practices.** Feeders and waterers must be constructed so that droppings cannot fall into them, the



turkeys cannot get into them with their feet, and litter and dirt cannot be scratched into them. They should be placed upon screen-covered platforms so that waste feed or water cannot be picked up by the turkeys. Grain should not be scattered on the ground or in dirty litter but fed from hoppers. It is particularly dangerous to allow turkeys to drink from puddles.

14. **What are the popular breeds of turkeys and what are their standard weights?**

	Mature Tom	Young Tom	Mature Hen	Young Hen
Bronze .....	36 lbs.	25 lbs.	20 lbs.	16 lbs.
Bourbon Reds .....	33	23	18	14
White Holland .....	33	23	18	14
Narrangansett .....	33	23	18	14
Slate .....	33	23	18	14
Black .....	33	23	18	14

15. **In breeding turkeys, how many hens are mated with one tom?** Six toms per 100 hens are sufficient but keep one or two extra in reserve.
16. **How many eggs will a turkey hen lay in a season?** Under good management, hens will lay 40 to 50 eggs each by the first of June. Production beyond this date is of doubtful value because poults usually cannot be hatched and raised profitably so late in the year.
17. **How long is it safe to hold eggs for hatching?** After ten days the hatchability of eggs is reduced. Weekly hatches are recommended.
18. **What is the hatching period for turkey eggs?** Twenty-eight days.
19. **In hatching turkey eggs in incubators is the procedure the same as with chicken eggs?** Yes.
20. **If  $2\frac{1}{4}$  cents per egg represents a fair charge for custom-hatching chicken eggs, what is an equivalent charge for turkey eggs, considering the added size of eggs and the extra week of incubation?** A checkup on this at the University of Nebraska indicated that 4 cents was the exact equivalent, based upon trays holding 75 per cent as many turkey eggs as chicken eggs.
21. **At what age are turkey poults removed from the incubator to the brooder?** When about 24 to 30 hours old or when they are well dried and able to stand and walk freely.
22. **Describe proper brooding of poults.** Poults are brooded in exactly the same way that chicks are brooded. Provide a clean, warm brooder house and clean litter and equipment. The temperature under the hover should be around  $95^{\circ}$  to  $100^{\circ}$  F. Since young turkeys are quite clumsy, the litter should be fine and smooth. A corral of hardware cloth should be provided to keep the poults from straying too far from the heat.
23. **When are poults given their first feed and water?** Feed and water are given as soon as the poults are put in the brooder. It is a good practice to have feeders and waterers filled and ready for use when the poults arrive.

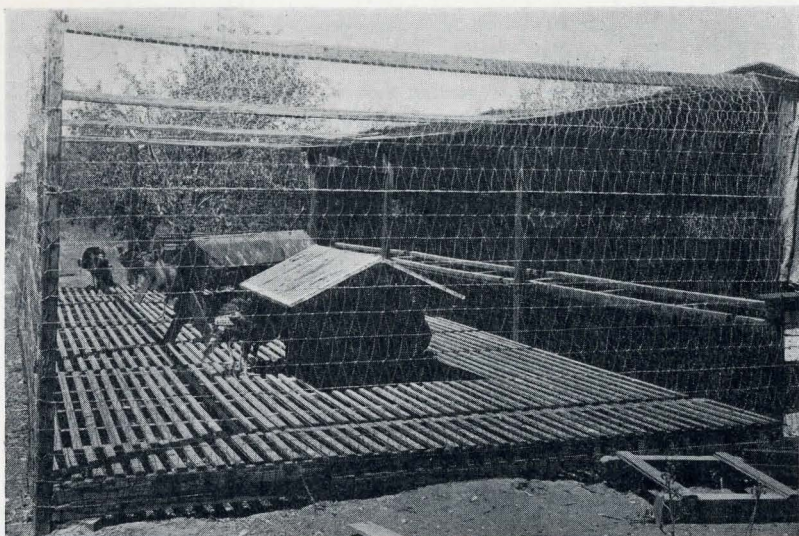


FIG. 2.—Corrals and open roosting sheds insure protection essential to successful production. Slatted floors, built in sections, have a definite and practical place in the sanitation program. Shade insures comfort—essential to development.

24. **What are poults fed?** The same feed that chicks are given is also given to young turkeys. Turkeys can tolerate a higher protein feed, if more rapid early growth is desired.
25. **How are poults fed?** Mash is put into chick-sized feeders and the poults are allowed free access to them.
26. **Give satisfactory mash formula for poults that can be mixed at home or locally.** The following mash formula has proved highly satisfactory for starting poults:

NEBRASKA ALL-PURPOSE MASH FORMULAS FOR CHICKS, POULTS,  
AND HENS

	No. 8	8-M <sup>1</sup>	8-S	What will it cost?	
Yellow cornmeal.....	310	410	310	@.....	Cwt. \$ .....
Shorts .....	200	200	200	@.....	" .....
Bran .....	100	100	100	@.....	" .....
Pulverized oats or barley.....	100	100	100	@.....	" .....
Alfalfa meal (No. 1 quality).....	100	100	100	@.....	" .....
Meat scraps.....	50	25	50	@.....	" .....
Fish meal.....	50	25	50	@.....	" .....
Dried buttermilk.....	50	..	..	@.....	" .....
Soybean oil meal .....	..	..	50	@.....	" .....
Pulverized limestone or sifted oyster shells	20	20	20	@.....	" .....
Cod-liver oil or other suitable fish oil ..	10	10	10	@.....	" .....
Fine salt .....	10	10	10	@.....	" .....
	1000	1000	1000	@.....	" \$ .....

<sup>1</sup> With skimmilk or buttermilk.



Fish oil is not necessary after the eighth week. If barley or ground oats are not available, use 150 pounds of bran and 150 pounds of good-grade alfalfa meal. The protein content of mash mixtures No. 8 and 8-S is 19 per cent. If an increase in protein content is desired for poult feeding, then use 260 pounds cornmeal, 75 pounds of fish meal, and 75 pounds of soybean oil meal per 1,000 pounds of mash. Soybean oil meal can be successfully substituted for dried buttermilk in mixing a ration for chicks and poults. Cod-liver oil may be omitted entirely when poults go on range at about 8 to 10 weeks of age.

27. **At what age and how is grain fed?** As much grain (equal parts cracked corn and wheat) as the poults will clean up readily may be fed on top of the mash at night after the fourth week. When put on range, poults may have free access to grain (corn, oats, barley, or mixture) in open hoppers.
28. **Why is limestone included in the ration for turkeys?** Limestone furnishes calcium for bone building.
29. **Are both limestone and cod-liver oil necessary to prevent leg weakness?** Yes. Cod-liver oil supplies vitamin D, which insures mineral (calcium) assimilation and fixation. Experimental evidence indicates that early mineral fixation also prevents perosis (bone bending). Crooked breast-bones may thus be checked, if not prevented entirely, through proper feeding the first two months.
30. **Do turkeys do better on feeds high or low in fiber content?** Young turkeys can tolerate more fiber than chicks and do well on feeds containing a higher percentage of alfalfa, wheat bran, or oats.
31. **How much feed is required to grow turkeys to market size and age?** Monthly feed requirements in pounds and rate of growth for turkeys during their first seven months are as follows:

	1st mo.	2nd mo.	3rd mo.	4th mo.	5th mo.	6th mo.	7th mo.
Feed .....	1.02	3.07	7.48	11.6	14.82	18.0	20.4
Weight .....	1.80	2.80	5.00	8.75	12.25	15.25	17.25

L. E. Cline, Nevada College of Agriculture.

32. **Should skimmilk and buttermilk be fed fresh or sour?** It makes little or no difference; turkeys thrive on both.
33. **Is it safe to feed sour milk in galvanized containers?** It is safer to use earthenware crocks. Whatever is used for milk should be cleaned daily. A scalding-water cleaning every few days is recommended.
34. **Are there any special precautions necessary in brooding poults successfully?** Yes, young poults seem less hardy than chicks and must be watched more carefully. Do not leave open pails or water pans within reach of them or let them have access to cold corners. To prevent tracking filth into the brooder house, keep a pair of old overshoes at the brooder house door to slip on when entering. Keep visitors out. To prevent crowding and piling at night, hang a lighted lantern (with low flame) in the brooder house. (Poults may be put into bushel baskets at night during the first week or two, about 25 to 30 per basket as an emergency measure. Do not put over 250 poults in a brood. Do not overheat the house. Provide about 15 feet of feeder space for each 100 poults.

35. **When is it safe to put young turkeys on range?** In favorable weather, young turkeys are put on range when well feathered or about eight to ten weeks of age.
36. **How much range do turkeys require?** When properly fed, one acre of alfalfa or other good pasture per hundred turkeys is sufficient.
37. **If alfalfa is not available, what other green crop or pasture is recommended?** Sudan grass, sowed early and mowed about the time the poults are put out, is excellent. So is sweet clover, clover, or rape. A good field of cultivated corn is fine.
38. **Why is green feed regarded as so important?** Good pasture reduces feed consumption (mash and grain), speeds growth, and makes turkey production more economical and profitable.
39. **If grasshoppers are plentiful, to what extent may turkeys depend upon them for feed?** For best results, a diet of live grasshoppers must be supplemented with other feeds, particularly grains. Limiting the feed for turkeys encourages further ranging. A flock of about 300 early turkeys will usually manage quite well the grasshoppers on a quarter section farm if allowed to range freely.
40. **What kind of shelter do turkeys require on range?** A comfortable roosting place that will keep off rain and hail storms and protect the turkeys from natural enemies. This may be a simple shelter shed with a board roof (car siding) slanting north and with roosts (2" x 3", two feet apart) slanting south.
41. **What should May-hatched turkeys weigh at Thanksgiving?** Weights vary considerably, but well-fed young toms should weigh 15 to 20 pounds and young hens 8 to 12 pounds.
42. **Will June-hatched turkeys develop sufficiently for the Thanksgiving market?** June-hatched turkeys seldom finish properly before Christmas, and for this reason it is not advisable to market them sooner. About 26 weeks are required to finish market turkeys.
43. **What special fattening methods and feeds are recommended for finishing turkeys?** The same methods and feeds used when turkeys are put on range may be continued until market time. Corn or barley soaked in skim milk or buttermilk (sweet or sour) is fed by some growers. Mash feeding insures the soft-meatedness so desirable in quality turkeys but mash alone is not recommended.
44. **Is it advisable to sell turkeys alive or dressed?** If local prices are entirely out of line, it may be advisable to dress and ship, provided a good job of dressing, chilling, grading, and packing can be done, the quality maintained in transit, and a satisfactory (dependable) market located.
45. **What are the main precautions to be observed in marketing turkeys successfully?** Perhaps the most important factor in marketing turkeys is in the selection of birds that are ready for market. This means being fat and free from pinfeathers. Since bruises in live birds at dressing time usually become green spots in the dressed carcass later, it is very



important that they be handled carefully. Starve turkeys one day before killing in order to clean out feed. Dressed birds that have been poorly bled or have torn skin go into lower grades, so care must be taken in killing and picking.

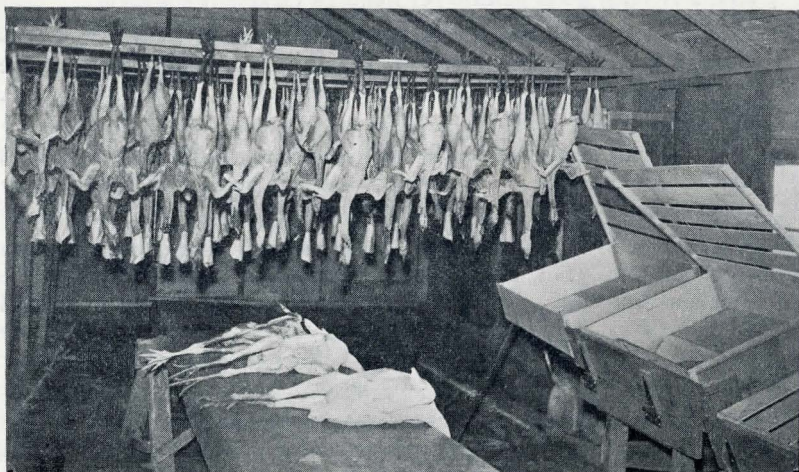


FIG. 3.—Without expensive equipment many farm turkey raisers “process” their own turkeys for market. Home-dressed, dry-picked turkeys are usually high grade, because owners take pains to complete the job right. Cold weather or artificial refrigeration is necessary for handling turkeys successfully.

For further and more detailed information on processing and marketing, see U. S. D. A. Bulletin 1694, “Dressing and Packing Turkeys for Market.” See local Agricultural Agent, or write this office for information on cooperative marketing.

#### OTHER PUBLICATIONS

“Hatching Turkey Eggs,” Nebraska Sattion Bulletin 269, F. E. Mussehl.

“Turkey Production,” Nebraska Station Bulletin 280, F. E. Mussehl.

“Mash Formulas for Chicks and Poults,” Nebraska Extension Circular 1473, F. E. Mussehl.

“Range Shelter Sheds for Turkeys,” Nebraska Extension Circular 733, J. H. Claybaugh.

“Outdoor Feeders for Growing Pullets and Turkeys,” Nebraska Extension Circular 1469, J. H. Claybaugh.

“Practical Poultry Equipment,” Nebraska Extension Circular 1441, J. H. Claybaugh.

“A Colony Brooder House for the Farm Flock,” Nebraska Extension Circular 730, J. R. Redditt and Paul Hoff.

“Diseases of Poultry—Their Nature and Control,” Nebraska Station Bulletin 290, L. Van Es and J. F. Olney.

“Protein Requirements for Finishing Turkeys,” Nebraska Station Bulletin 298, F. E. Mussehl and C. W. Ackerson.

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