SUGGESTIONS FOR CURING HAY IN SOUTH

Haying in Comfort.

(Prepared by the United States Department of Agriculture.)

The cure given the hay crop has much to do with its selling price on the city market. One of the greatest obstacles in the way of producing hay in the great agricultural sections of the South, which imports more than one-fifth of all the hay it uses, is the matter of curing. Rains are heavy in the South, and often come at harvest time. Weather-stained hay, unless badly damaged, is quite satisfactory as a feed for farm stock, but there is a strong prejudice against it in the city markets. The following suggestions for curing southern hay are contained in United States Department of Agriculture Farmers' Bulletin No. 677, "Growing Hay in the South for Market."

The curing of grass hay in favorable weather is a simple process. Curing is really a combination of three processes, drying, fermentation and bleaching. The first two processes are necessary and desirable; the third is undesirable, but in field curing it cannot be entirely avoided. To secure the best quality of hay the drying process must not be too slow. To avoid uneven drying the familiar processes of tedding and cocking are commonly employed.

Tedding is simply the turning or scattering of the cut grass after it is partially dry on top. It may be done by hand with a pitchfork or, preferably, by a horse-drawn machine called a tedder. When the crop is very heavy, the grass is sometimes tedded when in the swath, but usually not until after it has been raked into windrows.

Cocking consists of putting the partially cured hay into small piles. The object is twofold: (1) It reduces the surface exposed to moisture that may fall upon it, either as dew or rain, and (2), it evens up the drying, for the reason that the relatively dry leaves continue to draw water from the moister stems. Incidentally, cocking also reduces the amount of bleaching.

In unfavorable weather the labor of curing hay is much increased, as the cock, until sufficiently dry, should be spread at each favorable opportunity and recocked again in the evening or when rain threatens. If hay that is not sufficiently dry be placed in the barn or stack it is likely to become moldy and dusty.

Cut hay should never be handled while wet with rain or dew. As the surface of the hay, if lying in the swath, is the part which was best cured before the rain, it is in the best position to dry promptly. If in the windrow, the stirring of the hay would bring the surface moisture in contact with the drier hay beneath, by which it would be readily absorbed.

Bale Hay Only When Sweating Is Completed.

The fermentation of hay takes place during the process of drying, and because of it the characteristic sweet odor is developed. The process is accompanied by the formation of heat, which is particularly noticeable in the later stages of curing in the cock, the stack, or mow. The final stage of fermentation is called sweating. The process of sweating continues for a considerable period and hay should never be baled until the sweating has ceased. If for any reason curing be long protracted the hay becomes bleached or weather-stained and loses most of its aroma.

Legumes, with the exception of lespedeza, are far more difficult to cure than grasses. This is due largely to their solid, more succulent stems, and to the fact that the leaves shed readily if the curing process is delayed, so that much of the leafage, the most nutritious part of the hay, is lost. Furthermore, legume hay absorbs rain or dew more readily, both in the windrow and in the cock. Finally, legume hay is very apt to heat excessively in the sweating process if put in the stack or mow when not sufficiently cured. This heating is often sufficient to char the hay in the center and sometimes to cause fires. Legume hay should therefore never be put into a barn when half cured.

Curing may be considered completed when the stems are apparently dry. In this state a wisp of the hay is dry enough to rattle if gently shaken and breaks readily when tightly twisted in the hand.

Special Devices for Hay Curing.

To hasten the drying of hay and to prevent the injury of half-cured hay by rain, several devices often used are helpful and are here described, but each necessitates additional labor. Various forms of hay caps to protect cocks from rain have been used. The simplest is a piece of canvas about three feet square with a weight at each corner. A perch is simply a pole or stake about six feet long, preferably with one or more cross arms three to four feet long. The stake is driven into the ground and the green or half-dried plants are hung upon it so as to make a tall, narrow cock. Perches are much used in curing peanuts and cowpeas. A pyramid consists of three or four legs, usually six to eight feet long, pointed at the top and commonly sharpened below, so they can be fastened firmly in the ground. Crosspieces joining the legs are also useful. A pyramid permits the building of rather large cocks with a hollow space in the middle, which helps greatly in drying the hay. The objection to all of these devices is the additional labor and cost involved. They are considered more useful for legumes than for grasses. Additional information on growing hay in the South is contained in this bulletin, No. 677, and may be had upon application to the editor and chief of the division of publications, United States department of agriculture, Washington, D. C., as long as the department's supply lasts.

HANDY BAG-FILLING DEVICE

By Means of Arrangement Shown In Illustration One Man Can Work Satisfactorily While Alone.

A handy device for filling bags can be made by following the plan given herewith:

Set up three posts, as shown in picture. The apex should be about six feet from the ground. Screw into each part a stout hook at the height that will let the bag rest lightly on the

Device for Filling Bags.

ground when filled. If they are too high the bag will tear out.

By means of this arrangement one man can do the work of one man and a boy. It can easily be moved from one place to another, as the posts can easily be made of 2 by 4 inch pine material, light enough for a man to carry easily.

Poor Methods at Fault.

What we need today is better farming, better system of rotation and more land in grass. Under such management we can put stock raising on a money-making basis and gradually build up our soils. The great trouble today is not that of poor land so much as it is poor methods of soil handling. Much of the trouble is due to the fact that we do not measure up to the present-day requirements as farmers.

Protect the Machinery.

Some of the implements which are found on almost every farm are used for very short periods of each year. The length of service may not include more than three or four weeks. For the remaining part of the year, such pieces either remain in the open, or they may be given the best of care in a first-class implement shed. Where they are exposed to the weather a rapid decline in value is the result.

Spray for the Onion Maggot.

The onion maggot, which does a lot of mischief, may be fought with a new spray compounded to kill the fly which lays the eggs from which the maggots come. This spray should be applied before the maggots appear, with a coarse spray. The mixture consists of one pint of New Orleans molasses, one-sixth of an ounce of sodium arsenite and one gallon of water.

Good Old Red Clover.

Don't give good old red clover the go-by entirely. We can remember when it was as much lauded as alfalfa and seemingly as hard to get. No doubt of its food or soil-building qualities.

Fertile Eggs.

Upon placing a male with hens which have not had a male with them, the eggs become fertile in about three days and remain fertile for 15 to 20 days after the male has been removed.

Stick to the Cow.

Stay by the cow. She produces butter, skim milk, a good calf and manure to fertilize the land. Some of these products will remain high in price.

Average Life of Mule.

It is claimed that the life of a mule is an average of five years longer than that of a horse, and it will do work that much longer. The mule's keep is reckoned at a third less than that of a horse.

Disinfect Coops Between Broods.

After taking one brood of chicks from a coop move it to another patch of ground before putting in another brood. It is also a wise safeguard to disinfect coops between broods.

FARM AND FIELD

LIVE-STOCK-FRUIT-DAIRYING-GARDENING-FIELD CROPS-SILOS-PIGS

New Wrinkles in Progressive Agriculture

Making the Farmers' Business Profitable

TOLD IN AN INTERESTING MANNER EXPRESSLY FOR OUR READERS

BREEDING FOR MILK SUPPLY

Breeds Improve the Thing for Which They Are Selected—Germany Makes Increase in Yield.

Cattle used to be bred chiefly for work. Therefore the cows did not give much milk. Breeds improve the things for which they are selected. If cows were used for stepladders we should by this time have them seven feet high.

In 1730 the work cows of Germany gave an average of a pint and a half a day. Interest in milk increased, and by 1800 the average yield was a quart and a half. Breeding went on milkward, and in 1810 the German cows averaged two quarts of milk each per day. In 1820 three, in 1830 four—and there the gain stopped for 30 years.

Devon Cows.

But in 1860 the production had increased to six quarts, and by 1870 to eight.

The breeders of the trotting horse found it tremendously hard to make their steeds go any faster after the 2:10 mark was reached, and it took years and years to get below two minutes—and at about the two-minute mark in all probability the record will always stand. So with the milch cows, as the yield increased it grew more difficult to breed record breakers, or to better the average; but now the average daily yield of all German cows is said to be ten quarts.

A thousand per cent gain in a century and a quarter; that is what long period breeding will do. It is such work as this which alone will keep the world big enough for its increasing numbers of people.

HANDLE THE BULL CAREFULLY

Quiet Animal That Has Never Harmed Anyone Usually One to Attack Unsuspecting Attendants.

The bull should always be handled kindly and firmly, and should understand that his attendant is his master. It is always advisable to train the bull calf to lead, and a ring should be placed in his nose at an early date. Never permit the bull to have his own way about anything where you may differ with him and insist upon prompt obedience.

It is very easy to spoil the disposition of a bull by permitting children, old as well as young, to play with him or tease him. The man who is always prepared for trouble never has any.

It is the quiet bull that has never horned anything that usually does the damage, suddenly developing a vicious spirit and attacking his unsuspecting attendants.

Working In Salt.

If you use a barrel churn, sprinkle the salt in on the butter after you have drawn off the buttermilk and washed the butter. Then turn the churn as you do to gather the butter. You will find that you have worked in the salt more evenly than you can by the old method, and this way is easier and quicker.

Pasture Extravagance.

But one of the most absurd pasture extravagances is the feeding and tramping thereon of an unprofitable cow, for even the cleanest and best, most luxuriant pasture cannot feed profit into a cow that has missed her calling.

Water for the Cows.

Cows should be given all the pure water they can drink, not less than twice a day. It has a decided effect upon the milk production.

Know How to Raise Cows.

Better than knowing how to pick good cows out of the sale ring is knowing how to raise them.

Good Investment.

A high price for a good bull is a better investment than a low price for a poor bull.

Feed Growing Heifers.

Growing heifers should be fed very much as milch cows are fed, except that the rations will be smaller, of course.

Faulty Method of Feeding.

Poor results sometimes obtained in feeding skim milk are due nine times out of ten to faulty method of feeding.

Improper Feeding.

Milk fever and caked udder may both be brought on by improper feeding before calving time.

QUALITIES OF POLAND-CHINA

Breed Considered Ideal of Lard Type of Hog—Gives High Per Cent of Marketable Meat.

(By D. L. GRAY.)

The Poland-China breed of hogs originated in the state of Ohio. This breed is considered the ideal of the lard type of hog. The individuals are broad on the back, compact, low, and dress a high per cent of marketable meat. The back is broader and shorter than that of the Berkshire, but the latter has the advantage of the Poland-China in length of side.

The face of the Poland-China is longer and not dished so much as that of the Berkshire. While the ideal ear of the Poland-China hog stands erect,

Head of Poland-China Sow.

still the tips of the ears should droop. The large, over-hanging ear is very objectionable to Poland-China breeders. In color the Poland-China is black, with six white points—on the face, on the tip of the tail and on the feet.

The Poland-China was originally a very large hog, but has been bred for refinement and compactness so long that at the present time it will not weigh as much as the Berkshire. Poland-Chinas are good feeders and early maturers. They are suited rather to lot feeding than to pasture feeding, as they have not the rustling qualities as some of the other breeds. Still they will make good use of pastures. The meat of this breed is tender and fine-grained, but there is more fat than the average consumer likes and the fat is not suitably distributed with the lean. The Poland-China is not quite as good as the Berkshire or Duroc-Jersey in breeding qualities.

ALFALFA SILAGE FOR STEERS

Animals at California Experiment Station Made Satisfactory Gains and Brought Profit.

California experiment station made silage out of their first cutting of alfalfa last summer. The field was foul with weeds, there being much foxtail which was nearly ripe, with beards already hard. It was decided that the cutting was practically valueless for hay, and therefore the crop was put into the silo.

The steers were fed on rolled barley, alfalfa hay, and the alfalfa silage. In two months they made a satisfactory gain, and were sold at a profit of about $5 per head.

The silage as fed out was about half foxtail, but it was always eaten up clean. The experiment shows that silage may be made from weedy alfalfa which would make but inferior hay, that such silage will be eaten without waste, and that it can be used as a supplementary food for fattening on alfalfa hay and barley.

It is suggested that where the first cutting of alfalfa containing foxtail is to be used for silage, the work should be done before the foxtail beards become hard.

CHEAP SHELTER FOR STEERS

Posts Set Eight Feet High on One Side and Six on Other With Roof Will Answer Purpose.

A cheap shelter for stock is made by setting posts 8 feet apart, 8 feet high on one side and 6 feet on the other side, making the shed 12 feet wide and 40 feet long, writes D. Siskel of Merrick county, Nebraska, in Missouri

Shed for Steers.

Valley Farmer. Roof runs one way, and north side and ends are boxed, with a gate at each end and rack running the full length of shed on south side. Straw may be used for the roof to still further cheapen construction. A shed of this size will shelter 25 or 30 two-year-old steers.

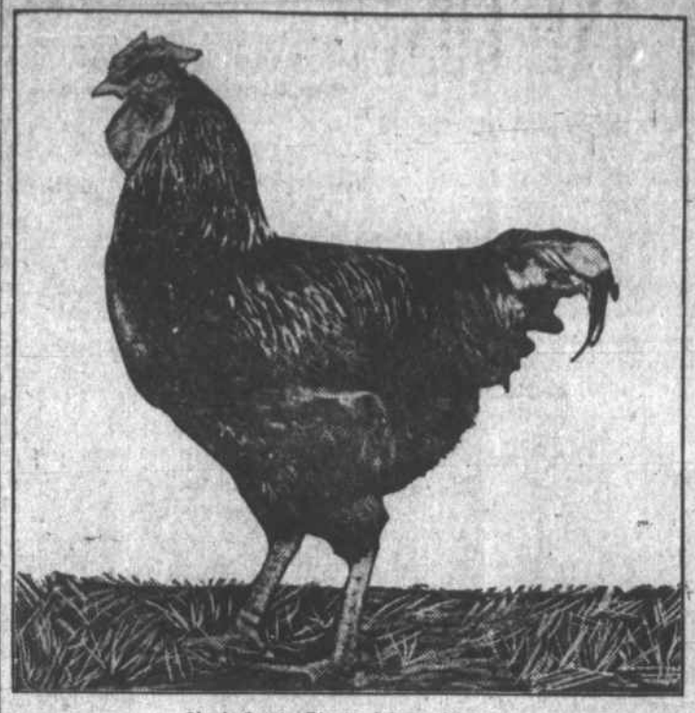
Sheep Keep Weeds Down.

One can easily tell while driving along the roads the farms on which sheep are kept. The absence of weeds is always noticeable. A few sheep on a farm is a sure means of letting the boys do something else on a rainy day than wield the scythe on the weed patches.

Sheep Respond to Care.

Sheep respond to every little extra attention, and the owner should move among them, talking to them quietly, every day.

MEAT QUALITIES OF RHODE ISLAND REDS



Single-Comb Rhode Island Cockerel.

(By E. T. DE GRAFF.)

After 16 years' experience with fowls, I have concluded that Rhode Island Reds combine more practical qualities and fewer undesirable ones than any of the 20 varieties I have kept.

Their popularity is due to their rapid growth, oblong bodies with wide, plump breasts and yellow skins.

Besides their early maturity they are hardy and lay large eggs, especially in winter. As mothers, they compare favorably with Plymouth Rocks and Wyandottes and are free from the objectionable fattening-up-behind characteristics of these breeds.

In raising these birds to table sizes, the following is my regular practice. In a corner of the house cellar is an asbestos-lined incubator room.

When a hatch is made, 50 of the liveliest chicks at about thirty hours old are removed in the afternoon and placed in a thoroughly clean, painted louseproof brooder, each chick having its bill dipped in water to teach it to drink. The other chicks remain in the incubator until next morning.

The first feed consists of stale bread, soaked in either sweet or sour milk, and squeezed out.

The second day they are given the range of the brooder scratching floor, upon which are scattered sand and charcoal dust with some litter.

Until they are six weeks old they get mostly chick feed in the litter and charcoal, grit and meat scrap in a hopper.

All utensils are kept scrupulously clean; they are boiled once a week.

Green food is always given them when there is no grass run. The outdoor brooding is in a clover-covered pear orchard with running spring water.

A very good food is made by adding some charcoal and meat scraps to johnny cake.

The chicks are also fond of dry wheat bran which is always before them. Feed little and often is the rule.

Milk is often given in addition to water. All liquids are protected so the chicks cannot wet themselves.

I know of no breed that possesses more vitality right from the shell. One of the reasons for this is the chicks feather out rather slowly until about two months old.

Most of the food goes towards making flesh, bone and muscle instead of feathers.

In this respect the reds are superior to those breeds that feather out young.

When three weeks old the chicks weigh about eight ounces, and when they reach the first broiler stage at six weeks, they weigh about one and one-fourth pounds. Two weeks later they weigh about two pounds.

At this stage the cockerel is commercially more profitable if plump and hatched at the right season than he ever will be afterwards if feed and care are considered. In the roasting stage at three months, they will weigh three pounds and will gain a pound per month thereafter until they weigh five pounds.

In this stage they appear awkward because of their rapid growth and development of their second feathers; but their well-shaped bodies, long, plump white breasts make them very attractive when dressed for market.

PROPER TIME FOR MOLTING

Period Commences Earlier in Young Fowls Than in Old—Valuable Additions to Bill of Fare.

The proper months for molting are August, September and October, but in young stock it is apt to begin a month earlier and in old a month later.

The older the fowl the more delayed will be the commencement of this period.

If not already done, the sexes should be separated until the fowl has completed her new feather growth. In fact it is not advisable to remate before the first of the new year.

Flock of White Leghorns.

Any weakness a fowl may have is pretty sure to develop at molting time.

Molting is not a disease, but the strain in growing the new feathers is apt to weaken the fowl, making it more or less susceptible to sickness.

It is generally supposed that it takes one hundred days for a fowl to change its coat of feathers.

The Van Dresser method of semi-starving and then overfeeding fowls to make quick molt has not stood the test expected. Poultrymen, as a rule, are more favorable to old nature's method.

Both sunflower seed and linseed meal are valuable additions to the bill of fare at this time of the year.

The bill of fare should be rich in nitrogen. Green food is important. Unless the material in the food is of a feather-making nature, the fowls cannot shed the old coat.

When a hen receives a large supply of carbonaceous food she increases her fat without supplying the necessary elements needed in the renewal of the feathers, and there is a general wasting away, inactivity of the bird, and death. When no stimulant is given, the shafts of the new feathers seem to stick on too long, not splitting open freely.

GAPE WORMS CAUSE TROUBLE

Best Preventive Measure Is to Remove Runs to New Ground—Separate All Infected Birds.

Gapes in chickens are caused by the gape worms which live from year to year in the soil of the ground where the infected chickens have been kept. The best preventive measure is to move the runs to ground that has not been so occupied for two or three years.

If the chickens are kept until they are six weeks old on ground that is free from worms, the trouble will be over for that year. A good plan is to move the entire chicken plant to new ground and devote the old ground to vegetables, grain or grass.

About the only remedy for the infested chick is to extract the gape worms from its throat with a looped horsehair or a very fine wire. The hair or wire should be disinfected in a solution of a tablespoonful of creolin in a pint of cold water each time before inserting it in the windpipe. Affected chicks should be separated from the well ones, and the quarters where they are kept should be sprinkled daily with slaked lime. Put a few crystals of permanganate of potash in the drinking water—enough to turn it pinkish. By this means you may be able to save a good many of your chicks, but an ounce of prevention is worth many pounds of cure.

Good Poultry Food.

Screenings, the small grains of wheat, if not moldy or musty, make as good poultry food as the large grains, and can often be purchased at one-half the cost of good wheat.

Supply Some Animal Food.

The hen must have some animal food in order to produce successfully. She gathers this in the summer time, but in the winter it must be provided.

Milk Relished by All.

Milk in any form is good for both old and young stock.

Bulky Food Is Best.

Bulky food serves to promote digestion and health.

USE CLEAN FEEDING BOARDS

Many Poultry Diseases Caused by Chicks Eating Over Droppings—Extra Work Gives Reward.

Keep plenty of smooth boards on which to feed the chicks. Never feed a chick twice on the same side of the board; turn over to the clean side, and next time get a clean board. Give all these boards a scalding off each time washed.

From white diarrhea on through many poultry diseases the contagion is carried because the chicks eat over the droppings. This extra work gives you its reward in saving you many chicks that otherwise would get sick and die. Never feed poultry of any age on dirty ground.

ORCHARD GLEANINGS

DORMANT PRUNING IN FAVOR

Work on Considerable Scale During Summer Season Is Not Advisable—Difficult to See.

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 the guard, also, to avoid peeling of the bark when it peels rapidly. 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 by taking off a moderate number of

Pruning Peach Tree in Dormant Season.

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 in early summer. The drain on the tree is less than it would be to bear an abnormally 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.

SPRAYING IS NOT DIFFICULT

Know Enemy You Are Fighting and Mix Materials Properly—Haphazard Work Will Not Do.

It does not pay to spray, as spraying is done by half of those who try it.

Yet proper spraying is not difficult. Have first a clear idea of what you want to do. Know the enemy you are fighting. Then mix your materials properly. Study the formula and follow directions carefully. No haphazard work will do. The details given for the mixing are all necessary.

Spraying well done pays, and it pays big.

Apply it right, with a strong pressure so as to make a very fine mist.

You can do it right if you try to and yet it is no easy job. It is work from first to last, but it is work that pays.

RIGHT SITES FOR ORCHARDS

Well-Known Fact That Cold Air Settles to Lower Levels Is Often Overlooked—Loss by Frost.

It is a well-recognized fact, though one too often overlooked in selecting sites for orchards, that cold air settles to the lower levels. For this reason it is often colder at the lower elevations than it is at higher points in the same locality. This is what is meant by "atmospheric drainage."

The occurrence of frost in low places when there is none on elevated areas is thus explained.

For the same reason peach buds are often winterkilled or the blossoms are injured by frost in the spring in low places when nearby orchards on higher elevations are injured much less, or even escape entirely.

Bees Help Fruit Trees.

In a recent experiment at the Illinois station it was found that the bees in the neighborhood work principally on the outside rows of the orchard, and this, with other factors, are the probable cause of this part of the orchard bearing more fruit. With hives located in the center of the orchard, the trees nearest the hives were better pollinated than those farther away.

Pruning Bush Fruits.

In pruning bush fruits the principal object is to shape the bush and do away with all unnecessary growth. This can be overdone, however, and should not be carried to extremes.

Check Wood Growth.

Summer pruning has a tendency to check the wood growth and encourage the setting of fruit buds, and also to aid in their development and maturity. This aids in keeping up the balance, and an orchard once in the habit of bearing will be less likely to overbear one year and produce little or no fruit the next.

Cut Off Cedar Apples.

Either cut off any cedar apples on trees near the orchard or cut out the trees.