

Farm and Garden

MAKE YOUR OWN CALABASH.

Any Farmer Can Grow the Gourd and Transform It into a Pipe.

Do you want a calabash pipe? If so, you needn't pay a dealer from \$5 to \$12 for one. Grow it and make it yourself. After you have grown the gourd you can make the pipe in about half an hour at a cost of half a dollar. So says the bureau of plant industry at Washington. And your homemade calabash, if you take proper pains in the making, will be just as artistic and satisfactory as the expensive imported one.

The calabash is made from a South African gourd. Until recently this gourd was not grown elsewhere, but the American consul at Cape Town,



CALABASH PIPE GOURDS.

H. L. Washington, sent some of the calabash seeds to the department of agriculture in 1906. Since then the government has discovered by experimentation that the calabash will grow almost anywhere in the United States. The gourd seed is planted about like melon seeds and at the same period. It grows luxuriantly, each vine producing many gourds. Not all of them are suitable for pipe material. Many are blighted by insect bites or other causes. Most of the gourds crook their own necks in growing. If the grower wants a pipe neck with artificial kinks he can get what he wants by bending the pliable neck in the way it is desired for it to grow and then waiting until the gourd matures.

Cut off the big end of the gourd at the point indicated for your pipe bowl's top. Clean out the pith. Cut off the neck end and make a little hole with your knife blade. Get a curved pipe mouthpiece with a screw thread. One from any old pipe will do, but it should be carefully bored beforehand to cleanse it from nicotine deposits.

Screw the thread into the opening in the neck of your gourd. If you want an inner pipe bowl that can be taken out for cleaning, you can buy a cheap one, such as is used in neercans, at a tobaccoist's store. A little plaster of paris poured into the calabash bowl and the inner bowl then pressed down flush with the top of the cut off gourd will make the inner bowl fit snugly. Don't leave it in the plaster of paris more than three minutes when fitting, for if you do it will set hard and be permanently stuck. Take it out after two or three minutes, when the plaster is partly dried.

After the plaster dries thoroughly put the inner bowl back, get a pipeful of good tobacco, light a match, place



CALABASH PIPES.

the bit in your mouth, puff away and dream dreams of auld lang syne or castles in the air. You are now a calabasher, qualified and passed by the United States government.

Uncle Sam says the farmers must not imagine that they can make a big income by growing calabashes and selling the gourds for pipe material. Gourds are imported now at from 25 cents to \$2 a dozen. It is the necessity of hand work in making the pipes that causes them to be expensive when you have to buy them. No two gourds are of the same shape or size. Consequently all the cutting and fitting must be done by hand. It is worth while for a smoker to have a pipe which he has made himself.

WHEN PLANTS ARE FROZEN.

Hints on Restoring Window Garden Flowers to Health.

During the winter the amateur in gardening has much to contend with, and not the least of the evils is frost, especially where an endeavor is made to keep more or less tender plants through the cold, dull months in a poorly heated greenhouse or frame.

Fortunately science has come to our aid and taught us a few things concerning the effects of frost on tender plants, and with these principles fully grasped we are in a position to combat frost. Plants which are kept as dry as possible during a spell of frosty weather without being allowed to suffer from this cause will withstand successfully far more frost than the same kind of plants whose tissues are gorged with liquid, and science has also taught us that the greatest mischief is caused by rapid thawing.

To grasp the above facts it may be as well before proceeding further to just consider briefly what really happens when a plant gets frozen. It is now generally known that a plant, like the human body, is made up of tiny cells, each of which, of course, has its own walls. Under ordinary conditions and when a plant has abundance of moisture at its disposal these cells are turgid with liquid. Now, when liquid becomes frozen it is one of the laws of nature that expansion takes place, and in the case of that in the plant cells no exception to this law is made. This expansion, then, results in a rupture of the plant cell walls, which under ordinary conditions of thawing causes the plant to collapse.

It has been proved that when a plant is thawed very slowly the plant cells are able to absorb the moisture which has been forced by expansion through the cell walls, and the rupture is to a great extent made good.

Assuming that the plants have not been watered more often than is absolutely necessary and that one morning we visit the greenhouse or frames to find that frost has reached them, we know that if they are to be saved thawing must be done very slowly. First of all, we must take care that the heating apparatus, if any is used, does not get into working order again, and if there is any likelihood of a burst of sunshine shade the structure with thick mats or anything else that can be quickly secured. Then procure an abundant supply of ice cold water and syringe or otherwise drench the plants with this until frost is gradually removed from the tissues. This will probably mean very cold hands and chattering teeth, but it is either this or losing the plants. For several days subsequently the plants should be kept as cool as possible without allowing frost to reach them again.

PATENTS NEW HAY PRESS.

Makes Two Bales at Time and Averages Six Hundred Bales a Day.

Theodore Guidry, a resident of Church Point, La., who for many years has been interested in farming and improving the devices used by farmers, has received a patent on a new double baler hay press. This press is unique in its construction, having done away with the large springs ordinarily in use on such balers and decreased the draft to a minimum. Experiments with models have demonstrated a capacity of fifty or sixty bales an hour.

It is constructed with a baling chamber on both ends of the press and compresses the hay by a plunger working on a crank shaft past the feed box on each end. The crank shaft is connected to a beam to which one horse is hitched for power, and at each round of the horse a stroke is made on two different bales, one on each end. It is possible with this model to get a bale of any desired weight, the same being controlled by two springs attached to a movable side of the baler which regulates the compression of bales.

Mr. Guidry says he thinks the baler will beat anything on the market for speed and simplicity, and he is now negotiating with manufacturing companies for its construction and sale.

Orchards Worth \$1,000 Per Acre.

A feature at a recent fruit show was an exhibit of Nova Scotia apples and a printed statement showing the profits of fruit growing in that province, especially in the Cornwallis and Annapolis provinces. The average estimate of cultivating, fertilizing, spraying and pruning per acre was \$25, and the cost of picking and packing the fruit is estimated at 50 cents per barrel. The yield reported from eight to ten orchards shows an average for the past five years of from 100 to 165 barrels of shipping apples per acre, sold at an average price varying from \$1.90 to \$2.50 per barrel during the five years. The gross returns per acre range from \$190 to \$304 and the net returns from \$117 to \$219. The average net returns for all the orchards for the five years were \$174 per acre, a sum sufficient to pay 15.75 per cent on \$1,000. Accordingly a valuation of \$1,000 per acre for these orchards seems not excessive.

Quick Improvement of Sweet Corn.

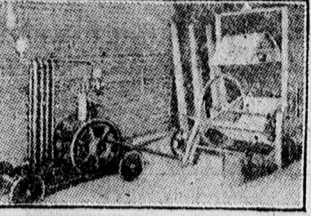
As a result of several years' section Nelson S. Stone of Massachusetts reported last season sweet corn which matured nearly a week earlier than other early kinds which he had tried, and the ears were almost double the size of other early varieties. The improvement was made by choosing the earliest ears and then using those grains that grew from the middle of the cob and then still further selecting the largest and best shaped grains.

POWER CONCRETE MIXER.

Homemade Device That is Useful on the Farm.

Of interest to farmers who need cement for any purpose, such as laying floors or walks or making posts, is a bulletin issued by the Colorado experiment station which tells of mixing concrete by machinery and prints the accompanying illustration of a homemade mixer, which is described thus:

Two pieces of 4 by 6 form the siffs. Upon these two, uprights about three feet high are fastened. A one and one-half inch pipe passes through holes bored in the top of the uprights. Upon this pipe the mixing box is turned, and through the pipe the water is added to the mixture at the desired time. The water is poured in at the top of the upright pipe and flows down and out through holes which are drilled in the lower side of it. The other end of the pipe is closed by a wooden plug.



POWER CONCRETE MIXER.

The ends of the box are made of pieces of 2 by 8 bolted together. A hole bored in the center of each end forms the bearings. The sides of the box are made of one inch lumber and are simply nailed to the ends with twelve penny nails. One-half of the box is made so that it can be detached and lifted off when the mixer is to be filled or emptied. The detachable half is secured to the other half by means of strong hooks so placed that by slipping this half about an inch to one side all of the hooks are loosened at once. After it is in position the removable portion is held in place by means of a barn door latch.

The driving gear is simple, but very effective. It consists of the rim taken from the wheel of an old rubber tire buggy. With the tire removed the grooved rim makes a very satisfactory wheel upon which to run a three-quarter inch rope belt. The belt is driven by a small sheave pulley, which is fastened to the countershaft. A belt tightener is used upon the rope, and by using a very loose belt the tightener is made to act as a friction clutch. This particular mixer is driven by a two horse gasoline engine, which is belted to the countershaft. The engine runs continuously, and the mixer is started and stopped by means of the belt tightener.

Many other systems of driving might have been used in place of the rope belt. The main gear of an old seif binder makes an excellent gear for a mixer. An old mower gear may also be put to good use in this connection. It is not necessary to have the mixer driven by an engine or horse power. A crank may be attached and the machine turned by hand. Many prefer turning such a machine rather than mixing the concrete with a shovel.

CITY MEN FOR FARMS.

Many Would Make Good Hired Hands if They Had Chance.

Many farmers throughout the country find it a difficult matter to get hired hands, while in the great cities there are thousands of men out of work. The problem of inducing some of the down and outs of city life to go out on the farms is claiming the attention of social students.

A commission of the New York legislature recently has been making an inquiry into the matter, though it has not taken up the subject exhaustively. John Mitchell, the noted labor leader, was present at one of the sessions and made suggestions.

The chief trouble seems to be that those in the cities who are always deep in poverty know nothing of country life, seldom if ever having seen the green fields. They were born to their conditions and know nothing else.

Thousands of these men, no doubt, if they should be taken out and given jobs on farms would return to the city as soon as they earned money enough. That is because the city sights and sounds have become second nature to them. They would pine for the filth and furore of their native element.

But, on the other hand, there is no doubt that many men in the cities would welcome a chance to get away to the country for themselves and their families and would develop into excellent farm hands. The problem is to put these men in touch with farmers who need them.

Diseases of Fowls.

Most of the diseases that afflict fowls are the result of carelessness and indifference on the part of the owner as regards the surroundings and conditions of his poultry. No poultry will show to advantage on the credit side of the cash account unless they are healthy and well cared for. How to prevent disease should be the watchword rather than how to cure disease.

Beef and Dairy Cattle.

When a dairyman has faced the actual practice of selling cows from his herd for beef he will not feel encouraged over the outlook of combining beef and dairy qualities in the same herd. There is a popular prejudice against eating beef from an old, played out dairy cow, and there is no advantage in trying to combine the two qualities in one animal.

CALVING IN THE WINTER.

Strict Attention of Dairyman Required During This Period.

A prominent authority on dairying says that the best and safest time for a heifer to freshen is in the summer when she is in pasture, as she then has the most natural food and environment. But it sometimes happens that she must freshen in the winter on dry feed, and under these conditions it requires the best intelligence and care of the dairyman to produce a good cow.

She should be free to take all the exercise possible. The heifer, while having plenty of feed, should never be allowed to become fat. Neither must she be forced to depend entirely upon the straw stack for her food. Food out of which she can make blood, bone and muscle



A GOOD STUDY OF CALF HEAD.

and milk is produced from the same class of feeds. To be explicit, 100 pounds of wheat bran, 100 pounds of oats chopped, 50 pounds of corn chop and 25 pounds of linseed meal or oil cake mixed together make one of the very best feeds at this time.

As the time approaches she should be placed in a roomy box stall liberally bedded with clean straw. And it would be well to mix a good handful of epsom salts with her grain food night and morning for several days before calving. Be on hand when the calf comes, even if you must stay up all night. This is especially important in cold weather. See that the calf gets up as soon as possible and that it gets the first milk, a substance necessary to its life and health.

The cow should now be fed a warm mash of wheat bran or something similar. In cold weather give her small drinks of warmed water several times a day. Never allow her access to ice cold water.

If the udder swells bathe it with hot water; use a flannel cloth wrung out of a bucket of hot water and hold it on the inflamed parts. Keep this up persistently twice a day, a half hour if needed be at a time. Then rub with melted lard to which has been added a little turpentine.

Rinsing the Milk Cans.

Milk cans in Denmark are sprayed with cold water, then thoroughly sprinkled inside and out with hot water. They are then fastened to a revolving wheel which turns them through a solution of lime water, and they are finally sprayed with steam. The milk bottles are usually washed with soda and water and the inside cleaned by means of a mechanically worked revolving brush and are then rinsed out with cold water. The bottles are then filled and corked by a mechanical process, sealed and tied down with thread. The bottles are then put into racks and packed in ice, ready for distribution the following morning.

THE FEEDER

Mixed feeds go further than single feeds, and this saving, added to the growth and development, makes it all the more desirable to feed as wide a variety as is possible to obtain.

Good Ration For Young Horses.

Equal parts of ground oats and corn make an excellent ration for young horses. Some add bran, thus making the ration more rich in protein and phosphorus, which build up bone and muscle.

Grind Feed For the Calf.

Don't feed the calf grain it cannot masticate. Grind it for him and don't insult him with straw while he is standing where he can see and smell the sweet clover hay you are feeding to your milk cows.

For the Sheep.

Succulent food of some kind should be provided. Mangels are excellent, but rather expensive to grow. Turnips meet the requirements well and are inexpensive to grow as a catch crop when sown among corn at the last working. They should be fed in almost any quantity the supply will admit.

Value of Salt in Feed.

Put a little salt in the cow's mashed feed or chop. It enhances the flow of saliva while the animal is taking her feed, which is a good thing for an animal as well as for a human being. It is not a good thing to force a cow to eat more salt than she needs, so only a little should be given in the feed, and then free access to rock salt will permit her to have all she wants.

Feeding While Milking.

Cows that are trained to be milked without feed seem to give down their milk just as well as others. Some extra nervous cows might do better, though there is doubt if the food would not make them more nervous, especially if it gave out before the milking ended. A little choice feed may act as an incentive to make the cow come up to a desired point where it is more convenient to milk her. This may be better than to hunt the cows up and milk them where found.

SUCCESS WITH THE DAIRY COWS

An experienced dairyman has the following to say regarding the raising and keeping of dairy cows: There is quite a marked difference between the dairy cow and other types of cattle which should be clearly understood, that the right treatment may be given to produce the best results and make a success of dairying. The dairy cow does not lay on a very great supply of fat tissue beneath her skin to fall back on for nutrition and sub-



A JERSEY DAIRY PERFORMER.

stance from which to produce milk in case of shortage of feed. The greater part of the nutriment of the food eaten are converted almost at once into milk which nature has intended for the calf, but which man has learned to utilize for himself. If the food supply is reduced to a minimum the fountain soon becomes dry, for the cow has few reserves from which to produce milk. This being the truth, it is clearly perceivable that the dairy cow, if she is to give the flow of milk required, must be supplied with an abundant amount of good, nutritious food from which to produce it.

Not only is a good supply of nutritious food the prime factor of successful dairying, but regularity of feeding is essential as well. If once the time is set for feeding and regularity is started the cow will be ready for her feed at that hour as regularly as the hour comes. Her digestive organs will have accustomed themselves to do it, and the cow will not be hungry till that hour, but if it is overruled she becomes hungry and fretful. Fretting and worrying is a great handicap to the dairy cow.

With regularity of feeding there must also be regularity of milking. The full supply of milk is not in the bag ready to be drawn out before milking time comes, but a great amount of it is produced by glands during the operation of milking. This injures the glands and produces a decrease in the milk flow. It is also advisable that the persons milking the cows do not change often, for each person has a little different manner of milking, and a change causes the cow to feel uneasy, and in some cases, if the change is repeated too often, it may injure the bag, and the cow will give less milk. At milking time it is best that the cow be comfortable and contented. She should have consumed at least a part of her food before milking begins, so she will be satisfied and willing to give up her milk. It is also well that she should have had access to clean, fresh water before milking.

The barn in winter must be kept moderately warm and clean. Fifty degrees is a fair average for a dairy barn. It may vary some for winter and summer.

As for exercise, it is very essential that the dairy cow should have plenty of it. Summed up, then, the requirements of the dairy cow are good, wholesome food, regularity in feeding and milking, good care and treatment and plenty of open air exercise. These constitute the essentials of successful dairying.

Dipping Sheep. To rid sheep of external parasites or the scab mite they should be dipped in some effective dip. Coal tar dips are effective, nonpoisonous and do not ordinarily injure the wool. They are therefore considered among the best. Before using all dips should be tested. Mix one teaspoonful of the dip with fifty or seventy-five of water, according to directions. Wrap a few ticks or bedbugs in a gauze and dip them in this mixture for thirty seconds. Then place them under a tumbler, and if all are not dead in six hours the dip is not strong enough. It should be made strong enough to make a thirty second dip effective. Sheep are to be kept in the dip one minute. Place the dip in the tank before the water, so the mixture will be uniform.

The best time to dip is when the wool is one-fourth to one-half inch long, so that the dip will adhere to the fleece. If the ticks are present at shearing time the whole flock should be dipped at once to prevent the ticks from retting to the lambs.

CONCRETE TROUGHS.

They Are Durable and Healthful For the Stock.

As the equipment of the farm and dairy takes on an air of permanence commensurate with the well established plan of farm and dairy operations instituted by industrious business farmers the final profits of the place are distinctly increased. Permanent material costs more at first than perishable construction, but where the business is to follow a fairly settled policy durability far more than repays the little extra first cost it necessitates. Of all expending, short lived things on the dairy farm cheap wooden water troughs and tanks are among the worst. Concrete tanks are practically indestructible and never leak from age or from exposure to the sun. The first cost is practically the last of this artificial stone tank, so that the foresight to install it works an appreciable reduction in the annual expenses of dairy farm operation.

The conditions for making a trough water tight are, first, a richer mixture of concrete than is required for ordinary work; second, enough water in mixing to give a sloppy concrete, and, third, the placing of all concrete at one operation. It is extremely difficult to make any structure water tight unless all three of the above conditions are complied with.

The best of concrete should be used. Mix one part of good cement to one and a half parts of clean, coarse sand to three parts of screened gravel or broken stones. The amount of excavation necessary for the foundation depends upon the size.

Place a two and a half inch layer of concrete in the form and immediately



STOCK DRINKING FROM CONCRETE TROUGH.

after placing and before the concrete has set place a sheet of woven fence wire or some other wire fabric over the concrete, bending it up so that it will come to within an inch of the top of the forms at the sides and ends. Place two and a quarter inches more of the concrete in the bottom and ram lightly to bring the mortar to the surface and smooth it off evenly. The time to remove the forms depends upon conditions, such as the wetness of the concrete, the weather and the temperature. Paint the inside surface with pure portland cement mixed as thick as cream.

The Best Type of Farm Ram.

Fashion and the judgment of our best breeders decree that the low down blocky type ram, he that weighs "heavier" than we thought, "the little big sheep," is the one which will be sought these days of neat prime joints of mutton. Look for breadth of loin, full brisket, deep body, masculine head and neck, strong legs, strong full twist, deep flesh, thickness through the heart and thick leg, well let down flanks, strong constitution and all these good things clothed in as fine, long and dense fleece as possible. If coarseness is on either side let it be the ewe rather than the ram. What we are looking for in our lambs are "ships of the old block."

The novice when selecting a ram of the Downs or other hornless breeds of sheep should be very careful not to select one with stubs—miniature horns. Although rams having such defects are almost invariably robust and masculine in character and in many other ways desirable as flock headers, still stubs brand them as being of inferior breeding. Such animals are generally unfavorably noticed by show yard judges, and they should in every instance be disqualified.

Hollow backs, slack backs or backs with the "fatal" drop behind the shoulder are very serious defects in rams, and care should always be taken to avoid animals of this conformation, as, like so many other deformities, these are faults that both rams and ewes almost invariably transmit to their offspring.

Machine Milking.

The milking machine does not seem so universally popular as the cream separator, nor is it so successful in every way. The owner of a machine must follow the manufacturer's directions carefully if he desires success. This makes it necessary to run the machine himself or place it in the hands of most intelligent and skillful help.

Doubtless improvements will yet be made which will remove some imperfections and difficulties. One trouble is the difficulty of clean milking and the necessity of some stripping by hand. Certain cows do not give down their milk completely to the machine, while others do. There is a difference with individual cows. There is also a difference in dairymen who use machines. Some succeed and some do not, according to individual make-up.

Farm and Garden

BUILDING A STONE FENCE.

Connecticut Farmer Tells How to Utilize Bowlders That Are in the Way.

One of the most picturesque sights in New England is the stone wall fence. The utilization of loose stones, which otherwise incur the ground, for the construction of barriers necessary to farm life used to be a leading industry in New England before the advent of the barb wire fence. Even now many farmers extend their stone fences just to get rid of the rocks. And there are plenty of rocks in other parts of the country that can be used to the same useful purpose.

Here, however, is a brave farmer, F. H. Plumb of Tolland county, Conn., who goes further than picking up and piling stones. He believes in breaking up bowlders and using the fragments for fence material. Says Mr. Plumb: "An occasional bowlder here and there in a level, fertile field ought not to dishearten any robust, enthusiastic farmer from breaking them up and clearing them away. Dynamite, a sledge, a few chains and a steady yoke of oxen or team of horses will work wonders in a short time in many a field."

A knowledge of rocks, however, will prove of great assistance before work of any kind with them is undertaken. Some are apparently as hard as flint; others so soft they can almost be crushed between the fingers. Some have a grain similar to a log so they may be split by wedges and half rounds quite straight and true. Others will hammer or split into all sorts of forms and sizes. But there are few stones a stone mason cannot trim into any form he desires.

If we closely examine a bowlder, say, three to six feet long, we may no-



A STONE WALL FENCE.

tice it has a grain its entire length and all the way through.

I noticed my stonemason would take a drill twelve inches long and three-quarters of an inch in diameter and, with a two or three pound hammer mounted on a twenty inch handle, drill a hole six inches deep in the bowlder in a few minutes, depending on the hardness of the stone. Then along the same seam of the rock another hole was drilled, and perhaps another and another, these holes being about six inches apart.

Half rounds and a wedge were then inserted in each hole, the wedges gently started, and then the entire length of wedges driven home evenly by means of a twelve pound sledge. With this treatment the big hard rocks seemed to generally split evenly and straight through. If they did not, after the rock was split a few heavy blows with the big sledge would knock off any protruding pieces.

But there is a knack in knocking a stone to pieces or trimming the stone with the side of a sledge hammer or of its cutting edge that takes time, thought and observation to acquire.

My job was this: Extending easterly along the roadway from my house was an old tumble down wall that was the most unsightly place to my family on the entire farm. The land inside the wall is about ideal for a rank growth of timothy, and plenty of stones of all sizes, from a pebble to enormous bowlders, were there.

The smaller bowlders, such as a yoke of cattle could draw on a stone boat, and all the smaller stones the boys and myself had picked off after the plowing of the past three springs and hauled along the wall. Of course this made the old wall look even worse than before, and all sorts of weeds and brush began to grow up among it. As the wall lay, it was made up of stones of all sizes, many so big they had to be split or broken and used as foundation pieces before work could be begun.

Ordinarily for a new wall a strip is plowed and dug out just below the frost line. As my wall was only to be rebuilt this was unnecessary, for I had a good foundation.

My wall was laid with a straight face on the road side, while on the field side rough cobbles without a straight face were set up at a slant of about one foot to the four foot wall.

In no part of the wall were the stones just thrown or dumped in. Every stone was placed one at a time, no matter how small, and so placed that it rested firmly on its base, with as little tipping or looseness as possible.

A wall put up in this careful manner ought to last several generations.

Record Corn Yield.

In a corn growing contest in North Carolina 127 bushels were grown on one acre. It is believed that this breaks official records in this county.