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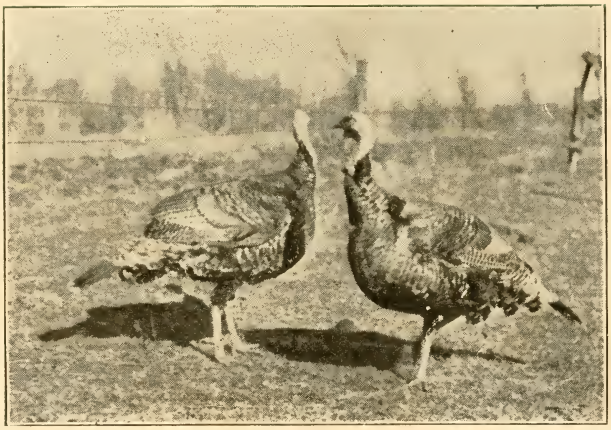
The Turkey Raiser's Guide



PUBLISHED BY THE

Banner Turkey Ranch

ALPHA ENSMINGER, PROP.

R. F. D. NO. 3 MORAN, KANS.

Price 50 Cents

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PREFACE

Dear Reader. I wish it were possible for us to meet face to face and personally discuss the many view points of the turkey business; as I am quite sure I could tell you the many details better than I have written them. This book might have been more elaborately written, but I feel that it contains all the information of vital interest to you, and if faithfully followed will reward you with success.

Turkey raising requires study and many have failed because of the lack of proper knowledge. Many newspaper articles on the subject are mere theory and are not at all reliable. Every item contained in this book is based on actual experience, gained through years of careful study and application of many methods. The business is now a very successful one with me, as a thousand marketable turkeys is the goal sought each year. With greater range many times this number might be reared by following the same general plan outlined in this book. Professional breeders will readily recognize and endorse the facts contained herein, and the inexperienced need only give my methods a trial to be convinced of their merits. The author will admit that there are many minor points upon which no two poultry men will agree. The same is true in any other business, as no two will agree on every detail. I emphasize the prevention of disease as of much greater importance than the knowledge of advertised cures. Neglect, which leads to disease, is the turkey's worst enemy. Many persons have the greatest success during the first year of their experience due to careful study and attention. But with the author of this book heavy losses were experienced during the first years of the business and many methods were tried out before satisfactory conclusions were reached. But very little has been written about turkey raising as a business, so what ever successes have been realized, the knowledge has been gained through actual independent experience. If those who have become successful could combine their knowledge, the business might soon be revolutionized, which without doubt would greatly increase the profits. I have had splendid success with turkeys for years and the constant demand for information from those who know of my success has prompted the writing of this book with a few illustrations to emphasize points of interest. I have endeavored to so plan, that there need be no unnecessary expense in caring for the flock, but the necessaries must be provided if success is expected. Any information or explanation not contained in this book will be gladly furnished on request, if within my knowledge and experience.

Yours for success,

ALPHA A. ENSMINGER,
Moran, Allen County, Kansas.

Turkeys Not Hard to Raise.

The general opinion prevails that turkeys are very difficult to raise, and if we are to judge by the experience of many we would be compelled to admit that they are. But in the great majority of cases where failure has been made it is entirely due to the unfavorable conditions under which they had to be raised. Disease is nearly always due to improper feeding. If a flock become sick a new system of feeding is advisable in which no other fowls of the barnyard should share. Turkeys are naturally very cleanly and if forced to eat with other fowls, especially in muddy weather, will very often contract diseases which ultimately may cause great losses. A trough for both water and feed should be built so high that chickens may not reach, and then covered leaving only a narrow space between, through which the turkeys may eat and drink. This plan is especially recommended where turkeys are being prepared for market.

Domestication.

Although the turkey has been under domestication for four hundred years, they may still be classed as semi-domestic. In caring for turkeys there are still many indications of the original wild nature. During the laying or the brooding season this is especially noticeable. Regardless of tame appearance at the approach of the laying season, unless carefully watched and every provision made for them, they will wander far into the fields and meadows where they will nest and rear their brood. Instinct has taught them to build their nest in healthful surroundings, away from the other flocks of the barnyard which spread diseases and harbor parasites. Even though they may choose nests that are provided for them, they will seek the fields in which to care for their young, and will remain there throughout the season. If undisturbed by animals that kill, they will return in the fall to the barnyard with their entire flocks. Turkeys are great foragers and never leave a field until its grains and grasses are exhausted. The exercise required in gathering their food should never be discouraged as it is absolutely necessary to their growth and development.

The Seven Standard Varieties.

There are seven standard varieties or turkeys grown in the United States, viz., Mammoth Bronze, Narragansett, Buff, White Holland, Black, Slate and Bourbon Red, the chief differences being color and size.

The Mammoth Bronze is the most extensively raised of all the breeds, equalling in number all the others combined. Leading poultry men who have had wide experience with the different breeds recommend the Bronze very highly. As far as habits

are concerned, the breeds differ but slightly, although the White Holland has the reputation of not wandering so far. But since there are no objectionable features of a serious nature it is often advisable for different breeders of the same locality to have the various varieties and thus avoid confusion because of flocks becoming mixed.

A Brief Description of the Bronze Turkey.

The pure bred stock and especially the males are very beautiful when parading during the breeding season. The burnished bronze of the feathers glisten in the sunlight like statutes of gold. Prominent judges of the show pens say all the colors of the rainbow may be seen in their brilliant plumage. The Bronze turkey ranks first in size and to retain the brilliant plumage. Wild blood is frequently infused, and thus the Mammoth Bronze gets its name from its size and color, which is indeed a very appropriate one.

Constitution of the Turkey.

Originally turkeys were strong, healthy, vigorous fowls. The reason they have weakened and so easily become a prey to disease, may be traced principally to these sources. Improper selection of breeding stock, inbreeding and poor care. One of the greatest proofs of the vigor of the turkey is exemplified in the fact that blackhead, one of the most fatal diseases, will, sometimes, not destroy for weeks or even months after contraction. In their wild state no doubt, the weaker ones died before maturity and thus only the hardier ones were left for breeding. And the law of nature, that the weak must yield to the strong, was proven then as it is now; that if undisturbed the stronger fowls will by sheer force destroy the weak and immature ones. Thus nature provided that only the perfect should survive and multiply. A lesson poultry men should learn if they would be successful.

Engaging in the Turkey Business.

To secure the very best results and therefore the surest financial success, turkey raising should be made a business of such proportions that it will pay to give the time and attention required to insure the outcome. Where large flocks are to be reared, a herdsman should be employed who understands every care necessary. The breeder should consider the amount of range necessary. The kinds of food needed and the prevention of diseases. And with this necessary knowledge every man or woman if willing to make the personal sacrifice required, are quite sure of success. It is well to remember the most critical period of turkey raising is at the very beginning, as the greatest losses are experienced between the time of hatching and when

they "shoot the red" or when about quail size. The subject of range is one of the most important, and where the amount is limited a satisfactory agreement may be made whereby the adjoining meadows and pasture lands from the nearby farms may be used as range. Instances are known where large flocks of turkeys have been "rented out" to help destroy grasshoppers and other pests of the fields that are so harmful to growing crops. Women are accredited with being most successful in the business because of their careful attention and enduring patience, although many young men are now being amply rewarded for their diligence along these lines and their methods are worthy of imitation.

Making a Start in the Business.

To those wishing to make a start in the turkey business, it is best to begin with a trio which is two hens and a tom. Purchases should be made in the fall that the proper amount of food may be given, and that sufficient time may be had to determine the health and vigor of the breeding stock, as the success or failure hinges almost entirely upon this one point. It is also important that the turkeys become accustomed to their surroundings before the breeding and laying season. Some are able to make a success with eggs by using the chicken hen as mothers, but this plan can not always be recommended as the faithful turkey hen is almost indispensible when caring for the young poults.

The Four Greatest Hindrances.

The turkey industry has four main hindrances, viz., Animal and human thieves, parasites and disease. Theft may be guarded against my high roosts, and well lighted grounds. Turkey bells will usually frighten away the coyote, but have no effect upon the dog which is one of the turkeys' worst enemies, coming miles to molest and destroy. After this habit is once formed they never forget it and will jump high fences to reach them and kill dozens at a time. With proper care, disease is perhaps little to be feared. Parasites may be controlled and guarded against by the use of Persian Insect Powder, which is very effective. Other brands may be used and may be just as effective. Any insect powder should be tested before using. Insect life has no lungs but secures the oxygen necessary to life through the pores of the body. By catching insects and covering the body, if the powder is genuine, suffocation will result immediately. Nature's method of eradicating vermin is by the fowls wallowing in the dust, but damp, wet weather often prevents this, so the use of insect powder is often very necessary.

Selection and Breeding

Separate the Breeding and Market Stock.

Turkeys that are to be used for breeding purposes should be separated from those to be fattened before the feeding begins. The very best individuals should be chosen, among the hens. The males for the coming season should be selected from flocks that will insure against inbreeding. In case the breeding stock becomes over fat their weight may be gradually reduced by giving less amounts of food until a healthy condition has been reached and should be kept in normal flesh until the laying season begins; during which time there is not much danger of becoming too fat. The egg contains so much fat that some corn should be fed during the laying season.

The Author and His Breeding Flock (The Whites an Experiment)

Selection of Stock.

Regardless of the choice of breeds, the careful selection of the breeding stock is of greatest importance; and the selection of vigorous, healthy, well-matured stock should be the first consideration in the business of rearing the standard or pure bred types. The markings are another characteristic to be observed. But since ninety per cent of all turkeys are marketed for food, health and vigor should never be sacrificed for fine feathers. Many turkey raisers have made this serious mistake and as a result have lowered the vitality of their flock to such a degree that they readily become a prey to fatal diseases. If

the same skill had been exercised by turkey raisers in the selection of their breeding stock, and the attention given to their feed and care, the same wonderful improvement could no doubt be observed in their condition as is so noticeable among the breeders of other fowls and in the animal kingdom, when compared with their wild state.

Turkeys are the only living thing that have not improved with domestication, and today they have not the health nor vigor so characteristic in their wild state four hundred years ago. On the other hand the chicken hen that probably layed no more than a dozen eggs during a season in her wild state has, through domestication, been bred to lay as many as three hundred per year.

Recently, however, turkey raisers have been studying the business from a more scientific standpoint and as a result they may expect the now inbred, overfed, misunderstood, semi-domestic turkey to become so much improved that they will share in the honor other poultry now receives. And the practice of infusing wild blood into domestic flocks to gain vitality may soon be done away with.

Select Good Males.

Taking into consideration the fact that the future flocks are influenced one-half by the males, great care should be exercised in their selection. Only vigorous, healthy, well-developed birds should be chosen, and should positively not be related to the flock they head.

A male should be one year old or older. The greatest objection to older ones being that they commonly become too heavy for breeding purposes. When using the older and heavier ones the toe nails should be rounded off by filing, and spur stalls should be made of heavy canvas and fastened in place by tying about the leg with wire or string. This is very important and should not be neglected.

The male should be carefully watched during the mating season. Notice if he struts about and associates freely with the hens. If these conditions do not exist he is useless as a breeder and should be disposed of and another secured in his place.

A well selected male may be mated to a flock of twelve females, and experience has taught the writer that splendid results may be obtained by mating one male with as many as twenty-five hens. It is always a good plan, however, to be provided with more than one as a loss during the mating season is hard to replace. Occasionally a hen will not mate with one male, but when placed with another this difficulty is overcome. If using two males alternately they may be changed every other day but equally as good results may be obtained by changing

but twice a week. The one not in use should be penned away from the view of the flock. There are exceptions where males do not molest each other, and in such cases they may both be given their freedom.

Breeds are often crossed in order to gain the advantage of earlier maturity, retard the wandering nature, mating the weak points of one breed with the corresponding strong points of another. The offspring of such breeding should always be marketed for food and should by no means be used for breeding purposes, as the weak points that were overcome with the first flock will develop in their offspring. This principle of heredity has often been demonstrated by livestock breeding tests.

Avoid Too Fat Breeding Stock.

The breeding stock is more often found to be too fat than too thin. Turkeys, as a rule, are small eaters, specially when forced to hunt for their food, but if grain in quantities may be had they often become over fat for breeding purposes. If too fat they usually stand around in a sleepy condition and take but little exercise. It is nature's plan that turkeys find their feed in small quantities, and it is well to scatter their food over wide areas that the needed exercise which is so necessary to vitality be had regularly. It is always well to separate the market stock from the breeding stock as the feeding should be very different. The breeding stock should be kept normal through the winter by giving a variety of food that copies nature's plan as near as possible, and just enough should be given to keep in healthy flesh thus avoiding the danger of too much fat. Examine the birds occasionally for lice, fat, and feather development.

Never Inbreed.

This one mistake has been more disastrous than all other mistakes combined in the care of turkeys, and every prominent breeder will agree on this point. Have the very best breeding stock obtainable, and have the males and females unrelated. Get away from the practice of keeping the same stock year after year, or changing back and forth with neighbors in the same locality, as these practices can not do other than debilitate your flock. It is very much better to send many miles for breeding stock than take this risk of inbreeding, as it is more detrimental with turkeys than with any other fowl.

Effects of Inbreeding.

One can not dwell too much on the subject of inbreeding as it is without doubt the most important subject to be considered when rearing turkeys. This fatal mistake is not discovered until the health and vigor of many flocks have deteri-

orated to a marked degree. In many localities, failure results from the practice of exchanging stock in the same neighborhood, where all the different flocks have originated from the same stock and the relationship is very close. And instead of success from much time and labor expended, many losses and diseases result. New blood must be introduced regularly if good results are to follow. It would be just as reasonable to expect to raise a crop of corn or a field of wheat without any care in the selection of seeds.

Mating and Laying

The Mating Season.

The mating season begins in February and continues through the laying season. Since one fecundation renders fertile an entire clutch of eggs if properly completed, no unusual disturbances should occur. But if copulation is incomplete, another opportunity will be given and will so continue until the entire clutch is made fertile. At such times and under such conditions the absolute need of strong vigorous males is emphasized, if a strong germed clutch of eggs is to be expected.

The Laying Season.

The laying season usually begins near the middle of March in central United States, but is greatly influenced by weather conditions. Nature has wisely provided that no eggs be lost by unseasonable weather. It is said the wild turkey will lay twenty-five or thirty eggs before wanting to set. They are smaller and less flecked than eggs of the domesticated turkey. The domesticated turkey eggs vary in size, shape and number according to the size and age of the hen. The younger hens laying the greatest number, but the older hen's eggs are much larger.

Age of Laying Hens.

When there is an opportunity for choice between the older or younger hens, it is always wise to select the former as they are more vigorous, produce larger and stronger eggs and are more successful with the young poults. Any age between two years and five may be selected as breeding stock, if well developed and healthy. Care must be taken in the feeding of the older hens as they may become too fat. A less amount of food is required after complete development. The younger hens require more feed while they are yet growing.

Gathering the Eggs.

The eggs should be gathered daily to avoid losses from weather conditions or destruction by animals or crows. A nest egg should replace the turkey egg when removed from the nest, and precaution taken that no egg comes in contact with perspiring hands, grease, salt or chemicals of any kind. The eggs should be marked with the date of laying, and handled to avoid jarring as much as possible. In order to follow the above directions, nests must be provided and securely located.

The Number of Eggs in a Laying.

The number of eggs each hen will lay depends very much on their care. With proper food and exercise and allowing no accumulation of eggs in the nest, between twenty and twenty-five eggs may be expected the first laying, and usually fifteen or twenty the second. If the laying period should continue

The Self-Sustaining Foragers in a Proper Ranging Order

longer, weather conditions, especially heat, is very detrimental to the young poults and the chigger, which at this season of the year is so abundant, is almost as destructive as lice. It is also well that the hatches be as near the same time as possible as equality in age and size, not only lessens the amount of care required, but insures against losses from the strong overcoming the weak as would be seen with very early hatches and those hatched late.

The Fertility of the Egg.

The question concerning fertility of eggs is often asked, and may be answered by saying that every egg of a clutch is equally fertile whether there are 15 or 25, save perhaps the first or last of a clutch, which is free from specks with rather soft shells which are easily broken, or they may be undeveloped.

Such eggs should be set together and not with the other eggs to avoid the trouble caused by breaking.

The turkey hen will usually lay two days and miss one until near the end of the laying season, when they lay every day and will remain on the nest a much longer period. The last eggs are usually smaller than those which are laid earlier.

Nests

Hiding Out Nests.

Although the turkey has been under domestication four hundred years, the wild nature still asserts itself at the beginning of the laying season and if allowed to follow natural inclinations will wander far from home at times. Many breeders have experienced splendid results from allowing the hen to locate and make her own nest, but the great danger of disturbance renders this plan not always advisable.

Preparing and Locating Nests.

During the last of February and first of March nests should be made and placed in protected places, in the path of the every-day range of the flock, at least ten days before the laying season begins. Nothing better can be obtained than barrels free from salt, layed on the side and securely fastened and straw or leaves placed within for nest material. If placed away from other fowls and protected from the strong winds the same nests may be used for hatching. Nests may be grouped or placed farther apart. The hens may be attracted to their location by scattering feed near them. And after learning the location the greater per cent will voluntarily choose a nest that proves satisfactory.

Barrels Make the Best Nests.

There can be nothing obtained more suitable or safe for nests than apple or confectionary barrels. They may be purchased for five or ten cents each and will last through an entire season of laying and hatching. The depth of the barrel affords a degree of seclusion the turkey enjoys, and protects the eggs from the sun, rain and wind. New barrels should be procured each year if possible, so they may be free from vermin and disease, which is always an item of great importance. A hole through the barrel beneath the nest allows any water to escape which might otherwise accumulate and destroy the eggs.

Properly Built Nests.

It is very important that a proper nest should be built, when he consider the value and cost of the eggs at setting time. Also during the incubating period, the success of the hatch de-

pends entirely upon the care of the hen and her care of the eggs. Desirable nests may be made of the following material in the following way. The nest should be constructed of coarse material such as weeds or coarse hay, and be made the desired shape with the outer edge sufficiently high to keep the eggs near the center of the nest is all that is necessary. The nesting material should then be pounded with a brick so as to thoroughly settle it. The nest is then ready to be lined with either fine chopped hay, chaff or leaves. This requires about a gallon to each nest. Such fine hay is often found in the mangers of barns. Beware of vermin in using this. A nest when made by this method will provide a proper amount of moisture and air, also prevent the breaking of eggs by ingress and egress of the hen during the laying or hatching period. Always be sure the hen is sitting good before placing valuable eggs under her as the chances for success or failure are often decided here. Hens that are used for the purpose of incubating eggs should be set a day or two prior to placing the turkey eggs in the nest. By so doing many broken eggs are avoided and better hatches obtained. Setting hens should not be disturbed during the first three days when the eggs are beginning to incubate.

Care of Eggs and Hatching

Properly Packed Eggs.

Those engaged in the sale of turkey eggs should use every precaution in properly packing and shipping that every egg may reach its destination in good condition. A small oak basket with a stationary handle is best as this will prevent any weight from above. The basket should be heavily lined throughout with excelsior. Each egg should be wrapped separately first with paper then with a covering of excelsior. Place firmly in the basket, covering with a coating of excelsior, using enough to prevent jarring. A paste board covering may then be used, and over all a piece of white muslin may be stretched which will prevent any moving about. The words, "These Eggs for Hatching," should be plainly written on the muslin. Also the name and address of the purchaser so there may be no delay in sending. When packed and addressed in this way eggs may be sent very great distances without danger of injury. Notice should be sent in advance of the shipments that purchasers might know when they may expect their consignment. It is not necessary for eggs to rest but a few hours after shipment; they are then ready for immediate incubation. If during transit a shell should become cracked and the membrane remain uninjured, a stamp or strip of paper may be pasted over the broken part of the shell and it will then incubate properly. A turkey egg should not be judged by the flecks as they may be washed off quite readily when the eggs are fresh. The fertility of the eggs may be judged after a period of incubation. An infertile egg will have the same general appearance after incubation as a fresh egg, and will not rot during the process.

Care of the Eggs.

Turkey eggs may be kept as long as two weeks without injurious effects, if carefully packed in bran, the small end turned downward and placed in a closed box so that they may be turned every day or two by resting the box on the different sides. Turn carefully allowing no sudden jar and keep in an even temperature. Eggs not set until April prevent losses from the early spring rains, also from the low temperatures that often occurs during this month. The insect life so necessary to the growth of young turkeys is never abundant until after the cold winds and rains of the early springtime have passed.

The Incubation of Eggs.

An incubator or chicken hen will hatch the eggs equally as well as a turkey hen. If placed under a chicken hen, eggs will hatch one day earlier as the temperature of the chicken hen

ranges from one-half to a degree higher than the turkey hen during incubation. Fresh turkey eggs if set under a chicken hen will hatch in 27 days. If given a turkey hen the time required will be 28 days, and eggs two weeks old or older requires 29 days. It is always the better plan for the little poults to be cared for by the turkey hen as they understand their every need.

Number of Eggs for a Setting.

An average sized chicken hen will be able to properly care for at least ten eggs if her nest is well located and carefully arranged. Turkey eggs are seldom infertile and often every egg of a setting will hatch.

An average sized turkey hen will safely cover 16 or 18 eggs. Care should be taken that eggs are not crowded, as they often become broken under such a condition. If eggs are broken all others should be taken from the nest and thoroughly washed. It is not uncommon for a turkey hen to remain for two long a period upon her nest; sometimes not leaving it oftener than four or five times during the four weeks unless forced to do so. In such cases they should be gently removed, fed and watered and returned to the eggs before the eggs become cold.

The Hatching Shed.

When eggs are to be incubated in large numbers with either chicken or turkey hens a hatching shed should be provided and should be located away from all disturbances of the barnyard and should be absolutely free from vermin. A shed 16 by 20 feet and high enough in which to stand is sufficiently large to accommodate 35 turkey hens covering 600 eggs. This shed should have a water proof covering and later in the season may be used as a storm shed. The nests should be made within barrels, laid side by side around the shed, the open end of the barrel being toward the center. The barrel should be securely fastened so that there may be no jarring during incubation. Nest eggs may be used until the hen becomes accustomed to her nest, after which time they may be given the eggs for hatching. It is well to close the nests that feeding and watering may be done at the discretion of the owner. Only a few should be cared for at a time. They will soon be able to return to their own nests without directions. Hens should be fed every other day by placing the food and water in the center of the shed. If the hens do not show any inclination to leave their nest voluntarily, they may be gently lifted from their nests and fed and watered. It is well to remain in the shed at this time and examine for broken or dirty eggs, and if any are found, all the others should be washed in blood warm water and the nest made clean and fresh. Provisions should always be made before hand for such emergencies to avoid unnecessary delay. Never

allow the hen to leave the nest while hatching if it can be avoided. Remove the little poults and shells during hatching unless the hen should become frightened. Moistened shorts is the best food for the setting hen, during hatching. Yards may be placed about the shed in which to confine the young until they may safely be given range.

Incubators and Brooders.

Incubators may be successfully used for hatching purposes, but it requires the care of the mother turkey to successfully rear the flock, and for this reason incubators are seldom used. Brooders are not a success since exercise is so necessary to the growth and well-being of a young turkey. However they may be very useful should a flock become suddenly chilled.

The Second Brood.

It often happens that turkey hens give up their first flock, lay, hatch and rear a second brood. This brood seldom gets large enough for winter roasts, but may be marketed as broilers. The hen seldom leaves her brood until they have become large enough to care for themselves or being cared for by another hen.

In deserting a brood the hen may fly or run away, sneak off or sit perfectly still while her young are following or calling her. At such a time it is very interesting to study their nature, as their sudden disappearance is often mystifying. A count may be made one moment and every turkey there, while in only a few moments several may have entirely disappeared and without any notice. A turkey hen may lay a number of eggs without leaving her flock, especially if her nest is discovered and eggs removed.

Conquering the Egg Thief.

Some animals of the fields and fowls of the air are egg thieves and their capture is almost impossible. However the following plan of control has proven very successful. Make a small hole through the shell of an egg large enough that a few grains of strychnine may be put within the egg; cover the opening with a piece of paper and place where the thief will be sure to get it. Great care must be exercised in using this plan that no domestic fowl or animal be destroyed by it.

Feeding and Care of Poults

Care of the Young.

Many things must be seriously considered in caring for the young poults. In order of importance the subject of food comes first. Nourishing food given regularly, protection from dampness, pure fresh water, ample shade and shelters that will protect from hail, rain, wind and dust storms. Weather conditions should govern the amount of food to be given, and a greater amount should be given following a storm. Sheds should always be provided to protect against storms.

Many are successful when choosing their breeding stock, and with the incubation of eggs, who utterly fail in the care of the young. Different climate and different surroundings bring about such different results that no definite rules can be made that will apply in all cases. Success is more sure if the season be dry, but with proper protection and careful feeding, turkeys may be reared successfully during a rainy season. Young poults have many enemies, among wild and domestic animals, crows, hawks and parasites, but the greatest losses are sustained through improper feeding. If you were to follow the advice of twenty breeders, by comparison you would find a wide difference of opinion as no two use the same methods, yet they would tell you to follow nature's plan as near as possible. Cooked food should never be given young turkeys. They may survive for a time but bad results will surely follow sooner or later. Study food conditions that made possible the flocks of thousands before man began the various experiments; that have so demoralized original conditions. One food that can be safely recommended that has stood the test is as folows: With three eggs well beaten mix one pint of rolled oats. This mixture to be given for several feeds. Then the food should be in the proportion of two eggs to a pint of the oats. No cereal is more nutritious or more suitable for turks than hulled oats. Range and weather conditions should govern the amount of food given, but it is always safe to give just a little less than they might consume. Never so much that any may be left to sour or otherwise become unfit for food. Cured and chopped onion may be added occasionally to give variety. This is all the food young poults need for their growth and development. And if not overfed, will take the needed exercise which is so necessary to their vitality.

Teaching the Poults to Eat.

Instinct has taught the poult to look to nature for its food, which it finds in insects, seeds and blades of grass. So the young turkey must be taught to eat from off the ground, which

usually requires three or four days. Scatter the food upon a clean open plat so their attention may be easily attracted or the food may be placed on clean boards. If only a few are being cared for they may be fed from the hand, but this does not in sure equal amounts for all so it isn't advisable only when in close confinement.

The Poult at Quail Size.

The poults do not make much growth during the first days, and it is during this period the weaker ones may die if special care is not given. After the poult has reached the size of the quail, the most dangerous period from losses has been passed. About this time the feathers begin to grow rapidly covering the back and sides and thus protecting the body from dampness and cold. Immediately after this period they become more vigorous and the beads begin to form and grow about the neck, sometimes termed "shooting the red." The little turk is becoming quite observant, and will see the birds of the air, notice animals about them and sudden noises attract them. At this stage they are beginning to try to gobble and are widening their range. The food can now be changed to a variety of good, sound grains, such as hulled, clipped or scalded oats, wheat and corn that has been cracked. If the flock were all of one age or size this changing condition would be very noticeable.

Cause of Bowel Trouble.

Too much feed or cold, damp weather may cause bowel trouble, but quite often this condition is brought about by greasy foods or spoiled eggs. Sand or grit should be kept constantly before the flock, but should not be mixed with the food. Very rich grain such as millet seed should be fed very sparingly or bowel trouble may be the result.

Coops.

No coop should be used unless yards or lots cannot be provided in which to confine the mother turkey and her brood or time can not be taken to go to the fields where they range for the extra feed which they require.

A coop which may be used if necessary is made of lath, 30 inches high, and the length and width to measure each way the length of a lath and so spaced as to allow the poults to pass out and in at will. This coop should be placed over the nest previous to the hatching period so the hen will become so accustomed to it that she will not try to gain her freedom immediately following or before the hatch is completed. The top of this coop should be water proof, and the coop moved every day to a fresh grass covered spot. If coops are used they should be thoroughly disinfected each season at least a week before using.

If great flocks are reared each year the yarding system explained below is the one most used and the only system to be recommended.

Yards or Coops?

Experience has proven that yards are far superior to coops in caring for young poults. Coops require so much attention to prevent disease. They must be disinfected and moved regularly and if a large flock is being raised the extra work required would become a burden. A yard that will be sufficient for several hundred may be made to enclose the hatching shed and should be made about 5 rods square. This will require a 20-rod spool of fence wire and should be 5 feet high. If no natural shade may be had this shed enclosed may serve the purpose of shading the turkeys during the hot season or a shelter from destructive storms. No extra care or exertion is required in driving the hen and her brood into the shed if the same hens are given the flocks that hatched the eggs within the shed.

The Necessity of a Shade.

As the turkey is a bird of the forest a shade is very necessary for their protection. If no natural shade is provided an artificial shade should be substituted and if properly arranged will prove sufficient. The midday sun if extreme will cause sunstroke, which of course is very injurious. A thermometer placed upon the ground during the heated season often registers 112 degrees F. and the temperature of the turkey is less than 100 degrees, so we plainly see what disastrous results may follow the lack of shade. A poult overcome by heat droops its wings and slowly moves about very closely imitating a poult infected with vermin.

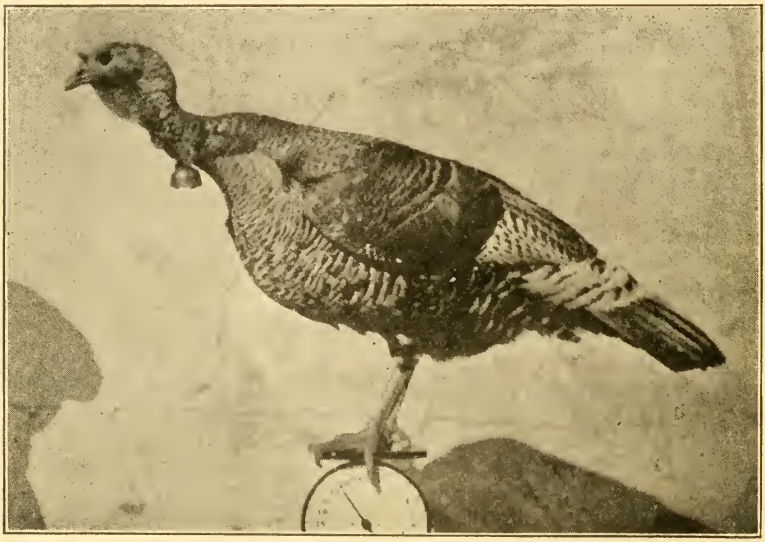
Pulling Wing Feathers.

Prominent turkey breeders advocate removing the wing feathers, also the "horn," that the vitality of the poult may be increased. The practice is rather a cruel one and is not at all necessary. If raw egg which contains the necessary nourishment be given in sufficient quantity at this particular time, the vitality will not decrease.

Pepper a Food and Salt a Poison.

Only few turkey breeders realize the grave danger occasioned by feeding salt. Although it may not prove fatal in all cases. it is very much better that none be allowed about the food. The quail, canary and turkey are alike in this respect and if salt be added to the food the result is almost sure to be destructive. Pepper when fed on damp chilly mornings in moderate

amounts mixed with the food is quite stimulating. When young poults show signs of bowel trouble it may be used very effectively at that time. Most of the plant food, as sour dock, pepper grass, wild onion, and dandelion leaves have a distinct peppery flavor and as these plants are so eagerly sought for by the flocks, we may readily understand that their nature demands such a food.



Miss Belle—Note Her Weight and Proper Bell Adjustment

Use of the Bell.

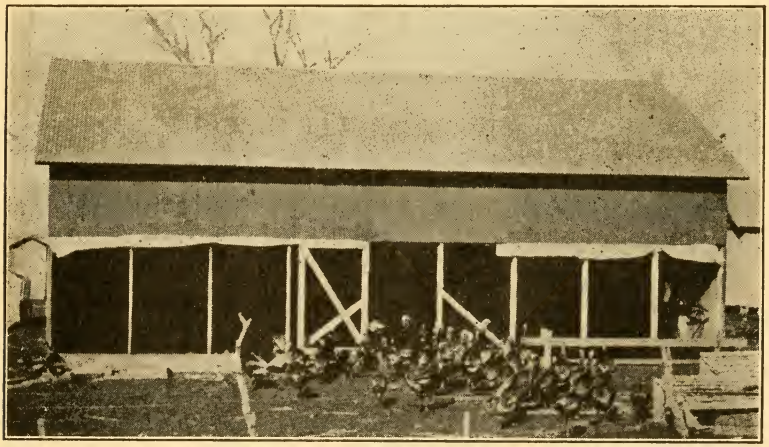
The turkey bell may be used at all times but is less needed when the flock has a herder. But every flock without an attend ant should have the bells as they are a great protection from many of the common enemies.

Breeders who have used bells many years report but few losses from ordinary causes. Dogs, however are not disturbed by bells and so they will prove no protection from them. Turkeys may safely roost among the stock and be unmolested if the little bells may be heard. No thief would be so bold as to attempt to carry away a single prize, as the least disturbance from without would cause the ringing of many bells as turkeys are easily disturbed and as suggested if a number are used, they could be heard a considerable distance at such a time. The careful adjustment of the bell is quite necessary to avoid being lost. Strap the bell about the neck so that it may not be

slipped over the head, but not so tight the fowl will become choked. After the proper adjustment is made the buckle should be securely tied so that it may not be picked or pulled loose. The bells weigh but three ounces and the turkeys very soon become accustomed to them. They should be in use before the laying season begins to avoid breaking eggs while becoming familiar with them. Hens will readily give up the habit of setting if forced to wear a bell and young poults are more easily kept together if the mother wears a bell as they readily become accustomed to its sound. Bells may be purchased of any hardware store, or a mail order house for $1.00 per dozen and only those with hanging tappers should be used, as those encased within an oval ball can be heard but a very short distance and are of very little value.

Finding the Lost Turkeys.

It is not unusual for a mother turkey and the flock to escape from the herder and wander away when much time and energy may be required before they may again be located, unless they have had some particular training. If the habit of talking to a flock while feeding has been followed, one may always expect a ready response from both the mother and her brood, if they are within hearing distance. They may also be trained to come at the call of the bell if they are early taught the habit.



A Successful Storm Shed for Winter and Summer

Before and During Storm Periods.

An approaching storm should be the signal for feeding all young turkeys regardless of how they may be sheltered during the storm. Usually poults are left to be cared for by the mother turkey and if either she or her young are hungry they

may continue to wander about in search of food and from the exposure many losses are experienced. Be sure the mother turkey is as regularly fed as her young as the same serious results will follow if she is neglected. Should the storm continue until nightfall it is well to make provision for feeding, as nature requires a full crop at nights. Protect young poults from drizzling rains and wet grasses as both are very destructive. Turkeys will often follow the streams after heavy rains in search of insects and may become lost if not carefully watched.

Protection From Dew.

When turkey raising is carried on extensively, coops or closed buildings are almost impossible, and will be a loss of time and material to construct them; and the yarding system is all that is necessary for their protection from dew. Always feed young turkeys early in the morning and then they will not care to wander about until the chill of the morning air is gone and the dew has evaporated. The effect of dampness is not so destructive as many are inclined to believe. The sheds that are used during severe storms may be used to protect from dew or damp weather.

Make War on Parasites.

Disease is no more destructive to little poults than to become a prey to parasites. All poultry raisers will readily agree with this statement. Poultry men should make every effort to destroy all parasitic life before the breeding and laying season begins. Carefully examine each one of the breeding stock about the head, body and wings and thoroughly treat each one if any lice should be found. Head lice differ quite materially from body and wing lice and should be destroyed by a different method. If about the head, cream, lard or sweet oil may be used effectively, while lice about the body may be exterminated by the use of insect powder. It is well to remember vermin may be found about the eyes, mouth and vent in search of moisture and may be destroyed about these places by the use of a small amount of grease or blue ointment. After the breeding stock has been freed of vermin, care should be taken that they do not roost among the other fowls at any time during the laying season, as a guard against the nest becoming infested and thus lessen the danger of the young poults being infested at the hatching time. Setting hens should never be dusted with powder as they may not properly care for their eggs and there is also the possibility of destroying the germ of the egg either during the period of incubation or at the hatching time. In examining poults for vermin look first about the long feathers of the wings as they may often be found there when not found elsewhere about the body. Head lice are hard to discover as

they are so near the color of the feathers. Persian insect powder is one of the leading brands and one that is highly recommended as it contains neither lime or sulphur, both of which are very detrimental to growing fowls.

The Male's Future Possibilities.

Many turkey breeders have reported excellent success from the toms' ability in brooding young poults. They have several advantages not common with the hen. They are much larger and can safely hover many more. They afford greater protection and will never leave a poult behind. Their call can be heard for a much greater distance and if brooding young poults will never fight the young or attempt to destroy the eggs. It is necessary many times at this season of the year to confine the males in pens that they may not be so destructive. It is a common belief that the hens first learned to conceal their nests through fear of the males. Toms may be trained to set and hatch and care for the young in the ordinary manner. The nest should be darkened and should have within it several china nest eggs and if placed in a somewhat warmer atmosphere will altogether hasten broodiness. After this is accomplished a few eggs may be given him that will incubate in a few days. Then he is ready to care for a large flock.

Equal Feeding.

Often the mistake is made when approaching a flock of little poults that the feeder will feed the first ones that meet him and the little weak ones that are not so strong and need the feed most seldom get their share. The successful feeder is an equal feeder, and after the flock has been equally fed, beware in leaving them that some of them do not bcome lost in following after the caretaker.

"Turkey Raising Pays"

Range and Flock Control

Range Very Important.

Turkey raisers or those contemplating the business should first consider the subject of range on the basis of one turkey per acre. Having sufficient range they may be yarded successfully for short periods of time, provided they are furnished proper food and have sufficient exercise. Much yarding requires skill to keep the flock healthy, and the profits are usually greatly reduced under such conditions. The greatest profit is realized when abundant range is provided over which they may roam at will and gather grains, insects and other food to their own liking. Under such conditions the cost of keeping is practically reduced to a minimum and the exercise required is as necessary as the food they obtain.

What Constitutes a Range.

The farm, ranch, in fact any part of the premises over which they may be allowed to wander may be classed as range. During the early season when the poults are young a pasture of short grass affords the best accommodations, and they should be kept in such a place until they acquire age and vitality. How this may easily be done is later explained. An acre is sufficient range for as many as fifteen poults while young, and if proper food is provided, will be ample space until the time when the young turks begin to be restless and wander away from their pasture during the day. By this time the small grain fields are usually ready to harvest and they are now large enough to go among the stubble and pick up the shattered seeds without danger of becoming lost or being injured by the moisture from the vegetation. The stubble fields in connection with the short grass pasture usually provide sufficient food until the grass and weed seeds begin to ripen in the fields of larger grains, and from this time on they grow very rapidly as they may wander unrestrained for the foods that insure perfect health and vigorous development for any turkey.

Herding Turkeys.

Probably but few realize turkeys can be successfully herded and driven the same as cattle or sheep. Some may also think it is a great task, but the reverse is true when a grower wants to engage in turkey raising extensively and has not the advantages of fenced-in premises. By herding the flock they can be kept on premises at the herdsman's will and thus avoid their falling victims to their many enemies during the absence of the attendant. Herding also keeps them from tresspassing on for-

bidden ground or places where they may do damage. A few of the many advantages gained by herding are: Keeping from stagnant water, protection from predatory birds and animal enemies, keeping them from getting separated and driving them to shelter before storms. There are many advantages gained by hiring a herdsman employed where there are flocks varying in numbers from 200 up. Any boy can do this work providing he will make a study of the flock, for in herding the flock is entirely under the herdsman's care as to their wants such as water, rest, range and shade. When the herded flock shows a tendency for any of these privileges it should be provided, with the exception of feed which rests wholly with the attendant and should be given according to conditions. The herded flock should be fed each morning and evening and oftener during stormy period. My herdsmen talk to the poults which I advocate as nothing is more important in attending to large flocks. Turkeys will readily put all their confidence in a good herdsman, which he should secure to properly manage the flock at exciting times which occasionally occur. At such times the tone of his voice will immediately still them.

Pointers for the Herdsmen.

Herding turkeys does not require the services of a horse, although one may be used successfully. No very great effort is required in training and their habits soon become fixed. Their search for food begins early in the morning and their appetites are usually satisfied before the extreme heat of the day, which in this climate is two or three hours at noon-time. During this time the entire flock should be in the shade of the trees or in a prepared shade, after which time they will again go to the fields and remain until roosting time. Young poults often show an inclination to roost upon twigs of trees or little perches, but this should not be allowed until the breast bone has hardened so there will be no deformity. Until the caruncles form about the head, or until about ten weeks old, there can be no better protection than under the spread of the mother's wing.

Turkeys may be herded at any age or in large or small flocks. However not more than 500 should be given to one attendant. When 1000 or more are raised they should be divided according to size as there are usually two very distinct sizes. Each flock should have a separate herdsman, whose chief duty is guarding the hens as the young will always return to the mother although they may at times wander far away. Changing the range each day is quite necessary that there may be no scarcity of insect life.

Insect Pests as a Turkey Food.

Turkeys will eat the chinch bugs from corn, worms from cabbage, grasshoppers, tomato worms, in fact any crop-destroy-

ing pest, and may be herded in the fields for this purpose with profitable results. But when being used for this purpose no feed should be given them before entering the fields. Turkeys as pest destroyers are worth more to the farmer than the market value received for them when being sold, and this important factor is fast being recognized by both agriculturist and horticulturist.

Controlling the Flock by Talking.

The time to make talking effective with turkeys is when giving them feed. If kindly treated they will readily respond to the voice of those in charge, after becoming accustomed to being called. And if frightened or molested in any way will run or fly to a herder for his protection, or may sit under his umbrella as he watches their wanderings. The ability to control in this way is never more appreciated than when a large flock of hundreds become frightened and begin to fly and the noise of many wings like that of distant thunder can be heard in every direction. Or in the night time when the passerby will frighten them or other disturbing conditions arise, then if this art is successfully understood and practiced, serious injuries and possibly losses may be avoided.

Feeding Turkeys

Study the Turkey's Nature.

To get the best results one must study the turkey's nature in its wild state and follow as nearly as possible nature's plan in feeding and breeding, that healthy, vigorous stock may be the result. Berries, insects, seeds and grass, gathered here and there in small quantities constituted nature's food. So with young poults, food should be given often and in small amounts. Sloppy food should never be given, but feeds may be moistened, slightly, with sweet milk, egg or water. If raising large flock

Showing How Easily a Bran Hopper Is Made

which require great quantities, meat scraps may be used as a substitute for eggs. Meat scraps should always be used with other food and nothing is better than rolled or steel cut oats moistened with sweet milk or water. Chopped onion is also a fine food for turkeys.

Clean, Pure Food a Requirement.

There are no fowls whose habits are more cleanly than the turkey, and no food is ever eaten that is not pure and good, unless neglect forces them to it, because of hunger that cannot be satisfied otherwise. If left to their own inclination turkeys

may always be found in the open fields where pure fresh water abound, and where berries, grass and seeds are plentiful. They differ from our other domestic fowls, in that they abhor dead carcasses, and will not as a rule partake of any decaying matter. Their roosting place is the tree tops where fresh air is continuous. Allow no condition to change these well-defined plans of nature, for if it is done loss of vitality and disease will surely follow.

Bran as a Food.

Bran is to poultry what grass is to cattle or bread is to man. So necessary is it to the health of fowls and the production of eggs that any poultry man may well afford to pay a fancy price for it than to try to get along without it. It aids in digestion, keeps fowls from becoming too fat, promotes the growth of feathers and is especially fine with which to mix medicines as preventives of diseases and as stimulants to healthy development, such as copperas, sulphur, charcoal, and sulphide of soda. Such ingredients when mixed with bran are not so easily detected as when mixed with water which often prevents fowls from drinking sufficient.

The bran mash should be fed from a dry bran hopper and equally as good results will be obtained as when wet mashes are fed, which often causes roup. The hoppers should be self-feeding and the fowls should have free access to them at all times. When the bran is dry the fowls are unable to eat only a small amount at a time and will drink more water which is very necessary.

The health and growth of fowls demand a variety of food. If grain alone is fed, fowls will gather and swallow straws which will cause the crop to become bound. The egg-eating habit may be formed from lack of variety of food, or they may form the habit of picking each other's combs, which may prove very injurious. There are many dry mash formulas which afford the necessary variety. The following is especially recommended: 100 pounds of bran, 25 pounds of alfalfa meal (in the dust), 15 pounds granulated meat meal and 5 pounds granulated charcoal. This mixture should be thoroughly blended before being fed from the dry bran hopper. Alfalfa meal is a fine substitute for green food and may be used even in the summer months. The bran and meat meal should be continually before the fowls the entire feeding season. The meat meal should be the brand especially prepared for poultry which is retailed by the packing companies at about three cents per pound, and should never be fed stronger than one part meat meal to five parts bran. If fed in greater quantities "limber-neck" may be the result, or the eggs may be made unfit for food. The "balanced ration" is as necessary for the growth and

development of fowls as it is for man or livestock, and no poultryman need expect any very great profit unless he supplies this need.

Oats as a Turkey Food.

No other grain has been used that will equal oats as a turkey food. But they should be soaked, clipped, ground or scalded before feeding, as the sharp points stick and irritate the crop, which proves quite injurious. Any grain fed should be of good quality and free from must. Musty food is sure death to a turkey as many are able to testify.

The Feeding Trough That Excludes Chickens

Seeds May Be Fatal.

Cherry and plum seeds may be fatal to turkeys if they become lodged in the gizzard, and cannot be ground fine as all foods are before they may pass through this organ. And while seeds are not so harmful to the old as they are to the young, it is always best to protect them from this danger. Whole flocks have thought to be diseased, when suffering from this cause alone, and it may be necessary to make a careful examination in order to determine the trouble.

Early Fall Feeding.

It is very important to watch the food supply as the fall season advances that the flock may not lose in flesh. As the grass and weed seed begin to fall to the ground and the insects disappear, more food must be supplied to insure a steady growth and overcome their wanderings about the fields which at this time of year greatly reduce the weight. Conditions for feeding may be so arranged that there need be but little change

in the diet. A small field of wheat or rye, over which the turkeys may range together with the grain and meat scraps will insure a continued development with practically no change in food as far as results are concerned. If all your stock is not ready for the earlier market, do not regret the longer feed as the late sales are always best. And these better sales insures larger profits on the grain used.

Cool Weather Promotes Rapid Growth.

Turkeys that have had sufficient range with no scarcity of food will be fully developed by the close of the summer months, but at least 25 per cent more weight may be added during the fattening season, the quality of which may be entirely governed by the kinds of grains used.

An exclusive diet of corn will produce a greater amount of fat and a much coarser meat. While an exclusive diet of oats will give a finer, more tender meat with a less amount of fat. But since quality and quantity are both to be desired it will readily be seen that a mixture of the two grains named will produce the required results. The very finest results are obtained when peanuts, chestnuts, celery or celery seed and apples are used for fattening, but at such an extravagant cost that only the rich may afford such well-fed fowls.

Fattening by Cramming.

The flesh of a fowl fattened by the "cramming process" is of a very fine, tender quality if the proper foods are used. A small crate with no room for exercise and one that is kept darkened will produce a quieting effect which will insure tender flesh. Small machines have been built which may be obtained for use in this feeding and which have with them explanations for best results. The process of cramming may be accomplished by mixing the foods to the consistency of mashed potato and fed by hand. Carefully avoid strangling or closing the windpipe and feed every time the crop becomes empty during the day. This plan of fattening is not recommended for those having great numbers, as the extra amount of gain will hardly pay for the extra amount of care required.

Feeding for the Market.

Turkeys should be large and fat as possible before being marketed. They should be put on "full feed" gradually. Meat scraps and bran mixed in the proportion of nine parts bran and one of meat scraps is an excellent food for the beginning of the feeding period and may be made in the proportion of fifteen parts bran and one of meat scraps for the closing period. Charcoal may be fed at this time with excellent results when mixed with the feeds just mentioned. A green field of wheat, cabbage

or apples at this time furnishes the needed variety. It is not necessary to confine turkeys while they are being fattened as they usually take no more exercise than is needed. And often when in confinement will lose their appetite and this condition will make necessary stuffing or cramming to make them ready for marketing. The time required to get the turkeys on full feed is from seven to ten days, and should be accomplished gradually. Whole wheat and corn should be fed in connection with the meat scraps and bran. They should be fed two or three times a day just the amount they will entirely consume in a short time. The fattening period should continue from four to six weeks. Old corn is always preferable to the new as new corn may cause bowel trouble. The feeding period should begin about October first so that the turkeys are ready for the Thanksgiving market. If the turkeys are to be shipped to a distant market they should be ready by November fifteenth, so that sufficient time may be had for dressing, packing and shipping. The best of the flock should be selected for this market and those remaining made ready for the Christmas or holiday trade. It always pays to feed well, because turkeys become dissatisfied and will over exercise if underfed. The amount of grain required to produce a pound of turkey flesh will produce a pound of beef, but the difference in price makes turkey feeding much more profitable.

Roosting Places

Very few turkey breeders prepare special roosting places for their flocks. But this should be done, and the birds taught to go there, until permanent habits are formed. Roosting promiscuously on any or all trees about the premises, upon buildings, implements or vehicles should never be allowed. Low roosts often invite thefts by being in easy reach of man and beast. Breaking limbs is another source of danger as a fall is always injurious. The droppings should be as nearly confined as may be in one locality so that gathering of the same may be possible for the sake of sanitation as well as for the value they have as a fertilizer. Long poles placed from limb to limb in a clump of trees not less than ten feet above ground makes an ideal roosting place. It is seldom necessary for turkeys to roost within a building and should do so only during a storm of sleet, and ice, and when the temperature is between 15 and 20 degrees below zero. When housed, the building should be clean, well ventilated and without drafts. A shed with an open south front is most preferable. No other fowls should ever be housed with turkeys, as their habits are so very different.

The Way Turkeys Do, and Should Use the Hen House

Preventing Disease

The most successful turkey breeders are those who use preventatives rather than try to control or cure diseases. There are many conditions that if carefully observed will aid greatly in the prevention of diseases. First of all, sanitary grounds and roosts properly located, plenty of good wholesome food and pure, fresh water. The food should be placed on clean boards or fresh, clean ground. It is well to feed turkeys in the fields removed from the other fowls of the farm, and in this way they are encouraged to remain away from the other flocks that might be diseased. Feed regularly and protect from storms; furnish grit or coarse sand at all times. Watch the flock carefully for any signs of ill health and isolate any one that may be sick as a protection to your other fowls. Separate the small and weaker poults from the strong and hardier ones as a protection to both. Use vigorous breeding stock and avoid inbreeding as it weakens the vitality which renders the poults more liable to disease. Copperas and charcoal as preventatives, sulphide of soda as a blood purifier, and lime and carbolic acid as disinfectants, are all successfully used. Try to discover the cause of every death for by knowing the trouble you may prevent further spread of the disease.

The Fatal Disease of Blackhead.

Blackhead in a flock of turkeys is more destructive and unmanageable than cholera with hogs or fever with cattle. If

this disease could be completely eradicated, the breeding of turkeys would soon be the most popular as well as the most extensive of all the fowls. Thousands of dollars have been spent trying to find absolute preventatives and cures for this disease but so far none have been found that are perfectly reliable. This is a disease affecting the intestines and liver, though originating in the blend guts or cecum between the large and small intestines. The inflamation of the cecum is taken up by the blood and carried to the liver. This disease is supposed to be common among chickens but not destructive as with turkeys. especially young poults. For this reason chickens and turkeys should be fed separately. Poults will contract the disease at any age, or when fully matured, but it is most common among the younger turkeys. It is known that the disease is very slow in developing in many cases, and fowls may be affected for many months and still live.

The dead bodies should be burned immediately that the healthy fowls may not come in contact with them in any way as they fight and pick the dead carcass which is sure to cause immediate development and an early death—many times within 25 days. Healthy, vigorous flocks do not readily become affected. In some instances the disease will remain in the system of apparently healthy turkeys and will not make it appearance until subjected to unfavorable conditions, exposure, overfeeding or badly ventilated houses. In this way the premises are continually being reinfected and for this reason it is sometimes necessary to dispose of an entire flock and discontinue the business for two or three years or until every trace of the disease is destroyed.

SYMPTOMS OF BLACKHEAD.

The external symptoms of blackhead are loss of appetite, the droppings a bright yellow color, the wing feathers droop, a decidedly dull, sleepy appearance is very noticeable and in most cases a discoloration of the head occurs before death. It is from the last named condition the disease gets the name blackhead. The feathers appear ruffled and the turkeys affected will refuse to graze with the remainder of the flock and show a decided weakness. These symptoms are usually manifest before death. If the disease is in a chronic form the fowl will present an appearance of unthriftiness with no striking indication of illness. They may gradually improve but more often succumb after several months of chronic illness. The incubation period of the disease as it occurs in various fowls in a flock is indefinite as it is impossible to ascertain the exact time they first became infected. The disease develops in many cases so very slowly that it is several weeks before the vitality of the fowl is exhausted, and this is why flocks may be diseased and the owner be unaware of it. The disease is most frequent in turkeys

ranging from one to four months old, and it is generally agreed that the older the turkey the more resistant it is to blackhead.

PREVENTION AND CONTROL OF BLACKHEAD.

The contagious nature of blackhead makes it necessary to employ prompt measures of isolation and segregation. The sick will contaminate houses, yards and range and the immediate removal of healthy hens and poults to clean quarters is essential. Affected birds should be killed and burned or buried immediately as they continue to intensify the existing infection. A common mistake in the control of infectious diseases of poultry as well as other farm animals is the removal of the sick to isolated quarters and allowing the healthy to remain exposed to the infected quarters. All houses, roosting places and yards should be thoroughly cleaned and all accumulated refuse should be burned. And all places which might harbor the disease should be disinfected with any reliable disinfectant.

Poultry men should make a practice of examining all poultry that die from an apparently unknown cause, and by so doing one is often able to determine the nature of the existing trouble. It is especially important that a thorough examination be made when blackhead is suspected and the external symptoms are not pronounced. The liver and intestines are the two organs most affected in blackhead. If the disease exists marked changes from the normal conditions will be easily recognized. The liver will be twice its natural size and be covered with yellow and white spots. The intestines will be swollen and inflamed. Foods that are used should be soft as boiled rice, potatoes and sour milk should be given in liberal amounts. Prevention from any disease is much more easily accomplished than the control or cure. The most effective medicine that may be given for this disease is common quinine in the form of pills.

Roup.

There are but few poultrymen who have not experienced more or less trouble from roup. The disease is contagious when in the chronic form and if the affected fowls are not isolated there is danger of an entire flock contracting the disease, and often become fatal if not properly treated. The disease may be either external or internal. The internal is most fatal, the swelling affects the throat, wind-pipe and digestive organs, when in the chronic form. In the external form the swelling is confined to the head and eyes. Often the eyes are swollen shut and the fowl practically blind. In either form the fowls may starve to death as they are unable to eat.

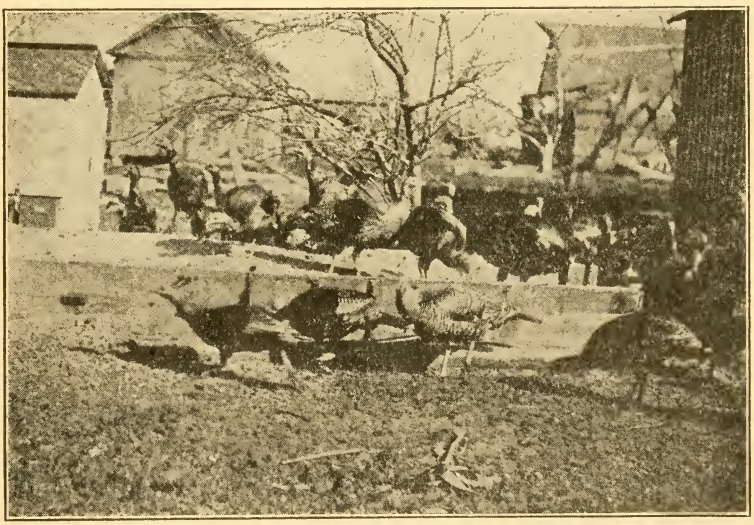
CAUSE OF ROUP.

Roup is caused by exposure to bad weather, cold drafts or becoming infected from other fowls. Or it may result from too

close confinement or too close quarters where the fowls have become too warm. This is especially true of turkeys. Fowls that roost in trees or in the open where there are no drafts seldom are afflicted with roup.

CURE OF ROUP.

Roup may be easily cured if taken in its earlier stages, before it has become chronic. The fowls infected should be placed in a box or building, and smoked moderately with smoldering leather of old shoes or woollen goods. Care must be taken that there is not so much smoke that the fowls become smothered. One treatment is usualy sufficient and should continue from 15 to 25 minutes at which time they will begin to throw the accumulated phlegm and may then be released. And will generally begin eating at once. A complete recovery may be hastened by adding a teaspoon of sulphide of soda to the drinking water. It may be necessary to open the eyes of the blind fowls by moistening the lids with coal oil. Burning sulphur is sometimes used instead of the smoldering leather, but the writer prefers the latter treatment.



Turkeys Eating Sand, the Great Necessity, an Every Day Occurrence

Cholera.

The disease known as cholera is very fatal to every living creature that may contract it. It affects the digestive organs mainly, and for this reason healthful surroundings and proper food should always be furnished, as healthy fowls are more able to resist the disease when coming in contact with it.

There are several diseases very similar to cholera and can

only be distinguished from it by a careful examination of the germs. The disease may be spread by the purchasing of new fowls. by coops, by dogs, cats, rats or even by grain sacks. The infected fowls should be isolated and the infected roosts and grounds thoroughly sprayed with a disinfectant; a constant watch should be kept for any new developments of the disease. It is very contagious especially among fat poultry. Neglect is nearly always responsible for the outbreak of this disease.

SYMPTOMS OF CHOLERA.

The symptoms of cholera and blackhead are quite similar in many characteristics. The same general appearance, the loss of appetite, stupidness, drooping wings and a lack of energy when disturbed. Cholera usually causes death in a very short time, varying from 30 minutes to three days in the acute form. Cholera is usually caused from drinking stagnant water, by eating unhealthful food or from lack of grit. The drinking of stagnant water alone will cause the development of cholera. With a clean, healthful food and water supply and sanitary surroundings there need be no great fear of this fatal disease.

Gapes in Poultry.

Many poultry men have asked for a prevention and cure for the disease called gapes. Young poults are affected by a small worm which enters the windpipe and lodges there causing the gasping for breath from which it gets the name "gapes." The gape worm is not prevalent in all localities, and but little information may be had upon the subject. The suggestion that "gape worms" result from eating fish worms or earth worms is a mistake as it is contrary to their habits as they gather worms and insects of all kinds from vegetation and it is possible in this way they come in contact with gape worms.

Crop Bound.

A turkey will sometimes eat substances that will not pass through the crop. This condition is known as "crop bound" and should not be neglected, but should be removed immediately. This condition is due to lack of variety of the necessary foods ,and turkeys will then swallow long blades of straw or hay which will form a compact mass that will cause very serious trouble if not removed. This may be done by giving rich cream or sweet oil that will dissolve the lump by the aid of the fingers. If this is not successful, an incision should be made in the top of the crop just large enough for the mass to be removed. Before the incision is made the crop and outer skin should be moved in opposite directions as far as may be and then when in natural position again the opening that has been made will require no stitching. To avoid this condition, bran should be given as food at all times.

The Market Demand

There is no doubt that the demand for the turkey as a food product will increase with the coming years and growing population. It is the only fowl that can take the place of the wild game that is now diminishing so rapidly. The time has gone by when the flying flocks of wild ducks and geese darken the sunlight, and the numerous prairie hen and quail of the fields are almost extinct in many localities, having been consumed as food, and so the future food supply rests with the turkey as a substitute. With the population so rapidly increasing there need be no fear of overproduction.

The Pilgrim fathers made the turkey the most prized fowl for the great national Thanksgiving feasts, and for many years the Thanksgiving season afforded the only great demand. But conditions are now so changed that fine markets continue through the entire winter season. In the high class restaurants and cafes the young poult is now taking the place of the popular "quail on toast," and are prized very highly when prepared in this way. The demand even now far exceeds the supply, so the business from the financial standpoint is assured. The only question of great importance among turkey breeders should be, "great quantity" and good quality. This result requires careful attention as the more study applied in any industry the more successful will be the outcome. An education on any subject is not acquired in a day. So if the inexperienced makes mistakes in the beginning, they need not be discouraged. Such gentle reminders insures success in the end.

The Demand Greatly Increases.

The eastern states, once the greatest turkey producing states in this country, are not now able to supply their own demand owing to the scourge of blackhead, the most fatal of all turkey diseases. In many localities the disease develops with each succeeding year to such an extent that the losses are so great there can be no profit and the business is almost abandoned. This condition alone creates a greater demand through the central and southern states as their supply is needed for the eastern markets. Blackhead is not known in the south and but little known through the central states. Experiment stations and individuals are earnestly studying this disease for a sure cure or preventive. To the one making the discovery "great will be his reward."

Marketing.

There are many points for consideration when marketing fowls, especially turkeys, and no definite plan can be followed year after year as conditions are continually changing. If near

the larger towns or cities turkeys may be dressed and sold to individual buyers at greater profits than if sold to poultry firms. Local buyers in the smaller towns may not be able to pay the highest prices, and in this case the large poultry firms of the cities may be communicated with, and the turkeys of a whole community sold together, saving to the producer the commission of the local dealer which is often from four to seven cents a pound. Many changes have been wrought in the handling and marketing of all kinds of fowls within the last few years, and usually the local markets are able to pay satisfactory prices, because they sell direct to the great markets of the cities. If turkeys are to be hauled to the markets crowding should be avoided. A wagon bed properly partitioned will prevent this and a free circulation of air is also very necessary. If large flocks are to be marketed and if not at too great a distance they may be driven very satisfactorily and in much less time than would be required to haul in wagons.

Killing and Dressing.

Not all poultry men market their stock on foot and for those who do not the following plans will be of interest.

If fowls are to be kept some time after slaughter they should be "dry picked." To do this easily and successfully, the fowl should be suspended, with the head down and both feet securely fastened at a height most convenient to the picker. The mouth should be opened and an incision made which will sever the arteries in the roof of the mouth and at the same time an incision made into the brain which renders the fowl insensible at once. If these incisions are properly made the feathers may be removed very easily. The fowls should be "fasted" from twenty to twenty-four hours just prior to killing and picking, and should be given no water seven hours before killing. But if water be given about this time the process of picking the feathers will be made much easier. Any one interested in this plan of preparing for market, should study the different processes by watching the work done by experts. If properly done it is very humane, but if not, is positively cruel. A dry picked fowl presents a very attractive appearance and will retain this appearance longer than if dressed in any other way.

Fowls should be picked immediately after sticking or scalding as the feathers come much easier than after delay. The flesh may be made much whiter and the whole body be more plump by submerging immediately in cold water. Dressing fowls means removing the feathers only—unless otherwise specified.

Packing.

The work of packing fowls for shipment should be carefully done in order to secure the best prices. The fowl should be

perfectly clean and thoroughly cooled and packed very tight. The material used for wrapping should be such that there will be no discoloration. White paper is most preferred. This method can be used only in cold weather or when shipments are made in refrigerator cars. When the consignments are billed long distances and the weather changeable the packing should be in ice, the fowls to be placed in tight wooden receptacles. When this plan is necessary the purchaser should always be consulted that there be no misunderstanding in regard to the packing.

Cost and Profit.

Comparatively speaking, the turkey costs less to produce and sell for more per pound than any meat-producing fowl or animal. The grains of the fields, which would be scattered upon the ground and lost, the many noxious weed seed, and the insect life which only destroy constitute the greater part of their food all during the growing season. Experience has proven that with abundant range, turkeys may be produced in central and southern U. S. at an actual cost of five cents per pound. This includes the extra feed necessary to finish for market. There certainly is no other live stock that costs so little and will sell for so great a profit to the producer.

Improving Conditions.

There is no doubt if study and the application of knowledge gained is continued, the time will yet come when the turkey will again possess the vitality they once had in their wild state. And the stumbling blocks of the past will prove to be the stepping stones of the future. The weak points are being emphasized in such a way that turkey raisers are able to guard against the conditions that once discouraged and mystified. It is now known that success depends almost entirely upon the breeding stock and for this reason the very best is none too good, and the first cost should be but little considered when beginning this interesting business. Many have failed who otherwise would have achieved success had they been in possession of this valuable knowledge. An absolute proof of this statement is verified by the fine specimens exhibited in the show rooms.

Conclusion.

In conclusion let me say that there is no other business in which one can engage with so small an investment and realize so great a profit as in the business of rearing turkeys. While it requires weeks of concentrated effort each season, it never seems to lose its attractiveness. Visitors will travel many miles in order to watch a great flock of a thousand turkeys as they roam the meadows and fields in search of food. The actions of

such a flock are so varying because of many changing conditions happening during the course of a day, that even the uninitiated never tire of watching them.

Turkey farming must of necessity be a very healthful occupation because of the fact that the very nature of the work calls one to the fields, meadows, and pastures, thus insuring that the major part of one's time be spent out in the open—in fact one must live "next to nature," constantly studying nature and nature's laws in order to be successful in this type of work.

Pointed Paragraphs on Turkey Culture

The wild nature which prompts wandering about the fields and roosting in trees in the open should never be discouraged as both are necessary to health and vigor.

Prevent turkeys from becoming wet with the morning dew by feeding very early or by yarding.

Follow nature's plan in caring for your flocks and avoid many difficulties you otherwise may have.

Know the location of your flock every night if you would be successful.

A pasture or woodland where grass is short is the very best surroundings for turkey breeding.

Texas, Missouri, Kentucky, Illinois and Iowa are the five great turkey producing states. Texas ranks first.

Blackhead has rendered the production of turkeys almost impossible in Rhode Island and adjoining territory which was once the great center of the industry.

The most healthy, vigorous, best matured, glossy feathered breeding stock should be chosen regardless of the variety if vigorous poults are to be expected.

Two males for each flock used alternately gives the best results.

A laying yard will prevent eggs from being stolen by crows or rodents.

A variety of grain gives best results, but bran from a hopper may be fed continually and when mixed with five per cent granulated charcoal gives splendid results. Turkeys in their wild state will follow the path of the forest fires to secure charcoal.

Turkey hens make the best mothers for young poults, as they are more free from vermin and understand the degree of exercise needed.

Young turkeys should have a variety of food which should contain the necessary amount of animal ingredients. This may be supplied by using raw eggs and granulated meat meal.

The Bronze is the largest turkey grown and therefore requires the most food.

Oats, corn and wheat are the best whole grain feeds, but weather conditions and the condition of the fowl should govern the amount fed.

Turkey raising is very profitable as it requires so few accommodations in the way of buildings, etc., and so much of their food is usually waste.

Turkeys cannot be successfully grown in continual confinement. It is absolutely contrary to their nature and will prove disastrous.

Ninety per cent of the turkeys grown are for the markets for food purposes, and should be healthy and vigorous.

The male of the breeding stock should reach the standard of his variety.

During the months of February and March meat scraps should be fed the hens, as it stimulates affection for the males and as a result fertile eggs are assured.

Be sure the hen is satisfied to set before giving her the eggs.

A properly prepared nest is necessary for a good hatch.

Removing the poults from the nest during the hatching period should depend on the disposition of the hen.

The different seasons and climates require different foods.

Corn should be fed in cold weather. Wheat and oats are better food in warmer weather.

Turkeys may be raised on any soil, but red sandy or gravel soils are best and good drainage is always a requirement.

Nests should be prepared and permanently located in the laying pens and the hens be accustomed to both before the laying season begins.

Poults may be easily caught by scattering feed for them to pick up.

Never misrepresent your stock in order to make a sale as fair treatment is always the best policy.

The male is half the future flock.

Do not allow young poults to roost on limbs, sticks or anything but smooth surfaces until they are six weeks old and their bones are hardened. If the breast bone becomes curved they cannot be marketed.

After poults have reached the size of quails, two feeds per day is sufficient. One in the morning and one at night.

Enlargement of liver is a result of over-feeding.

Corn is the principal fattening food.

Visit the nests only when laying hens are absent.

Turkeys should be marked when first taken from the nest by clipping off the back toe or by puncturing the web of the foot.

Never feed more at one time than will be eaten, as food left on the ground rapidly sours and is then unfit for turkeys.

Feed bran and oyster shells to prevent soft shelled eggs.

An absolutely perfect food has not yet been discovered.

Normal fleshed, well matured and healthy stock is best for breeding.

One bushel of old corn is worth two bushels of new for feeding purposes.

Turkeys may be easily trained to roost where provision has been made for them, if they are driven for two or three evenings to this location.

Before making a single sale, select the breeding stock for the coming season.

Females govern size. Males govern plumage and markings.

Don't discard a good breeding hen because of age. The author of this book has one 13 years old.

Do not neglect the size, shape and vitality of a flock for markings, as flesh counts for more than feathers.

If over-fed, mature stock readily becomes too fat.

With immature stock, extra feed develops growth.

Turkeys are the cheapest meat produced and command the highest market price per pound.

In purchasing breeding stock be sure that the different sexes are unrelated.

Laying pens save many steps as well as chilled eggs.

A turkey hen that has set for one week will own and care for a brood as well as if set for four weeks.

A roaming turkey is a healthy one.

Poor breeding stock means failure to any turkey raiser.

A nest egg should be placed in the nest when removing the turkey egg.

Never allow a broody hen to remain on the nest over night if expected to lay another clutch of eggs.

Poults should be handled only when necessary.

Look close when examining for lice. They are very hard to see as they are almost the color of the flesh.

The yolk of the egg is held in position by ligaments, and heavy jarring will cause these ligaments to become broken and the egg will not hatch.

Raw vegetables, cold boiled rice and sour milk are good for bowel trouble.

If bran and green foods are supplied, turkeys will not become crop bound.

The turkey bell will frighten away many of the turkey's enemies .

A derangement of the digestive system is soon noticeable in the droppings. If yellow, cholera may be suspected.

Make a thorough examination of every turkey that dies in order to ascertain the exact cause of death, as a further spread of disease may be prevented.

If a turkey has worms, small amounts of turpentine may be given effectively. Feed raw potato, pumpkin seed or sage.

A turkey will destroy more insects than any other fowl.

Bran is to poultry what hay is to stock. It is better to pay high prices for it than do without it.

The grasshopper has long fed upon our fields. Now let our turkeys feed upon him

Sand, shells, charcoal, onions and fresh water promote healthy flocks.

One hen should be kept to care for the small and weak poults as they are sure to be killed or lost with the stronger ones.

So profitable is turkey raising that months or even years may be well spent in learning the business.

Thousands of bushels of grain are lost each year in the grain belt for lack of turkeys to glean the fields.

Broiled poults are now taking the place of "quail on toast."

Short legged fowls have the plumpest bodies.

Tape worm may be removed by giving a small dose of "male fern."

Previous to the purchase of breeding stock, which you can not see, obtain a few feathers from the flock, for the purpose of studying the markings.

Beware of slop pails, wells, tanks or any other water receptacle into which they may fly and be drowned.

"Turkey Raising Pays"

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