

Give the hen wide range.

Tomatoes should be started early.

Potatoes are a highly specialized

Cows should be kept comfortable at all times.

Provide some succulent feed for ewes in winter.

Weeds rob the soil of food elements required by other plants.

Farm philosophers say this is going to be a very dry year.

The milch cow needs a shelter from the summer storms and heat.

A pig that is fed grain all his life usually falls to pay expenses.

Potatoes require considerable nitrogen and a large amount of potash.

The pigs should have a clean, dry yard to exercise in during the day.

A cheap and effective way of dehorning calves is with potash caustic.

By judicious choice of varieties carrots may be enjoyed for a long sea-

A daily record of work done will cut out many of the wastes of the

The oat crop as a money maker on the farm is liable not to receive the attention it deserves.

The soil on cultivated fields on hilly or rolling land will wash less if plowed well and extra deep.

The gardener should try to grow the carrot quickly in order to secure tender, sweet, uniform specimens.

One of the chief reasons for butter becoming rancid at an early age is the

ton of clover hay, 40 pounds of nitro-

Prune the trees in the early spring if possible, any month of the year if necessary, but be sure to prune the

Clover and grass seed may be sown, and a good stand secured, on oat the first of May.

If the buttermilk is not washed out casein in the milk.

With a quiet, stendy team a halffashloned walking plow.

There is no professional study that requires closer work than does the development of the corn plant-a combination of brain toll and nature.

Pigs in the pasture require some sort of crude shelter to protect them from the sun and keep them from blistering and scalding on hot days. cheap fertilizer is drilled to the acre.

Growing geese require large quantitles of grass, which they will obtain if allowed their range, and which will cut down the feed bill at least one-

The picking of live geese for the live geese feathers, so called, is practiced less and less. It is a cruel practice, and ought to be entirely abol-

The amount of feed that the pigs vised. That must be determined by assimilate food.

It has been found that the seeds of many weeds will retain their vitality for 15 to 25 years, possibly longes, and not all of the given year's seed grows in any one year.

It is surprising how few farmers have cement floors in their stables. and as a rule they do not realize the loss they sustain by having the earth floor or a leaky, filthy plank floor.

Poorly-hatched and poorly-brooded etc. chicks furnished good grounds in the past for believing that artificiallyhatched chicks were not as strong and vigorous as those hatched by the hen, and they were not. But matters have greatly changed of late years. until it is cooled and again brought There are now incubators and brood- to the proper temperature before beers that are reliable and safe.

Clover is rich in protein.

Feed young turkeys bread crumbs. Poultry is quite a large factor with

The brooder must be kept free from

The use of summer stlos is growing

Beet molasses contains over 56 degrees of potash per ton.

The sows and pigs should be put on

pasture as soon as possible. The seed well treated will treat the

armer to a disease free crop.

Some horses have learned to balk by being overloaded and abused.

Potatoes will do their best on a well-

manured, well-prepared clover sod. There are over 170,000,000 of acres

under wheat cultivation in the world. Peas, beans and onlone were first

known in Egypt many centuries ago. The intelligent care of trees is a

great aid in our battle with the insects. Let the patch of mangel-wurzels be

included in the farm plan for this

Old grass and clover pastures are much benefited by a dressing of plaster and ashes.

One of the "unfailing" signs of an ignorant or careless feeder is a bunch' of scouring pigs.

Weeds sometimes injure by killing farm stock, or by rendering their product unsalable.

The brood mare in foal should be handled by a firm, steady hand, not an excitable, rash hand.

Better to put up new fence or mend the old than to spend the rest of the

summer chasing pigs. With the high cost of feed, a little tankage added to the ration of hogs every day will pay big.

When the cream runs off the spoon like oil and has a slight acid taste it is, usually ripe for churning.

It has been found that denatured sugar forms a valuable and economical addition to skim milk for calves.

Some dairymen are finding it quite convenient to have the milking room hold four cows only at one time.

Stimulate the soil to a vigorous production by means of thorough culfact that it is not washed thoroughly. tivation and liberal use of fertilizer.

One ton of average fresh manure | In deep setting, with plenty of ice. contains ten pounds of nitrogen; one the cream is all up in 12 hours in any of the good family creamerles now in 1150.

> The age of seed has much to do with the vitality or germinating power. Young, bright, shiny seeds are best.

season of shortage and kept in a ground during the last of April and thrifty, growing condition, for weeks on mangels alone.

Young geese do not lay as many ferit will furnish abundant food for the tile eggs or produce as many goslings bacteria, since they thrive on the in the first breeding season as they do in the second.

Milk readily absorbs bad odors grown boy, with a sulky plow, can do such as arise from onions, garlie or as good work as a man with the old- decaying vegetables; hence don't set the milk pan near them.

> Grading of cream is receiving more attention by the dairy press and dairymen than it possibly ever has in the history of the dairy business.

A good stand of clover cannot be had when sown on fall or spring grain where only a few hundred pounds of

The worst feature of cucumber culture is the insect pests, but these may be controlled by dusting with dry insecticides or even with bone dust.

The same laws that have sent the prices of beef and pork products almost out of reach of the workingman will also hold the prices of poultry products.

Where one has plenty of land, or should get cannot be definitely ad- land that is too hilly or rocky for regular field cultivation, the pasture the feeder from the appetites of the affords the cheapest feed that can be grown on the farm.

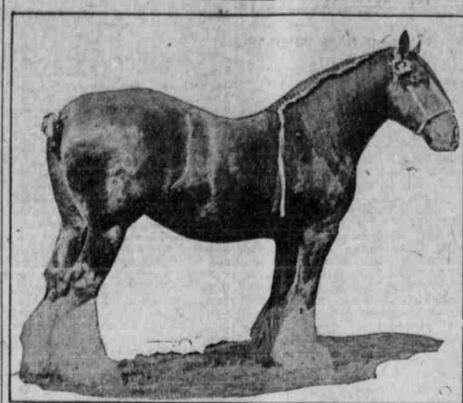
> For market purposes a stock bird, for a crop: large-breasted, firmly set on short legs, surmounted by large thighs, will prove valuable, especially if belonging to a showing how clod formation takes family of egg producers.

Whether dairying or beef raising should be carried on depends entirely upon the tastes of the land owner or renter and, of course, upon the condition of the buildings, the local market for dairy products, shipping facilities,

Many very good dairymen disagree as to whether it is best to separate the cream while it is warm and fresh from the cow or whether it is best to wait disked. Corn stalk roots and other trash prevent the ground from becoming separated and pasteurized.

### PEDIGREED STOCK BREEDING PLEASANT AND PROFITABLE

Of All Pursuits That City Business or Professional Man With Country Home Can Indulge in, Live Stock Heads List.



Prize-Winning English Sire.

(By CAPTAIN WADDELL.) country home and rural pursuits by a country home and farm to show way of relaxation from business, than Americans how easily this can be the ordinary man of this kind has any idea of.

A country home with land attached to it would be a dull place if there were not something besides the fresh LICE INFECTED air, scenery, babbling brooks, song birds and flowers to admire and occupy one's mind in a way that combines rest with pleasure.

Of all pursuits that the city business

or professional man with a country home and farm can indulge in, nothing is so pleasant and remunerative as that of pedigreed stock breeding. This may comprise horses of the various breeds, cattle, sheep and swine, either of which when taken hold of practically and sensibly will bring much pleasure and a good deal of profit to the man who indulges in during the year and as soon as an it. In the first place, there is a ready animal is discovered to be lousy, the market for good pedigreed stock of lice should be destroyed at once. We every kind, and apart from the pleas- have found a strong decoction of toure of breeding them and seeing them | bacco an excellent wash for the purflourish and grow into maturity there pose of destroying lice, but during is the delightfunl fascination of exhibiting them at the various horse and mixture of crude oil and crude carlive stock shows, competing with bolic acid mixed 50 parts crude oil to friends and neighbors and beating one part crude carbolic acid, and find

great stables of this country that sprayer, but for the hogs we prefer have been and still are winning the to use a brush, or to saturate a few majority of the blue ribbons through | gunny sacks or old blankets and wind out the country have imported all them around a post in the hog yards these horses from Great Britain, which | and allow the hogs to make their own robs him of much of the pleasure of tollets by rubbing against these posts. winning with home-bred animals, this They will soon learn how to apply is particularly the case with heavy the mixture where it is most needed harness borses, but the same holds and will keep themselves free from good in regard to Shires. Clydesdales, these pests if their beds and houses Suffolks, Percherons and Belgians, are kept clean and disinfected. Hogs have often been tided over a All the great winners at the great shows throughout this country where these horses are shown are importations from England and Scotland in the first three cases and France and Belgium in the two latter.

As far as polo ponies are concerned It is only necessary to say that ninetenths of the polo ponies that competed for the American cup at Hurlingham two years ago were English to have patience and do all one can bred and English purchased, which to assist them at first. robbed that splendid achievement of much of its glory.

All these animals as well as hunters, hackneys and Shetland and Welsh | raw egg in the milk, if given to a ponies, which are all in great demand calf with scours, is said to be very could be bred in this country as suc- | beneficial.

cessfully as they are in the countries There are pleasant profits to be in which their breeds originated, and made by the man who is seeking a it remains for the man of wealth with done, and so make it as pleasant and profitable as it is in Great Britain.

(By R. G. WEATHERSTONE.) Lice seem to be more troublesome during the spring when the farm animals are kept inside until warm weather comes than at any other time recent years we have been using a them with animals one has bred him- that this does the work in a very thorough and effective manner. On In the case of horses almost all the the cattle we apply it with a hand

Lamb is Helpless.

Considerable attention should be given to ewes and young lambs. A new-born lamb is just about the most helpless thing on the farm, and frequently needs a little help to get started in life, but when fairly under way no young stock will give the owner more satisfaction; and it will pay

A half cupful of wheat flour and a

## **FARM ANIMALS**

Insects More Troublesome During Spring When Live Stock Kept Inside Until Warm Weather Arrives.

**GOOD USE FOR DISK HARROW** 

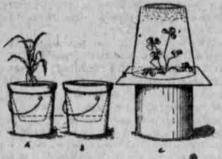
### **ELEMENTARY LESSONS IN** PRODUCTION OF PLANTS

In Study of Rudimentary Agriculture One Soon Learns That Things Do Not "Just Happen," But Follow Inexorable Laws.

(By D. J. CROSBY.) tin cans as near alike as you can get few hours. them and punch holes in the bottoms for drainage. Secure enough garden soil to fill both cans, mix it thoroughclods. Fill both cans level full of by jarring each can three times on same weight. Plant five or six kernels amount should be applied to the in about the same physical condition.

When the corn is three or four inches high, wet both soils thoroughly, al- plant carries food in solution which low the cans to stand until water ceases to drip from the bottom, weigh them, and record their weights separately. Set both cans in a warm light GUARD YOUNG place where the corn will continue to grow rapidly. Weigh the cans twice on the following day-morning and afternoon-and record the weights. keep this up for three or four days, or until the corn begins to suffer from lack of moisture. Water again and continue as before. You will probably find that the can containing the growing plants loses moisture much more rapidly than the other.

This experiment may be performed in another way by using flower pots instead of tin cans. When the corn is three or four inches high, get two lard orchard to find that many of them pails or cans just large enough to take in the pots to their rims. Mark thing for the trees, but it is also a on the outside of the pails the depth good thing for mice, as it affords to which the pots will extend on the inside, and at a point one inch above each mark made a dent which can be distinctly seen on the inside of the pail. Now fill each pail with water up to the dent, water both pots thoroughly, and set them in the pails as shown in the figure. Set both pails and pots in a warm, light place tramping snow around the base of so that the corn will continue to grow. their trees, but oftentimes this is neg-The next day remove the pots, and you will find that the water is not up to the dents, you will conclude, and naturally, that the soil has taken up



Moisture Demonstration. B., to show that plants absorb mois-from the soil. C, to show that plants off part of the moisture from the

the water. From an eight-ounce graduate pour into one pail just enough water to bring it up to the dent again. Make a record of the amount necessary to do this. Fill the graduate and bring the water in the other pail up to the dent. Repeat these operations daily for two or three weeks and you will be able to find out exactly how much moisture the growing plant absorbs.

In order to show that plants give off moisture, take a plant that is well started in a tomato can or flower pot, a piece of cardboard, and a glass tumbler large enough to cover the plant, cut a slit in the cardboard and draw it around the plant, seal the slit with-pitch, wax, or tallow so that no moisture can come up through it from below; cover the plant with the glass and set it in a warm, sunny place. Moisture will condense on the inner surface of the glass.

If moisture does not condense readily inside the glass, cool the glass by exposing it to a current of cold air or by wrapping it for a minute or two in a cloth wrung out of cold water. The outside of the glass should then be dried so the moisture on the outside will not obscure that within.

That water absorbed by the roots of plants is forced upward through the plant can be demonstrated by severing the stem of a geranium three or four inches from the surface of the soil, setting on top of the cut end of the stem a section of glass tubing several inches long, and fastening the two together by wrapping the joint with a strip of adhesive tape or surgeon's plaster. Keep the root of the the late or second crops.

plant normal by supplying it with wa-To show that plants absorb mois- ter. Note what happens inside the ture from the soil, take two one-quart glass tube, making observations every

To show that water and whatever substances it holds in solution circulate to all parts of the plant, fill a ly, and sift it to remove pebbles and tumbler about one-third full of lukewarm water colored with a few drops loose soil, which should then be packed of red ink or some other brilliant coloring matter, and place in colored the table or floor. It is important to water the freshly cut stems of white have the soil packed alike in both carnations, white roses, lilies of the cans. Weigh the fixed cans, and if valley, or other white flowers, or the one is heavier than the other, take twigs of trees with young leaves on, out enough soil to bring them to the or almost any soft green plant. Be sure that they are fresh. In a short of corn in one can, water both cans time the colored water will rise alike, and set them aside for the corn through the stems or twigs and may to grow. Whenever water is applied be seen distributed in vein-like patto the can containing corn, an equal tern through the petals of the flowers or through the leaves. Hold the other can in order to keep both soils leaves up to the light and the coloring matter can be seen more clearly. In this manner the stem of the has been absorbed by the roots.

# FRUIT TREES

If Mulched and Not Properly Pro-tected Much Damage Will Have Been Done By Mice—Best Material Is Wire Screening.

(By W. A. PATRICK.)

If your young trees were mulched last fall and not properly protected from mice and rabbits, you will probably be surprised when you visit the have been ruined. Mulch is a good them the best protection during the winter and they gather in large numbers around the foot of the trees and

eat away the bark. Protection is easy. The best material is wire screening, although some use tarred paper and veneer from wood. Some orchardists practice lected and the trees are injured before the work is accomplished. The protectors should be pressed into the ground deep enough to prevent the mice from crawling under. Personally I prefer wire screening, but in case tarred paper is used it should be promptly removed in the spring to prevent injury from scalding.

Transplanting Asparagus.

Some growers prefer lifting asparagus plants in the fall, choosing only the strongest for planting in the permanent plantation. If the ground is prepared early in the spring, the plants need not be lifted until planting begins, but the safer course is to take the plants up in the fall and store them in a cool, moist cellar or pit. Experiments at the Pennsylvania state college indicate that too much care cannot be exercised in the selection and planting of asparagus roots. This is one of the main arguments for growing one's own plants. If they are purchased at about \$4 a thousand, it is not likely that many will be discarded, while if grown at home and there is a surplus of several thousand, the grower does not hesitate to select the strongest. It is important that thinning be practiced in the nursery with a view to growing the best plants. This should be done when the plants are about two inches high. They should be thinned to one or two inches apart.

Mulch the Beds.

A mulch should be placed over the beds in the fall. It prevents the plants from heaving out of the ground by frost, protects them during the winter. conserves moisture the second season before and during the harvesting season, discourages growth of weeds and protects the berries from sand and other dirt.

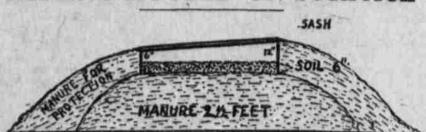
Scraping and Pruning.

Scraping old apple trees to remove loose bark is a good practive when combined with judicious pruning. It makes the trees look better and do better, and it reduces the number of insect hiding places. Once in three to five years if often enough to do it.

Dividing Point.

In the garden the Fourth of July is the natural date or dividing point between the early or first crops, and

## MAKING HOTBED ON SURFACE



a hotbed may be made on the surface | the purpose. by making a layer 21/2 feet deep and extending several feet beyond the sides and ends of the frame. Pack the before putting on the soil. Rich gar- down weeds and conserving moisture.

If plenty of manure can be obtained | den loam a trifle sandy is best for

Value of Mulching.

Mulching answers practically the manure solid and leave for a few days same purpose as cultivation in keeping

#### ing compact and firm. Fig. No. 4 is ground disked before

place and the depth at which mois-

Fig. No. 2 represents ground plowed,

showing air space between the turned

This air space prevents a firm and

and stops capillary attraction with the

Fig. No. 3 is plowed ground disked.

Note that the air spaces still exist.

This is what happens when corn stalk

ground is plowed without first being

ture can escape from the ground.

subsoil.

The illustration given herewith | it is plowed. The mulch of dirt breaks

Fig. No. 1 representes hard, crackedopen soil that has not been tilled,

shown in Fig. 4 plowed. Disking the ground before it is plowed leaves a mulch of fine dirt which fills up the air spaces left between the furrowed over slice and the ground beneath. slice and the ground beneath, thus making the foundation for a firm and compact seed bed.

Fig. No. 6 illustrates disking before and after plowing. When the ground is treated in this manner the seed bed becomes compact and firm in a much shorter time and forms a means of capillary attraction. This treatment puts the ground in such condition that whether the season be wet, dry or normal, the farmer is not taking any

#### shows the various uses to which the up capillary attraction so that moisdisk may be put in preparing the soil | ture cannot escape from the top of the ground. This permits what moisture there is in the ground to come close to the surface. Fig. No. 5 is the disked surface

compact seed bed from being made