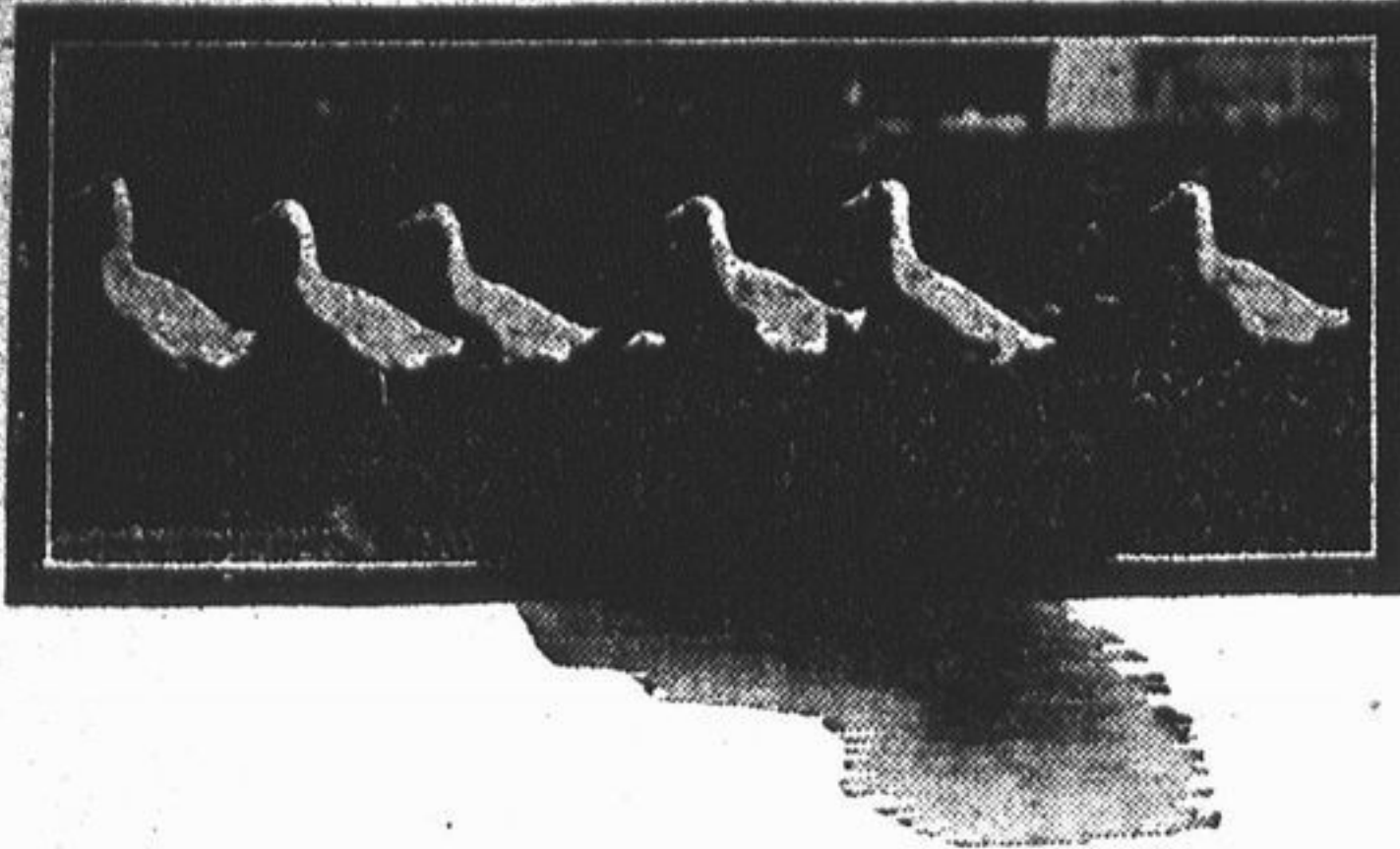


PROPER SELECTION OF FOOD FOR DUCKS



Just Ducks.

By GEORGE E. HOWARD, United States Department of Agriculture. The food of the duck is both vegetable and animal in nature. In the wild state it gathers its food from brooks and marshes, consisting of flag, grasses, small fishes, water insects, etc. When the birds are raised in confinement this diet must, in a measure, be imitated to get the most satisfactory results. The duck has no crop, the food passing directly from the throat to the gizzard, and as a consequence the food must be in a soft mushy state. Too much hard food, such as grain, does not agree with these birds and they cannot thrive on it. While some raisers use a small allowance of grain others do not, and it has not been proved to be of any advantage to feed it. Soft food is their natural diet, together with grasses, vegetables and animal food. The proper selection of the food is extremely important to secure the rapid growth of the duck, and the ingredients of the food must be such as will afford a well-balanced and substantial ration. As a whole, it may be said that the rations used by the largest duck raisers are essentially the same, differing only in the quantities used in the mixing. Investigations show the real value of the food to be the same for producing rapid growth and early development. The duckling grows twice as rapidly and is a much heavier eater than the chick, and to produce the best results its food must be such as will be easily assimilated. The various methods of feeding given in this article are recommended for raising ducks successfully. It costs from 6 to 12 cents a pound to raise a duck for market at ten weeks of age. It costs from \$1.75 to

\$2.50 each to keep breeding ducks a year. The three different methods of feeding ducks for market (ten weeks old): (1) feeding young ducks to be kept as breeders; (2) feeding old ducks. The first method, for the sake of convenience and to explain more fully the composition of the rations, is subdivided into four parts, as follows: (1) From time of hatching to five days old provide the following mixture: Cracker or bread crumbs and cornmeal, equal parts by measure; hard-boiled eggs, 15 per cent of the total bulk of crackers and meal; sand, 5 per cent of the total of crackers and meal. Mix with water or milk, and feed four times a day. (2) From five to twenty days old, the following mixture: Cornmeal, two parts by measure; wheat bran, two parts by measure; 50 per cent of this bulk; beef scraps, 5 per cent; sand, 5 per cent; green food, 10 per cent. Mix with water to a dry crumbly state and feed four times a day. (3) From twenty to forty-two days old, the following mixture: Wheat bran, two parts by measure; cornmeal, one part; beef scraps, 5 per cent of this bulk; sand, 5 per cent; green food, 10 per cent. Mix with water to a dry crumbly state and feed four times a day. (4) From forty-two to seventy days old, the following mixture: Cornmeal, two parts by measure; wheat bran, one part; beef scraps, 10 per cent of this bulk; coarse sand or grit, 5 per cent; green food, 10 per cent. Mix with water to a dry crumbly state and feed four times a day. The hours for feeding are 6 a. m., 10 a. m., and 6 p. m.

RIGHT BREED FOR BEGINNER

Well-Established, Long-Bred and Popular Varieties Are Best to Attain Greatest Success.

New breeds of poultry are brought out from time to time and with the introduction of each the claims made for their virtues over long-established breeds is calculated to make any beginner feel that he must have the new ones if he is to attain the greatest success. The fact of the matter is that the new breeds are the ones that the beginner should usually keep away from. They are yet in the making. In a way, and require the skill of the expert breeder to develop into practical, true-type fowls. It is with the well-established, long-bred and popular varieties that the beginner should generally start. The new breeds are no better in any way than the old ones and as a general rule are not nearly so good in a practical way. Don't get the idea the poultry business is going to be revolutionized every time some new breed is brought out.

ERADICATE LICE AND MITES

Whitewash is Effective Against Vermin—Free Use of Lice Powder is Always in Order.

The free use of an effective lice powder is always in order in the poultry house. In applying powder hold the fowl by the feet, head down, and work the powder well down into the feathers. The free use of kerosene on the roosts and in the cracks will exterminate mites. Whitewash is very effective against vermin.

LOSS BY FAULTY METHODS

Forty-five million dollars a year is the loss due to faulty methods of handling on the farm where eggs are not collected frequently and marketed regularly, and because nests are not kept clean and males are allowed to run with the hens in the warm months after the breeding season.

NOVEMBER-LAYING PULLETS

Pullets hatched in May can be brought to laying by November, if they are properly fed and cared for and crowded, as fast as possible. It cannot be done however, if they are half fed, tormented with lice, short of fresh water or allowed to become stunted for any other reason.

BREEDING FROM CULLS

Breeding from inferior specimens will never build a flock. The old saw: "The best is none too good," should be the slogan of the breeder and fancier.

FIX UP WINTER QUARTERS

Fix up the poultry quarters now so that the flock will be in clean, comfortable and sanitary conditions for the winter. Make the walls air-tight and afford good light and ventilation.

CULL CLOSELY

Many farm poultrymen do not cull down their flocks nearly as closely as they should. The chief reason for this is that they are afraid to lose the flock. The best way to keep a flock is to keep it small. A good quality of best seed is a must for the poultryman.

TEMPERATURE FOR HATCHING

A fertile egg will start to hatch if kept at a temperature of 80 degrees. If kept at a temperature of 100 degrees, blood will form in three or four days.

GROWTH PRODUCER

A good quality of best seed is a must for the poultryman. The best way to keep a flock is to keep it small. A good quality of best seed is a must for the poultryman.

ORCHARD TOPICS

PRUNE IN DORMANT SEASON

Removal of Dead Branches Cannot Affect Vitality of Tree, No Matter When Work is Done.

(By W. J. GREEN, Ohio Experiment Station.)

In practice summer pruning on a considerable scale is not advisable. It is difficult to see, when the leaves are on, just which branches should be removed, except in the case of dead branches. One must be on his guard, also, to avoid peeling of the bark when it peels readily. Pruning is less expeditiously done in summer than when the trees are dormant.

There are occasions, however, when one desires to complete work of pruning begun early in the season. There need be no fear of injuring the trees



A Badly Pruned Peach Tree—The Bearing Wood is Near the Extremities of the Limbs, and Even a Small Crop of Fruit Would Be Likely to Break the Limbs.

by taking off a moderate number of branches when the leaves are on, in spite of the fact that the removal of leaves debilitates a tree. If done early in the summer the injury is less than after the summer growth is nearly completed.

The removal of dead branches cannot affect the vitality of the tree, no matter when done. Nor can there be any serious effect if here and there branches, which are too close, or which cross, are removed. The thinning out of small, twiggy branches for the purpose of thinning the fruit is not a harmful process if the fruit is heavy crop of fruit. There are a great many trees which might be relieved of a surplus of fruit during May and early June to good advantage.

BEST ORCHARD COVER CROPS

Largely of Same Composition as Farmyard Manure—Interesting Comparison is Given.

Cultivation is the cheapest and most valuable fertilizer at the disposal of the grower. The best cover crops are largely of the same composition as farmyard manure, and with the exception of being unable to seed the soil with germs of decay, may take their place in every particular. A comparison of the three most popular cover crops with manure is shown herewith:

Table comparing Nitrogen, Phosphorus, Potash, and Water content of Vetch, Red clover, and Ryegrass against Manure.

Vetch and red clover are legumes and take a large part of their nitrogen from the air, and when they decay give it to the soil. Ryegrass has the power of breaking up and absorbing a large quantity of potash. They are all lacking in phosphorus, which is easily and cheaply supplied by 200 pounds of acid phosphate or fine bone meal.

TREATMENT FOR FIRE-BLIGHT

Only Process Recommended by Plant Pathologists is to Cut It Out—Paint Surface of Wound.

There is nothing that can be done to cure or remedy the pear or fire-blight after it has once started. The only process recommended by plant pathologists is to cut it out, and thus stop its ravages. The cut should be made at least a foot below the blighted area, in order to be sure to cut below all diseased tissue.

Paint the surface of the wound with lime-sulphur or formalin solution. One-quarter of a pint of formalin solution and five gallons of water makes a good sterilizing solution to be used at any place where disease germs of plants, trees or bushes are to be killed.

Where the blight has reached the bark of the larger branches or trunk, it should be neatly trimmed away with a knife, then sterilized and painted with ordinary paint. Dip knives and pruning implements into a sterilizing solution occasionally.

Burn the twigs and cuttings from blighted trees as soon as they are removed.

Work of Practical Orchardist

The practical orchardist must prune, spray and fertilize his trees for the purpose of making them produce fruit of a superior quality.

Currents and Gooseberries. Currents and gooseberries will grow on almost any kind of land to raise a fair crop of fruit.

Cut Out Sprouts. Cut out sprouts about shade trees, and about fruit trees. They only take away the strength of the tree.

HOLD ON TO THE GOOD BREEDING ANIMALS



Prize-Winning Tamworth Sow.

(By R. G. WEATHERSTONE.) It is well known that the progeny from mature parents are superior to those descended from young progenitors, not fully developed. Bows and sows, for breeding, should be kept in a good, thrifty condition, but not fat.

The writer has always been troubled to keep his breeding sows from becoming too fat, and consequently farrowing a small number of scrawny pigs.

I once took a large sow to fatten for one-half the pork. I did not know she was with pig and fed her all the cornmeal and wheat middlings she would eat.

Imagine my disappointment and vexation when she had three little, dwarfed pigs—not only smaller than pigs usually are when first farrowed, but emaciated.

Sows for breeding should not be allowed to run with the fattening hogs fed on corn, but kept in a pasture by themselves and given a plentiful supply of slop, made of equal parts of wheat shorts, cornmeal and wheat bran.

Most young sows will breed when three months old, if allowed to run with a boar, but eight or twelve months is as young as it is judicious to breed them. Not only this, but it stunts or dwarfs the growth of such young things permanently, and they never attain good size.

The pigs from large-bodied, old sows will be more in number, and frequently double the size of pigs from young sows when farrowed—and this with the same feed and care—and will frequently weigh 50 per cent more at a year old.

A neighbor of mine last year bought an old sow in the spring for \$10. She had ten fine pigs in April, which were fattened and sold to a butcher in the fall of the same year, bringing him \$115, and he still has the sow for a breeder.

Sows should be kept for a number of years until their places can be filled with younger ones which have proved to be good breeders.

Formerly, heavy pork from hogs 12 to 24 months old (and the fatter the better) was demanded. Men who worked hard in the open air said there was a wasting quality about pig-pork—that it shrank in the pot and did not stick to the ribs.

Fortunately, this call for heavy pork is decreasing. In the farmer's family, and with people generally employed in indoor occupations in the towns and cities, pork from younger hogs is preferred.

This pork is not only the best, being the tenderest and sweetest, but it is the quickest produced, at a lower cost and at better profit to the producer.

Young animals grow faster and with less food than when they become older, and pork from a hog less than a year old does not cost so much to produce as the pork from old hogs.

To make the most money from hogs, none, except those kept for breeding purposes, should ever be wintered over.

A little alfalfa makes the corn stick to the pigs' ribs. The well-fed litter of pigs must have an opportunity to exercise, or else thumps are liable to claim the pigmest.

ENSILAGE RELISHED BY FARM ANIMALS

Greatest Use of Feed Has Been for the Dairy Cows—Beef Cattle Also Like It.

Ensilage is relished by most farm animals. The greatest use made of it has been for dairy cows, thirty to fifty pounds being fed each cow daily at the North Dakota experiment station. It can be fed to beef cattle, too, but they should be fed about half as much as the dairy cattle. Young stock can be fed ensilage in proportion to their size. Some grain and hay should be fed with ensilage. If the hay is alfalfa, the grain can be decreased and in some cases omitted. The amount of hay consumed by the lambs also was reduced when silage was added, 121 pounds of the silage reducing the hay consumption 0.72 pound daily per lamb.

Without silage, the ration of shelled corn and clover hay produced gain on proportionately the same quantity of grain as did the same ration with silage added. Considerable hay was saved, however, as it was found that 363 pounds of silage reduced the quantity of clover hay consumed in making 100 pounds of gain by 199 pounds.

DAIRY DAIRY

PROPER CARE OF THE UDDER

Cold Cement Floor, Bruising, Sudden Chills, Etc., Are Some of External Causes of Trouble.

Many good cows are lost to a useful life on the dairy farm by the neglect of a little necessary care at a critical time. This is particularly true of udder trouble. The preventative remedies can be easily applied. But should the udder become congested or inflamed just before or after calving, immediate steps should be taken to effect a cure. Fomentations with hot water several times a day, a gentle massage with the fingers, and the application of warm lead will help to alleviate the trouble. The rubbing should be toward the milk veins so as to get the blood away from the udder if possible. A dram or two of salicylic acid or two drams of salicylic acid to assist. In very severe cases, of course, the veterinary should be called, as it is poor economy to risk the life of usefulness of a good producer. For mild cases of udder trouble the average dairymen should be competent to treat and with a little observation it should be possible to develop a little skill in treating such troubles.

A cold cement floor, cold ground, bruising of the udder, sudden chills, etc., are some of the external causes of udder trouble. The preventative remedies can be easily applied. But should the udder become congested or inflamed just before or after calving, immediate steps should be taken to effect a cure. Fomentations with hot water several times a day, a gentle massage with the fingers, and the application of warm lead will help to alleviate the trouble. The rubbing should be toward the milk veins so as to get the blood away from the udder if possible. A dram or two of salicylic acid or two drams of salicylic acid to assist. In very severe cases, of course, the veterinary should be called, as it is poor economy to risk the life of usefulness of a good producer. For mild cases of udder trouble the average dairymen should be competent to treat and with a little observation it should be possible to develop a little skill in treating such troubles.

EFFECT OF COOLING ON MILK

Illustration Given Herewith Shows What a Difference 20 Degrees in Temperature Will Make.

The cut is a graphical representation of the effect of cooling on milk. A is a single bacterium; B shows bacterial growth in 24 hours with milk kept at 50 degrees. At C is the family of a single bacterium after 24 hours.

At 70 degrees. It is easy to see what a difference 20 degrees in temperature makes. At 50 degrees the multiplication is five-fold, at 70 degrees it is 750 fold.

TO DISINFECT COW STABLES

In Case of Contagious Abortion Any of the Standard Coal Tar Mixtures Will Be Found Good.

For a disinfectant in cases of contagious abortion in cows, any of the standard coal tar disinfectants are good. Crude carbolic and bichloride of mercury are two good ones.

MILK PRODUCER MUST KNOW

Many Dairymen Attempt to Make Business Without System—Records Ought to Be Kept.

The chief objection to progressive dairying is carrying it on in a slipshod manner without the application of business principles. The milk producer must stop guessing, and know for sure what the results will be of the different operations conducted in different ways, and in each case adopt the one that will return the most profit. It is the net result from a cow that tells whether she is making a profit or not. We cannot know what that net result is if we do not keep a record.

GETTING RETURNS FROM COW

If the cow eats just a little more than is required to keep her alive her yield will be small and the cost high, while if she eats a large quantity above what is required to maintain her body, she will give returns from a larger proportion of her feed.

IDEAL STRAW SHED

The old thick-walled straw shed for any kind of farm stock is about ideal, after all that is said to the contrary. The thick walls keep out cold and prevent drafts and still grant an ideal ventilation. You never find any frost inside walls in the straw shed.

COMMON CAUSE OF SCOUR

A dirty feed pail is the commonest cause of scours in calves. A clean feed pail and a dose of castor oil is the best remedy.

INCREASE IN DAIRY COWS

The increase in the number of cows in the United States is by no means keeping pace with the increase in population.

PAINT THE HOUSING

Paint the housing of your cows with a good quality of white wash to keep them clean and healthy.

LOAD STOCK

REQUISITES OF GOOD HORSES

Well-Bred Horses in Special Demand for Any Farm—Only From Best Stock.

By W. W. GILBERT. Nowadays farmers are beginning to awaken to the fact that it takes good horses to do good work on the farm. The fact that almost any horse can be made to do something at farm work is no valid excuse for men who profess to have their own interests at heart to persist in breeding horses



Farm Mare and Colt.

that nobody wants, not even themselves. In the fields a big team makes more by the width of the furrow or width they cut.

There is pleasure and inspiration in the business of breeding and handling high-class horses. Bear in mind in breeding horses that it is just as essential to breed good feet on to them as to get weight and blood in them.

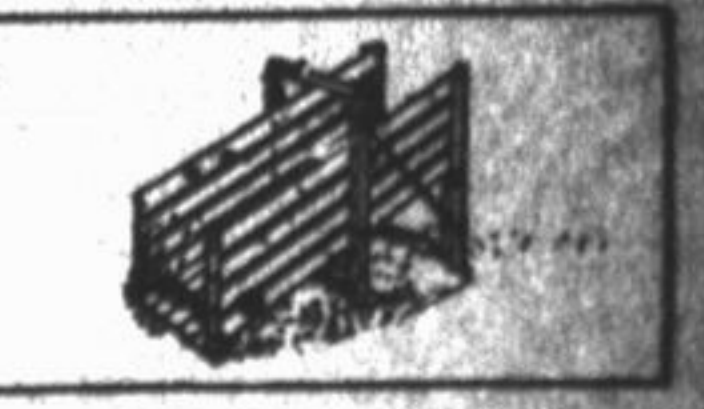
The purebred mare is a good investment to the small farmer, and if he will allow her to share the work of the place she will do nearly as much work as a gelding, and raise a good colt besides.

A well-bred mare bred to a stallion of best type will bring a colt worth as much at weaning time as a grade colt would bring at maturity, sometimes a lot more.

UNLOADING CHUTE FOR STOCK

Device Patented by Illinois Man is Especially Good for Horses—May Be Moved Easily.

Handling of live stock, especially hogs that are ready for market, is sometimes cruel and a cause of real financial loss to the shipper because of lack of unloading facilities at the local stock yards. An Illinois farmer has patented the unloading chute shown here. It is strong and yet light enough to be moved freely about so that hogs may be unloaded from the wagon on to the level ground. Cleats prevent slipping of an animal that is coming down the chute, thus reducing the possibility of broken legs and bruises. The chute may be folded up and carried on



Chute for Live Stock.

the load of stock, or put back out of the way when not in use. It is used on large farms or at small stock yards to certain to be found practical by business farmers everywhere.—Farmers Business.

DRENCHING DROVE OF HOGS

Best Way is to Drive Animals into Pen Where They Will Head Him—Little Room to Move In.

The quickest and easiest way to drench a drove of hogs is to drive them into a small pen where they will have but little room to move about. To hold the animal while drenching is a noise of snarl and squeal, and the upper jaw, well back toward the angles of the lips, and the mouth is thrown into the back part of the mouth with a dose syringe. As there is danger of a hog breaking a syringe it is best to use a metal one. Sometimes when the drench is being given the hog hard to hold, it is necessary to elevate the head and raise the forefeet of the ground. For this purpose a pulley and rope wire strainer is recommended. It should be hung in the most convenient part of the pen and the animal secured in the usual way by placing a rope around the jaw. The end of the rope is thrown over the hook in the lower pulley and the hog drawn up until it is almost over the floor. It is best to use the hog has become quiet, well under control, before giving the drench, as there is some danger of the animal getting into the air passages while doing harm.

FOR FATTENING

Pigs are strongly recommended for fattening when they are in the nation with other cows, but they are equal parts, better gains and less than when other of the above is fed alone. This is especially true when they are in the nation with other of the above is fed alone.

TEST VALUE OF

Farmers, however, should be sure to test the value of their stock before they are sold. This is especially true when they are in the nation with other of the above is fed alone.

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