

NEWS AND VIEWS OF THE FARMER

FORMING APPLE TREE HEADS

HOW TO PRUNE TO GET BEST RESULTS BOTH IN SHAPE AND QUALITY OF FRUIT.

By L. C. Corbett.

Trees are started even as low as 18 or 20 inches from the ground.

The reason is that in certain localities where wind-storms are frequent, a low-headed tree is less likely to be broken, will lose a smaller proportion of fruit, and does not suffer so much from sun-scald, as the low head serves to a certain extent as a shade for the body.

During the early years of both ornamental and fruit trees, they should be pruned vigorously, because they

division should be reduced to two.

The arrangement of these branches should be based upon the same principle as the arrangement of the main body of the tree.

One additional precaution is necessary with trees which have an upright or pyramidal tendency; the terminal bud which is intended to form the leading branch from any primary branch, should be left on the outside rather than toward the center of the tree. By observing this precaution, the plant will have more tendency to spread.

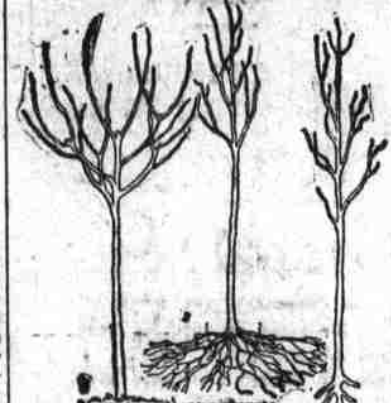
On the other hand, if a tree has a tendency to spread and it is desirable for any reason to prune it into the form of a pyramid, leave the terminal bud on the opposite, or inside of the branch.

With common peach trees, which are shorter-lived than apple or pear trees, these precautions are not so important, particularly in the after-pruning. At the time of forming the head, however, this is very important because these trees are much more liable to split down with heavy loads of fruit, than the apple and pear.

The general rule in the after-pruning of the peach tree is to shorten the yearly growth about one-half. Of course this is not always necessary, particularly during seasons of heavy crop and sparse rainfall, when the natural growth of the plant is very short.

Whenever the normal growth is under eight inches little additional pruning is necessary, but whenever it exceeds that amount, heading in will be advantageous. This serves the double purpose of preserving a compact symmetrical tree, and at the same time reducing the annual crop of fruit.

Thus, the fruit which is allowed to remain on the tree receives a larger amount of nourishment than would be the case were the full annual growth left and the tree permitted to bear its normal quota of fruit. The fruit will also be larger and of better quality.



A. A five-branch tree at the end of the first season's growth.

Re-division of root to top in a nursery tree fitted for shipment. C. How the roots are cut at digging time.

make much longer, natural growth during the first ten years, than later. With pears and apples, the main body branches left at planting time should not be more than eight inches long. At the close of the first season, when pruning time arrives, the growth of that year should again be shortened to at least one foot, and each of the main body branches should carry not to exceed three subdivisions about eight inches long.

The same operation should be repeated the third year, but the number of branches carried by each sub-

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AUTUMN SOWN RYE

By W. E. Gilbert.

Rye is not grown on every farm but those who have proved its value as a bulky, succulent green food that is available in the spring before the grass grows, treat it as an indispensable and valuable crop.

Those who do not grow it can have an idea of this. In the spring time when they are lamenting the absence of new grass, resolutions are often made to grow some the succeeding year, but when the time arrives to sow the crop the good intentions are forgotten and nothing is done.

Then when the time comes around again, as it always does, much regret is felt that provision was not made to meet it with a good supply of rye.

I would remind all that rye should now be sown and assert that it is most dependable.

It is hardy, always grows, produces an immense bulk of material long before any kind of grass affords a bite and the stock relish it greatly.

This includes cows in milk, mares suckling foals, sheep with lambs, and st-re stock too, if sufficient is grown to allow them some.

It should not be sown in bleak prominence where it will have to contend with cutting winds. The more sheltered spots or fields are better adapted for its development in the hazy weather of early spring.

It may follow after corn or potatoes. It is only a temporary crop and will be consumed and cleared off in time to admit of roots being sown in the early summer. Making such quick and profuse growth it requires rich soil, but not to excess, as this would produce growth of a soft and too perishable nature.

Field after field of it need not be grown. A few acres from two to half a dozen, according to demand, will yield a big supply. About three bushel of seed should be sown per acre. I much prefer to drill it, like grain, to sowing it broadcast.

Birds and pigeons are very fond of the seed and if sown broadcast much of it will be eaten, but when drilled, most of it is left alone.

There is a great demand for it by the cow keepers and those who have become acquainted with its disposal in this fashion never fail to have a large supply.

Fall plowing is injurious to cut worms and grasshoppers.

PRODUCTION OF SUGAR BEETS

THE SUPPLY OF SUGAR PRODUCED ANNUALLY IN THE UNITED STATES DOES NOT NEAR MEET THE DEMAND.

By S. C. Clinton, Iowa.

The first refined beet-root sugar produced in commercial quantity was made about one hundred years ago at a cost of approximately 80 cents a pound. The cost of producing cane sugar was then somewhat higher than that of beet sugar.

The amount of raw sugar extracted from the beet at that time varied from 4 to 6 per cent, and the amount of refined sugar obtained was from 1 to 2 per cent of the weight of the beet. The cost of producing an acre of beets was estimated at approximately \$35, while the yield was from 6 to 25 tons per acre.

The advances that have been made in cultural methods have been offset to a very great extent by the increased cost of labor in the United States, so that the actual reduction in the cost of producing beet sugar has been due to the improvement of the beet or to less expensive operations in extracting and refining the product.

Thorough cultivation is another factor in producing good sugar beets. It is a common saying among the Germans that "the sugar must be hoed into the beet."

In no time of its life should a sugar beet be allowed to stop growing, for if it once becomes stunted it is doubtful whether it will ever make as good a beet as it would have been under conditions of continuous growth.

Another way the beet has been improved is by increasing its sugar content. This has been done without increasing the size of the beet.

If a largely increased yield of beets is combined with a much higher sugar content it is entirely possible to obtain three times as much sugar per acre as is produced on an average at the present time.

The present average yield of beets per acre in this country is about 10 tons, and the percentage of sugar actually extracted and refined does not exceed 12, making the average yield of sugar per acre approximately 2,400 pounds.

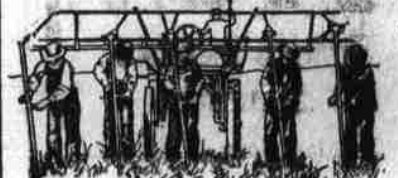
Yields of more than 30 tons of beets per acre are sometimes obtained, and yields of more than 20 tons are common.

From 20 to 25 per cent. of the sugar in the beet has been reported so frequently that it is safe to assume that an average sugar content of 18 per cent is within the limits of possibility.

If an average yield of 20 tons per acre and an average sugar content of 18 per cent could be reached, we would have an average yield of 7,200 pounds of sugar per acre.

Clay loams are very satisfactory for sugar-beet production, provided other conditions are favorable; but more depends upon the physical condition of the soil and upon methods of cultivation than upon the particular kind or variety of soil used. The soil, however, should be well supplied with

them through various forms of rollers, but the seed coats are so hard that any device that has been tried not

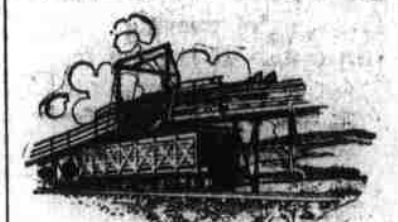


Cultivating Beets With Electrical Hoers.

only breaks the coats but likewise the seed balls, thus destroying the germ.

The department of agriculture has been more successful in this line by its efforts to produce a single-germ seed, and its scientists have within the past year increased the production of single-germ seed from 3 to 25 per cent.

The yearly consumption per capita has increased 8 pounds during the past ten years, that is, approximately 645,000,000 pounds, or 320,000 tons.



Unloading Beets.

more sugar was consumed last year than would have been consumed ten years ago had the population at that time been the same as it is today.

This goes to show that the manufacture of beet sugar in the United States, in spite of its wonderful progress during the past few years, has not even kept pace with the increased rate of consumption.



Women Weeding Beets.

umus and well drained. During the past few years there has been a remarkable advance in the price of farming lands, especially in those localities where beet-sugar factories are in successful operation.

The production of single-germ beet-seed is a method of thinning beets before the seed is planted. Commercial beet-seed consists for the most part of two to seven individual seeds welded by nature into one mass.

It is evident that plants produced from such a mass of seeds must of necessity be very close together, and thus far no mechanism has been devised whereby the plants can be properly thinned. This hand labor has to be resorted to.

Repeated efforts have been made to break up the seed balls by passing

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EARLY MOLTING AND THE EGG BOX

Most people believe that if they can keep their hens to molt early they will lay more eggs during the season, but this is not true. Hens that have molted late will lay more eggs during the winter than the early molters.

This has been shown by the most careful experiments but the facts are not generally known.

Molting hens require a large amount of feed containing nitrogen such as oil meal, meat and other feeds rich in protein. Molting can be forced by cutting down the feed of hens as if they were molting earlier than those on full feed, but the former do not finish molting much earlier.

Starved hens molt more uniformly than others and this is particularly noticeable in hens two or three years old.

In an experiment conducted by the Cornell experiment station it was found that on a basis of 100 hens the

fed flock produced eggs to the value of \$29.97 more than by the starved flock.

The total income from all the birds was \$278 for the starved flock and \$350 for the fed flock, a difference in favor of natural molting for the year of about \$95.

A Western poultryman of long experience gives his method of controlling molting as follows:

As soon as the hens are through laying he turns them out on alfalfa, feeding them dry bran only, in addition. Under this treatment they get thin. Then he feeds them a mixed ration of grains and meat, giving a light feed in the morning and all they will eat at noon and night.

Under this treatment they finish molting quickly, get new feathers and begin laying in September. By October 1 they are all in good laying condition and make a profit through the fall and winter.

COW MANURE AND ROCK PHOSPHATE

"At the Ohio Experiment Station," says Director Charles A. Thorne, "we for five years conducted an experiment in the use of cow manure in the production of corn, wheat and clover grown in rotation."

The result of this test is that in the five year average we have produced an increase of about two bushels of corn, two-thirds of a bushel of wheat and about \$9 pounds of clover hay for each ton of manure, when the manure has been taken from an ordinary open barn yard.

"The total increase was worth \$1.50 if we value corn at one-third of a dollar per bushel, wheat at two thirds of a dollar, clover hay at one-third of a dollar per 100 lbs., corn stover at \$3 per ton and straw at \$2."

"When however we leave this manure in the stable to be trampled under foot till ready for use the increase has been worth \$1.50 per ton of manure; and when to this straw manure we have added as made about 40 lbs. of phosphatic rock to each ton of manure for the purpose not only of preventing the escape of ammonia but of reinforcing the manure with phosphoric acid we have realized a total value of \$2.25 per ton of manure, after paying for the phosphate used. The manure treated in this manner produced an average increase of three bushels of corn, one and three quarters of wheat and 115 lbs. of hay for each ton of manure."

THE PACKAGE HELPS THE PRICE

You may not believe it, but farm butter put up in square packages of a pound neatly wrapped in oiled paper will bring a better price in any market than the same butter loosely packed in a tin bucket or jar.

A butter mold costs a trifle and oiled paper with your name printed on it costs but a little more, and if butter is put up in square package form it will bring from two to three cents per pound more than if packed in jars or tins.

Faustidious customers in the city, who are in the habit of getting nearly every thing they consume in fancy packages, absolutely will not buy butter that is scooped out of the pail and sent to their homes in wooden dishes.

In spite of this fact which nearly every farmer ought to know, ninety without being put up in this form and it all goes together in one mass at the creamery where it is worked over, molded into pound packages, wrapped and stamped with the name of the creamery and sold at a profit all of which might have been had by the farmer if he would do the same thing and sell direct to city consumers.

Of course it is not always possible to sell direct to consumers, but even if butter is sold to the stores it will bring a much better price if put up in oiled paper in pound packages. In fact the making of butter is not all there is in the business.



A First-class Two-Year-Old Clydesdale.

STOCKING PUMPKINS IN THE FIELD

You needn't expect to reap much profit from growing your horse and cattle on pumpkins for a few days during the harvest season; then cut off their tops and use the valuable seed for another whole year. Store seed for another whole year. Store seed for another whole year.

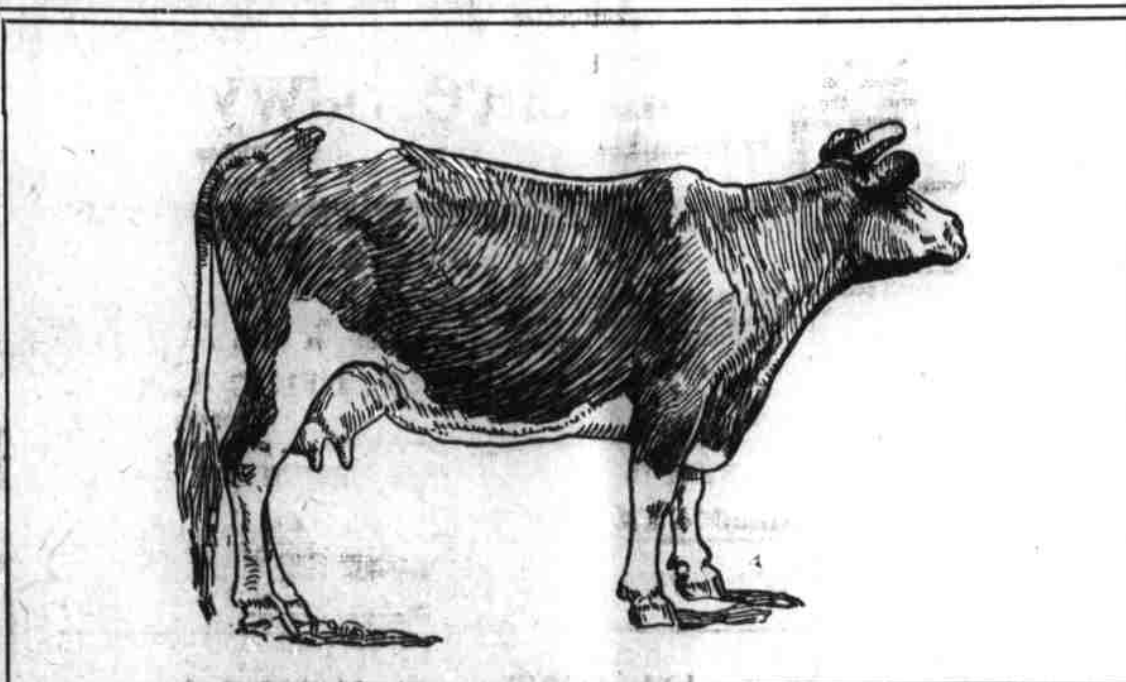
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A FINE TYPE OF HEAVY MILKER



KEEPING BEES IN A HOUSE

By F. G. Herman, New Jersey.

I regard house-apraries as especially adapted to our yards, having all the facilities for properly caring for bees in themselves, the year around, and without increased cost over open yards.

I keep part of my bees in a house made for the purpose, and I am ready to endorse all that has been said about the superior comfort of handling bees in house-apraries. When I open one of these hives the bees do not fly up with the same alacrity that bees do from the hives that stand in the sunshine.

The house contains twenty colonies of bees in two tiers of hives. The broad side of the house which is in view, faces eastward, and the end southward; there are no hives facing the other two directions.

The hives in this house are known by the name, "Long Ida." They hold crosswise, twenty Langstreth frames each. They are expressly used for extracting honey.

One row of hives is set on a frame just high enough for me to be able to raise the covers, and look into them comfortably, and the other row rests on the floor. I might add that the hives are only one story, so there is no use for queen-excluders, and no tiring to be done.

There are no bees at large in the house, excepting a few which leave while handling the combs, and these quickly make their escape by way of the windows, which are left open all

summer for ventilation. The netting on the windows is so arranged that the bees can leave the room, but cannot enter it.

The awning over the windows is to prevent the rain from coming in while the windows are left open. The hive-entrances match the corresponding slots in the sides of the house, and when the bees enter the slot, or entrance, they go directly to their respective hives.

Each alternate entrance is painted a dark color; this is for the purpose

PLOW UP WORN OUT PASTURES

It is well to have a good reason for everything and the main reason for plowing up pastures is when the forage plants become scarce and thin and weeds and moss are plentiful. Many such fields are found and they are allowed to remain so—a most profitable proceeding, for while we have many light and poor crops on arable land, worn out pastures are quite as common.

It may be the argument is that there is not the expense of cultivation that there is with arable. This is true, but unremunerative grass land is as undesirable as any other. The durability of pastures depends to a great extent to the clean state and good heart of the land when the seed is sown and also on the quality of the seeds. Some are really perennial and permanent, others contain a great many weeds and such pastures fall away in a few years.

Renovating may be attempted and is often successful if begun in time but as a rule nothing short of plowing up

and recultivating makes really satisfactory permanent pasture. To say that a field has only been laid down a few years and cannot need renewal is not a strong reason for letting it remain.

The condition of the pasture only can be taken as indicative of whether it would remain or be demolished.

Some fields are so foul that a summer fallow is urgently needed in their redemption. I am not averse to this course, though it means delay and if the fields are not actually over-run with tenacious weeds, they may be broken up in the fall, cleaned as much as possible in the spring and preserved with in the succeeding year.

If land is plowed in the fall, harrowed in the spring, cleaned as much as possible and a grain crop with rather thick seeding introduced, the weeds will have experienced a severe setback by the fall and it carefully prepared for roots to follow, quite a new state of things will be experienced.—E. C. Miller.