

TURKEYS

THEIR CARE & MANAGEMENT

By A. G. TAYLOR, B.S.A.
Poultry Husbandman



BRONZE TURKEY COCK

DOMINION OF CANADA
DEPARTMENT OF AGRICULTURE
BULLETIN No. 46—NEW SERIES

POULTRY DIVISION
Dominion Experimental Farms

Published by direction of the Hon. W. R. MOTHERWELL, Minister of Agriculture,
Ottawa, 1925

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First prize Bronze turkey cock. Ottawa Winter Fair, 1924

TURKEYS

THEIR CARE AND MANAGEMENT

By A. G. TAYLOR, B.S.A.

INTRODUCTION

The raising of turkeys is generally considered to be more or less difficult and few farmers enter into this branch of poultry farming. With the proper kind of soil, either a well-drained clay loam, sandy loam or gravel, the business of turkey raising is comparatively easy, providing the essentials to success are supplied. These essentials are, briefly, first, free range; second, well-developed, healthy, unrelated breeding stock; third, palatable foods properly and regularly fed. Every farmer should raise a flock of turkeys each year as the investment is relatively small when compared with the revenue received. There is little labour required and the market for dressed turkeys is always good at both Thanksgiving and Christmas.

ORIGIN AND HISTORY

The turkey in its wild state is distinctly an American bird. Wild turkeys were found in their natural habitat by the early European discoverers on the American continent. There are three distinct species of wild turkey. The common wild turkey (*Meleagris Americana*) had for its breeding ground the Northern and Central United States, or that part extending from Maine to Missouri and southward to Virginia and northern Texas. The Mexican turkey (*M. Mexicana*) roamed over Mexico and southern Texas, while the Central American turkey (*M. Ocellata*) inhabited Central and Southern America.

It is generally supposed that our domestic turkey originated from the common American wild turkey which was the largest of the wild family, although some writers claim that the Bronze variety came from the Mexican turkey, because of its brilliancy of colour and white markings on tail and tail coverts. It cannot be denied, however, that there has been considerable infusion of blood of the American wild turkey due to crossing of wild toms with domestic hen turkeys.

BREEDS OF TURKEYS

The three most important breeds of turkeys are the Bronze, White Holland, and Narragansett. Other breeds are, Black, Slate, and Bourbon Red. The standard weights of the breeds are as follows:—

Breed	Adult Cock	Yearling Cock	Cockerel	Hen	Pullet
	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.
Bronze.....	36	33	25	20	16
White Holland.....	28	24	20	18	14
Narragansett.....	30	25	20	18	14
Black.....	27	22	18	18	12
Slate.....	27	22	18	18	12
Bourbon Red.....	30	25	20	18	14

There is little difference in the hardness of any of the breeds and the flesh of all turkeys is very similar both in texture and flavour.

Bronze.—The Bronze is our largest breed of turkey and beyond question the most popular. The colour is brilliant bronze on neck, back and breast. The colours are much more striking in the males than in the females. The feathers in the wings, both primaries and secondaries, are barred with black and white, each bar running straight across the feather. The tail feathers are dull black, evenly barred with brown, and have a wide black and bronze band near the end of each feather which terminates with a broad, pure-white edging. The shanks and toes in young birds are dark brown, but in mature birds they are of a pinkish colour. The shanks should be clean, heavy, and of fine texture.

Bronze turkeys are great foragers, a character which they inherit from their wild ancestors, and gather much of their food from the fields over which they roam. This roaming instinct, wherever food is available, makes for cheap gains and is without doubt responsible for the popularity of the breed. The females are good layers and excellent mothers, and the young are hardy and grow rapidly from the very start. Bronze turkeys usually reach maturity at about two years of age.

White Holland.—The White Holland is no doubt a descendant of the American wild turkey, but has probably been perfected in Holland, hence the name. The colour of the plumage is pure white in all sections. The colour of the beak is light horn and that of the shanks and toes is pinkish white. The male, when about ten months old, develops a brush on his breast which is jet black in colour, and very often a black brush is found on adult females of this breed.

White Holland turkeys are perhaps the most highly domesticated of all our breeds. They do not possess the roaming instinct of the Bronze, and usually confine their rambles to the immediate vicinity of the farmyard. The females are excellent layers and good mothers; and the young hatch well, are easily raised, mature rapidly and have flesh of fine texture and excellent quality.

Narragansett.—The Narragansett turkey originated around Narragansett Bay, in Rhode Island, U.S.A. The under colour of the bird is dull black. The surface colour is steel gray, each feather ending with a black band. The colour of the primaries and secondaries is evenly barred with dull black and pure white. The tail feathers are dull black, and are marked transversely with light brown lines, each feather ending in a broad black band edged with white. The colour of the beak is light brown or horn, and the legs are of a deep salmon shade.

The Narragansetts are moderately large birds, fairly well domesticated, stand range restrictions well, and are fairly resistant to disease. The females are excellent layers, good mothers and the young grow rapidly.

Black.—The Black turkey is, as the name suggests, black in colour and slightly smaller than the White Holland.

Slate.—The Slate turkey is slate or ashy-blue in colour.

Bourbon Red.—The Bourbon Red turkey is of recent origin and was developed and brought to its present state of perfection in the Central United States. Its colour is brownish-red with white primaries, secondaries and main tail feathers. The bird is fairly large, being similar to the Narragansett in size.

MANAGEMENT

The Breeding Stock.—Turkeys intended for breeders should be selected early in the autumn before fattening for market takes place. Select well-matured birds and only those possessing good constitution and vigour. Good

quality of bone is a factor which should not be overlooked in the selection of breeding stock. It is not necessary that the largest birds be chosen, but the small ones should not be retained as breeders.

Every precaution should be taken to secure birds that are free from disease, and males unrelated to the females. Both of these facts must be kept in mind if the desired results are to be obtained.

A good start can be made in turkey raising with one male and four females. The number of females can be increased to ten or twelve, providing that the male is a good vigorous bird.

Housing.—Breeding turkeys should not be confined to houses during the winter months, but allowed to roam at will during the day. The only shelter that is required for them at night is a straw-barn or closed-in shed. They should not be kept in a draughty place, but any building that will provide shelter from wind and rain or snow is quite suitable. Never house turkeys with hens or in heated houses, as colds, which later develop into roup, are almost sure to follow.

Feeding.—During the winter months the breeding turkeys should receive only limited rations, as they have a tendency to become over-fat if well fed. Give hard grain in preference to mash or ground grains. Equal parts of oats, wheat and buckwheat are quite suitable during the cold months, but when the weather moderates in spring, the buckwheat should be discontinued.

Once daily during winter is often enough to feed. Scatter the grain in a litter (the threshing floor in the barn is a good place) and let the birds get some exercise in scratching for it. Grit and oyster shell should also be provided and placed where the turkeys can help themselves. Water should be provided once each day in which may be placed some muriatic or hydrochloric acid (about ten drops to one pint of water), which aid in warding off digestive troubles.

In the spring, the breeding turkeys should be given grain twice daily, morning and evening, and a feed of wet mash at noon made up of equal parts bran, shorts, ground oats and cornmeal properly mixed together and moistened with sour skim-milk as required. Feed only that amount which the birds will clean up readily at each feeding. Start giving the extra feed of grain early in March, and the noon mash about a week to ten days later.

Laying.—Turkeys should be fed for egg production just as soon as the spring weather comes, and laying should commence about the middle of April in Eastern Canada and somewhat sooner in Western Canada with its earlier spring opening—especially in British Columbia. Much depends on the time the weather becomes really spring-like as to the time for forcing for laying, as eggs laid too early would have to be held too long before setting. This important question must be practically left to the discretion of the attendant. To get turkeys laying at just the proper season requires experience, and beginners should be cautious in this regard.

Turkeys should be wintered where they are expected to lay in the spring. Housed during the winter months in such a place as a straw-barn, they have a very fine place to make their nests when laying commences. Turkeys are rather inclined to make their nests in concealed places, due to their wild instinct, and if some provision is not made to offset this habit, many of the eggs may be lost or destroyed by beasts of prey. About the time when wet mash is being commenced for the noon feed, suitable nests, should be made. These can very easily be constructed with boards of one inch material, eight to twelve inches wide and three feet long, making a square frame. These frames can be placed in corners near to the ground and make suitable nests for the turkey. Sufficient nests should be made to provide one for each female. In each nest place a nest-egg to attract the turkey's attention. Turkeys usually

lay about three eggs in four days, missing one day and then laying early the following morning. All eggs should be gathered as soon as laid, especially in the early spring, to avoid chilling. The number of eggs which a female turkey lays varies from fifteen to forty or even more, depending on the bird and the season. Most turkeys lay about twenty-five to thirty eggs and then become broody.

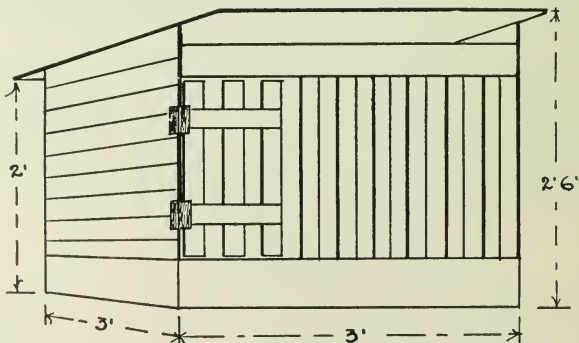
Hatching.—When the turkey remains on the nest for two days and nights, she may be considered safe to entrust with eggs. If the nest is not so made as to keep the eggs in the centre, it should be adjusted before the bird is set. If possible, try to get it near the ground, but make sure that there are about two inches of straw between the eggs and the earth. This is important only during the early spring or before the ground warms up. Later in the season the eggs will hatch well even if set on the earth. Entrust the turkey hen with from fifteen to twenty eggs depending on her size and the season of the year. Any surplus eggs should be set under ordinary hens at the same time as the turkey is set. Each hen should cover ten or eleven turkey eggs. The period of incubation is twenty-eight days.

Remove any vermin that may be on the mother turkey or on the setting hens. This should be attended to shortly after the hatching season has started. Dust the setting birds with powdered sulphur twice during the hatching season, about the fourth day and again about the fourteenth. Do not put insect powder or sulphur on the setting birds after the eighteenth day, as sulphur in the feathers of the setting birds at the time of hatching may get into the eyes of the young poults and cause trouble.

The birds that are setting should be removed from the nest once each day to feed. Provide hard grains such as oats, wheat, or barley, but very little if any, corn. Grit, shell, water and a good dust bath are also essential, and a limited supply of green feed. The setting birds may be allowed to stay off the eggs from five to twenty minutes depending on the temperature. The attendant should see that they return to the nest at the proper time lest in cold weather, the eggs get chilled.

The eggs may be tested out on the tenth and twentieth days, removing all clear eggs at the first test and all dead germs at the second test. When the eggs begin to pip, which should be on the twenty-seventh day, the setting bird should not be removed from the nest to be fed, but left alone until the twenty-ninth day to allow the young poults to become dry and harden off.

Taking off the Brood.—When the poults are all dry and ready to be taken from the nest, they should be placed in a box or coop which has been prepared and placed in a convenient place. Any poults which hatch under the ordinary hen, should be given to the mother turkey when she is removed from the



A convenient brood coop.

nest to the box in the open. A turkey can brood up to twenty-five poults quite readily. An orchard or grove is the best place, but if neither is available, any protected place will do. A suitable box should be in waiting to receive the mother turkey and her brood.

This box may be of rough lumber and is made three feet square; two feet high at back; two feet six inches high in front; without a floor, but provided with a water-tight roof. The front is made of slats placed about one inch apart. There should also be a door here. The boards at the bottom of the box (on the sides, back, and front) should be without openings for about eight inches from the base, to prevent the young poults from straying from the mother for the first few days.

The box is constructed without a floor for convenience in cleaning; moving the box daily to a clean place serves to keep it free from odour and provides a fresh place for the birds to sit each night. This is copying nature as nearly as possible, but with added protection. Later on, when the birds are allowed their freedom, the box may be left standing in a tilted position during the entire day to allow it to air thoroughly before being used the following night. The young poults should be confined to the box for the first two or three days, and if the weather is chilly, for most of the first week. They should then be given their freedom with the mother turkey for about three hours the first day, lengthening the period each following day. Care should be taken at the start to get the brood back into the box each night, and in a very short time the mother turkey will bring the brood home regularly and enter the box. She can be encouraged in this by giving her a little wheat each night on returning from her wanderings.

Feeding the Poults.—Poults should not be fed until they are at least forty-eight hours old, and even sixty hours is not too long to leave them without food. The first feed should be chick-size oyster shell scattered on a small board and sour skim-milk. This fed in the morning, is sufficient for most of one day. About four o'clock in the afternoon they should be given some hard-boiled eggs, chopped fine. The following morning, start regular feeding on hard-boiled eggs and bread-crumbs mixed together and fed three times daily until the birds are one week old, at which time the egg can be gradually discontinued and the feed consist of bread alone. When the birds are about two weeks old a little moist shorts may be added to the ration and the bread crumbs discontinued, until the feed consists of shorts alone. All changes should be made gradually that no bad effects may result. At this stage it will be found that the young poults are getting much of their food on the range and require feeding only at morning and evening.

Sour skim-milk and pure water should be given daily from the start and also grit and oyster-shell. Never overfeed or offer anything that has been mixed for a previous feeding. As the poults develop it will be found that the area over which they travel becomes greater and that the amount of food consumed at home decreases, until very little feeding is necessary. It will also be found that the birds grow and thrive better on the wide range with little hand-feeding. This is why turkeys must have free range to make economical gains.

Shooting the Red.—When the poults are about six weeks old they should get their red heads, after which time, exposure to rain does little harm, and they may roost in the open, on trees or on roosts put up for the purpose. They should be allowed to roost high enough from the ground to protect them from beasts of prey. Before the poults get their red heads, they should be sheltered from cold rain storms, as young birds with undeveloped feathers take cold very easily when wet over the back. Dew on the grass will do no harm providing the weather is warm.



Turkeys on free range.

Fattening.—Turkeys to be fattened need not be confined in pens. When properly fed they take no more exercise than is necessary for good digestion, and in confining in pens there is great danger of the birds going off their feed, and developing digestive troubles with accompanying loss of flesh; also quite frequently, the loss of a number of birds will follow. Turkeys raised in the open during the summer cannot stand close confinement during the fattening period.

When the time arrives for fattening, the young birds, should be started feeding gradually. The proper time to commence is four weeks before they are wanted for table use. Three weeks of this time goes towards conditioning the birds, and the fourth week for killing, shipping and retailing to the consumer. The feed should be composed both of mashes and whole grain. Feed mashes morning and mid-day, and the whole grain for the evening meal; and as the former are more easily digested than whole grains, the birds can assimilate larger quantities of feed when given in that form. The reason for feeding whole grain in the evening is to prevent the birds becoming very hungry before morning, which would surely happen if mash were the evening meal.

The mash is made up of equal parts ground oats, barley meal, cornmeal and wheat bran. Ground buckwheat is also good and can be used instead of ground barley if necessary. Mix the ground grains thoroughly before moistening. Mashes should always be fed in a moist condition but only sufficient water or skim-milk used to make the meal stick together and not enough to make it sticky or sloppy. Feed mashes in "V" shaped troughs making sure that they be clean and never give more than the birds will eat readily. Remove any food remaining in the trough after the birds have become satisfied. Moisten the mash about two hours before feeding to allow it to become thoroughly soaked as this materially aids digestion and prevents many digestive troubles. The same kind of mash can be used for morning and noon feeding. Whole corn is about the best grain for fattening purposes. It is high in fattening properties and very palatable. Care must be exercised in feeding corn, however, especially if the weather is not cold. Give the birds only amounts they will clean up nicely just before they go to roost. Provide fresh water and grit in abundance.



Bronze turkeys at fattening time.

Turkeys usually thrive best in the open. Even during the fattening period they should be allowed to roost outside. All they require is protection from rain or cold winds. Do not allow the birds to roost in draughty quarters, as in the autumn these lead to cold in the head, which later develops into roup. Where it is impossible to devise a scheme to have the birds roost in the open, a barn floor may be used to good advantage as these quarters can be properly aired each day.

Dressing.—Whenever possible turkeys should be sent to market dressed. Turkeys are very easily dressed because of their thin coat of feathers. Before killing, starve the birds twenty-four hours, during which time they should be confined to a pen and given all the fresh water they will drink. This aids in cleaning out the intestines and also tends to improve the flavour of the flesh. Killing is done by bleeding in the throat, the sticking being done through the mouth. Hang a can to the lower part of the beak to catch the blood. By pushing the knife up through the roof of the mouth, and giving it one turn thereby piercing the brain, plucking is made much easier. The flight wing feathers and the tail feathers may be left on; also the head and feet; and the birds left undrawn. Dressed birds should be thoroughly cooled before being packed. Packing may be done in barrels or boxes, arranging the birds firmly to prevent moving in transit.

DISEASES

While turkeys do not seem to be troubled with very many ailments, they are far from being immune to disease. The large proportion of turkey mortality in Canada is caused by three diseases. These are first, pneumonia; second, roup; third blackhead, (Entero-Hepatitis). There are other causes of mortality in turkeys, but they are of minor importance to those above named.

Pneumonia (so called).—This disease is caused by dampness and exposure and affects poults in their early life. Young turkeys are but thinly covered with down during the first few weeks or until the feathers grow, and exposure to cold rain or severe weather gives them little chance to live. The lungs in a bird are located near the backbone, lying close to the ribs, and when the young turkey get its back wet, if the weather is at all cold, inflammation of the lungs is almost sure to set in with death usually following. To cure this disease in young poults is well nigh impossible, and the only procedure is to prevent the poults from getting wet. A little care on the part of the attendant for the first few weeks can offset this disorder, by seeing that the poults are not hatched too soon, that suitable protection is afforded them in the way of coops when they are young, and that they are kept in when the morning is wet and cold. The birds on range should be brought back and put into their box before it starts to rain, but when caught in a storm, it is well to leave them alone, as driving them through the wet grass may do considerable harm.

Roup.—Colds which develop into roup are the result of infection, which may be the result of poor management. Housing turkeys in unsanitary houses, in poorly-ventilated or heated buildings, or allowing them to roost in draughty quarters, will cause colds or roup. Colds can be noticed by the exudation from the nostrils. If seen in time, the trouble may be offset by removing the cause. Allowed to continue, the cold develops into roup, and swellings on the sides of the head, large enough to obstruct the eyesight, will develop. The nostrils become clogged, the membranes of the mouth become affected, and these symptoms are followed by a very offensive odour. Treatment is not advised unless the specimen is very valuable. To effect a cure, the nostrils should be washed out and disinfected with potassium permanganate solution. Wash out the mouth with luke-warm water, disinfect with the permanganate solution and bathe the eyes so as to cleanse them thoroughly. Another remedy which gives good results is the use of Argyrol. Make a 10 per cent solution of this material and drop it into the nostrils of the bird with a medicine dropper. Give moist feed and be careful not to overfeed. A good dose of Epsom salts should be given to clean out the digestive tract. Give the salts in drinking water at the rate of one teaspoonful per bird.

Blackhead.—Blackhead (*Enterio-hepatitis*), a disease very common amongst turkeys, is responsible for nearly ninety per cent of mortality. Breeding turkeys which appear quite normal may be affected with the disease, and being chronic carriers, may transmit it to the young poults each season. The disease makes its first appearance when the birds are quite young, and many of the poults may succumb before they get their "red heads." Others may become nearly full grown before being affected.

SYMPTOMS.—The symptoms of the disease are as follows: infected birds become weary and lag behind the remainder of the flock; droppings are more fluid than normal and may be streaked with yellow; gas bubbles may appear in the droppings; the head is usually darker in colour than normal. The birds thus affected lose flesh, and are of uncertain motion when walking.

POST MORTEM FINDINGS.—The intestines and liver are usually the seat of lesions which appear quite marked and easily noticed. The intestines appear enlarged and quite hard in places, and when opened present the presence of lesions. The liver is usually spotted on the surface, the size of the spots varying from one-eighth of an inch to the size of a ten cent piece. These spots are usually yellowish in colour and very often they appear as whitish-yellow or even faded green. The intestinal tract will also show an inflamed condition. In very severe, acute or chronic cases, the bird may appear as having localized or general peritonitis.

TREATMENT.—In the light of present knowledge, a cure for this disease is not known. Various remedies have been suggested, but none of them has proved to be an absolute cure for blackhead in all its various stages. Birds showing symptoms of the disease should be isolated from the flock and confined in clean, well-ventilated quarters. There are two good reasons for this confinement: first, to prevent the infection spreading by the droppings, and second, to render treatment possible. Give the birds one teaspoonful of muriatic acid (Acid. Mur. Dil. B.P.) in a quart of drinking water. Place the acidulated water in a porcelain or glass vessel and make sure that all other drinking material is removed from the reach of the birds.

Another treatment or preventative has been suggested by Dr. Weggeforth of California, and is in part as follows: Begin treatment when the poults are two weeks old, giving two teaspoonfuls of powdered ipecac twice a week to each unit of twenty turkeys, feeding it in mash. When the birds are three months of age, this dose can be decreased to one teaspoonful every ten days.

The above suggestions and remedies may prove useful, while in other cases they may prove valueless. The safe practice to follow after a serious outbreak of this disease is to cease raising turkeys for three years, and have the ground well cultivated so as to get it thoroughly freed from the disease organisms. Then start by the purchase of turkey eggs and raise the breeding stock. When a change of blood is wanted, introduce it by the purchase of a setting of eggs and mark the poults from these eggs at hatching time. A good male bird can be selected from this source in the autumn and retained as head of the flock for the following and subsequent years.

We have never heard of the disease, commonly known as blackhead, being transmitted from one flock to another by means of the eggs, and have every reason to believe that the last-named suggestion is practically safe. Yet time and further research may prove that even this method is not beyond question.

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