WINTER GARDEN ON EVERY SOUTHERN FARM

and spring, as they can be easily grown and form valuable additions to he usual dry, winter diet. With more of such food products in the diet, there would be less use for spring tonics and other medicines. In addition to this these food products are palatable and serve to lower the cost of living.

se grops attain their best develment on a sandy loam soil well sup-ed with humus or decayed vegetable the late fall or early spring and will not withstand the heat of summer. In all sections of the lower South, lettuce, spinach and radishes can be grown in the open throughout the fall, winter and spring. In the more northern of the Southern states and in high altitudes these crops can be grown in full and spring in the open and during the winter in hotbeds or cold frames.

To have lettuce and radishes throughout the season, it is advisable to make sowings of seeds every two or three weeks. As soon as the crop is removed, another crop should be planted. The radish seed might be sown between the rows of lettuce if hand cultivation is to be given. The radishes would be harvested before the lettuce reached sufficient size to crowd. By making two sowings of spinach, one in the fall and another in late winter or early spring, a continuous supply can be secured.

In growing this crop in the open or a har in hotbeds and cold frames, the best The results can be secured by sowing the seed in a well-prepared bed and trans-planting the young plants. Sow the seed thinly in drills 4 to 6 inches apart and cover about one-half inch voy. deep. For the best results, transplant the young plants as soon as they form the first true leaves. Set these plants in insure good table qualities. The in a cold frame 2 inches apart each soil should be fertile and contain

(Prepared by the United States Department of Agriculture.)

Every Southern garden should have a supply of lettuce, spinsch and vaniter markets of the East demand a hard quality than the Big Boston. The markets of the East demand a hard head lettuce of the Big Boston type, but the markets of the Central use more of the loose-leaf lettuce. Unless growing for local market, however, it is best to grow the headed type, be-cause large quantities of the other kind are grown under giass in the central

Spinach can be grown in the open in all sections along the coast from Norfolk, Va., south and in practically all sections of the lower tier of South ern states. In the colder regions of the South, this crop can be grown in the open with a little protection or in canvas-covered cold frames throughout the winter.

The soil should be made fairly rich. Well-rotted manure is the best fertilizer, but if this is not available, apply at the rate of 50 to 100 pounds of a high-grade fertilizer per tenth acre. Sow the manure or fertilizer broad-cast and thoroughly harrow into the

soil. Five ounces of seed will make two plantings on the plot 20 feet square in drills 10 to 12 inches apart. Thin the plants out to stand three or four inches apart. Frequent shallow cultivation by hand or with a wheel frames, the cultivating must be done by hand. In most sections of the South, however, spinach can be grown in the open without any protection, as a hard freeze causes very little in-

The variety of spinach most com-monly grown is the Savoy. At Norfolk, Va., the large truckers grow a strain of this variety called the Norfolk Sa-

Radish.

way and at soon as they reach a height abundant moisture. Fresh stable ma of 11/4 to 2 Inches, take up the plants nure should not be used, however, as with a trowel or spade and set to the is would produce excessive leaf growth.

permanent bed. If planting in the Well-rotted manure is the best fertilifield, set the plants 8 to 10 inches zer and should be applied at rate of apart in rows 14 inches apart. When about two tons per tenth acre. If no



SOUND RADISHES OF UNIFORM SHAPE AND SIZE.

each way. Lettuce seed is sometimes grade complete fertilizer. sown in rows in the field and the

oughly prepared as very little cultiva- inch deep and on heavy moist soil, covtion can be given when the plants attain considerable size. While the beds or cold frames the rows of radish plants are small, the soil should be cultivated to keep down weeds and inches apart, or just wide enough for prevent a crust forming. In the hand heeing and weeding.

frames, a hoe of hand weeder can be the transport of tradishes, used, while in the open a wheel hoe turnip-shaped, olive-shaped and long. can be used to good advantage.

Of the loose-leaf types, the Grand Rap- are the French Brenkfast and Early ids and Black Seeded Simpson are Scarlet. The Charter Long Scarlet, among the best varieties, while the Big Long White Spanish and Icicle are the Boston is the best variety for market best varieties of the long type.

Poultry Industry Called On to In-

crease Meat Supply.

In Many Sections, Particularly in

South, Number of Fowls on Indi-

vidual Farms Should be Very

Largely Increased.

The secretary of sericulture points

out the importance of increasing poul-

try on the farms in the following let-

try association through Mr. Harry M.

I hope that the coming meeting of the American Poultry association,

which you will attend as a representa-

five of the department, will be high-

ly successful and productive of good

tial to the effective prosecution of the

the needs of the nations with which

we are co-operating. The poultry in-

dustry can render very great service to the nation in this emergency. The

production of poultry is one of the best means of bringing about a quick

increase in the meat supply of the country. In punny sections, particular-

ly in the South, the number of fowls

on individual farms can and should

adequate supply of foodstuffs is ess

I need not point out that an

transplanting to frames, the plants manure is available, apply at the rate should be set 8 to 10 inches apart of 100 pounds per tenth acre of a good

Sow the radish seed in rows 12 plants thinned out to stand the proper Inches apart in the field and cover onehalf to one inch deep, depending upon The soil for lettuce should be thor- the soil. On light, dry soil, cover one

Of the turnip-shaped, the best varie There are two general types of let-tuce, loose lenf and the heading types. Turnip. The best of the olive-shaped

NEED MORE CHICKENS agricultural colleges, the experiment of agwere generally adopted. riculture, many of the problems confronting poultrymen would be solved or miniplaced. The department is co-operating with the industry in many directions and stands ready, of course, to render any assistance it can

FIRE KILLS MANY PARASITES Burning Out of Stubble Fields is Wasteful, But It Has Another Side (From the United States Department of for Consideration.

> We feel that the burning out of stubble in fields and pastures is wasteful, but it has another side that calls sideration. Insects of many kinds infest these fields and take a share of our hard-earned farm pro-The fire destroys myriads these insects or their eggs if it is applled at the right time, and if we use the fire it is up to us to study the habits of the most troublesome insects and destroy them.

struggle in which we are engaged. We FILLING SILO TO CAPACITY must not only supply our own needs but we must endeavor to meet in part

Silo Carefully Packed Will Hold Much More Than One Carefessly Filled -Prevent Spoilage.

Use of sufficient labor to insure thorough packing fills the slio to its rated enpacky and at the same time prevents spoilage of ensilage around air pockets. A sile carefully packed will hold much more than one carelessly packed. In a silo over 12 feet in diameter it be very largely increased. If the improved methods which have been pen of worked out by the experts of the state pack. may be found profitable to keep two or two or three boys busy at the

. Take the Hens Along.

When you go after anything in the poultry business be sure to take the bens along with you.

Deal in Facts.
is best to always deal in facts in the poultry business, because

it page. Einstic Poultry Business.

The poultry business is clastic, and hometimes stretches as far as one's fancy will permit.

First Egg Is Smallest. The first egg laid by u pullet is the smallest and the size increases gradu-ally until about a dozen have been well. hild, when they begin to decrease.

Exercise for Cows.

Let the cows out for water and exercise while the stables are being cleaned out. It makes the work easter and does not worry the cows.

Until breeding time comes, it is visable to produce infertile eggs.

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

Progressive Agriculture

Making the Farmers' Profitable

TOLD IN AN INTERESTING MANNER EXPRESSLY FOR OUR READERS

CHARCOAL OF MUCH BENEFIT MANURE GOOD FOR ORCHARDS

Charcoal is good for hogs. It keeps their digestive apparatus in good running order. Corn cobs make good charceas when properly charred. nearly every farm most of the cobs feed lots until they become a nuland taske charcoal of them for the hogs? It can be done in the following

Dig a pit about 10 feet long, 3 feet wide and 3 or 4 feet deep. A larger hole than this can be made, depending upon the amount of cobs to be burned. With some paper and cobs or kindling start a fire in the center of the pit and as it gets a good start add more cobs. Continue adding cobs until the pit is filled, then lay some old sheet-iron across the top and cover with earth to hold in the fire and smoke. Leave alone for two or three days, then open and if the pit was properly made and filled, the cobs will have turned to charcoal. This can be taken out, sprinkled with salt, lime and copperas and placed where the hogs can get at it.

CARING FOR FARROWING SOW

Exercise Should Be Given and Corn Ration Decreased—Don't Feed Too Rich Ration.

Exercise the sow daily before farrowing Decrease the corn ration and increase the tankage rather than the middlings. For 24 hours after far-rowing do not feed the sow, or feed lightly. Water should be supplied. Care should be taken not to feed the sow too rich a ration. More milk may be available than the pigs can take, and milk fever may result.

After farrowing, the pigs should be given plenty of exercise, to prevent thumps. Rails about the sides of the pen will keep the sow from lying on the pigs. If colony houses are used. a lighted lantern hung inside on very cold nights will help to keep the

BABY BEEF SIRE DESIRABLE

Farmer Cannot Afford to Use Any Other Kind in Strictly Beef-Producing Undertaking.

If you are engaged in beef produc tion and raise your steers use a real "dyed in the wool" baby beef sire to make your business a profitable one. You cannot afford to use any other kind of sire in a strictly beef-producing undertaking. *

There are just four breeds of cattle common to America from which real buby beef sires can be selected. These are the Shorthorn, Hereford, Aberdeen Angus and Galloway. The market wants meaty, blocky beeves, and sires of these breeds are the kind that produce this type because beef production has been bred into them for generations past.

The way to get a good baby beef sire



Champion Swerthorn Steer.

only way to be certain of results. Buy from a reliable breeder, and if pos from a man you know. By all means be sure to buy from a man who maintains a disease-free herd.

The better the sire you use the greater is the improvement which he will produce in your herd. Use one that is better than any other animal in your herd and in buying a new sire always get one better, if possible, than the last.

MINERAL MATTER FOR SWINE

Mixture of Charcoal, Slaked Lime and Small Quantity of Salt is De-sirable in Winter.

During the winter, when the ground ir frozen, it is very desirable to provide mineral matter to hogs in the line and a small quantity of salt. This mixture can'be placed in a box where the pigs can eat as much as they want. ft-coal dust can usually be had at a much lower cost than charcoal, and it

Straw in Stock Ration Straw may be used in the feed ra-tion for horses, sheep and rougher cat



hence the need of harnyard manure or commercial nitrogen, Old orchard solls may need organic natter. This the barnyard manure will also supply. There is no other fertility that will stimulate growth in rees better than barnyard manure, for it affords both organic matter and ni-

growth is necessary, nitrogen in the soil will be necessary also. Warm soil may lack available nitrogen,

In applying manure to large trees do not make the mistake of applying the manure close to the tree, around the trunk. The young roots where the plant food is to be obtained for old trees may be considerable distance from the trunk of the tree. It is a good practice to spread the manure as far away from the trunk as the branches extend, possibly farther. This will provide that the manure is above many of the roots that are to absorb plant food.

DANGEROUS SAN JOSE SCALE

Insect Multiplies Rapidly and It Is Only Matter of Time Before Orchard is Destroyed.

(By PRESSLEY A. GLENN, Illinois Agricultural Experiment Station.)

It is difficult for one to realize fully the dangerous character of the San Jose scale unless he has seen its work. It feeds on the sap of the host plant, The amount of sap that a single vidual, or even several hundred individuals could extract could not injure a healthy tree or shrpb, but the species multiplies so rapidly, that from a few scattered parents millions of progeny may be produced in a season or two, sufficient to cover completely the bark of parts, or even all, of the tree. Most of our insect pests have natural enemies which so restrain their multiplication that they become destructively abundant only now and then; but those of the San Jose scale are inade-quate to its control. A young tree or shrub may be killed by the scale in



Mature Male San Jose Scale.

two or three years; older trees withis to buy one. Own your own bull if stand the attack longer, but sooner you have ten or more cows. It is the or later are likewise destroyed. Young orchards are killed out more quickly than old ones; and where young trees are set in old infested orchards, they they are old enough to fruit, Where VALUE OF SPRAYING this insect is present, orchards or other plantations containing trees. ceptible to its injury can only be preserved by spraying.

WINTER KILLING IS AVOIDED

Many Orchardists Harden Trees Late Summer and Early Fall by Planting Cover Grop.

Did you lose some of the trees in your orchard by winter-killing last year? R. B. Cruikshank of the Agricultural College Extension Service, Ohio State university says that many orchardists are preventing winter-killing by hardening their trees during late summer and fall months. They cease cultivation in August and plant a cover crop of clover or rye. This takes the moisture out of the soil which ordinarily would be taken up by the trees. Growth of the tree is finished by this time and the lack of moisture causes the wood to become firmer. Little damage is said to occur where this practice is followed.

AVOID HARM BY "SUNSCALD"

Best Preventive Probably Is Whitewash -Liberal Amount of Salt Will Make It Stick.

During the winter is the time when injury is done by what is commonly termed "sunscald." The best preventive is probably whitewash. White wash made from strong, fresh, stone lime will stick fairly well if a liberal amount of sait is added. Flour paste or a small amount of glue will also

Grade and Pack Carefully.

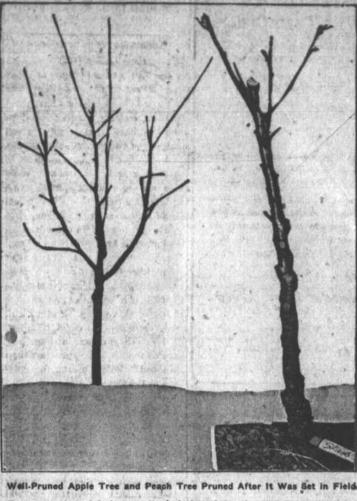
Be careful to grade and pack apple vell for market. Only firm, sound fruit should be used and this should be of uniform size and quality, no matter whether the box or barrel is used.

A Good Crabapple.

The Whitney crab is a good canning ort. It is straight, upright-growing Good for a back yard in town

Plums on Sandy Soil. Plums do well on sandy soil.

PRUNING OF FRUIT TREES IS ESSENTIAL



Proper pruning of fruit trees is ab-solutely essential to the production of should be examined occasionally and good fruit. And yet there is no other so cut as to secure a well-balanced top. necessary work about a farm orchard For many reasons high tops are the so constantly neglected.

And when it is done, in the majority of cases, it is only half done. As a upright, result of crowded limbs, and thick foliage, half of the fruit produced is of small size and bad color.

Now, all of this inferior fruit is unnecessary, for it is entirely possible to have every apple on the tree, of good full size, and color fully up to the standard of its variety.

There is no sufficient excuse for the prevailing neglect of pruning, for it may be done in the winter time, that season of comparative leisure in the country. The months of November, ber and January make up the right trimming season, says Iowa Homestead. If done at that time the wounds dry up, so that loss of sap later becomes unnecessary. But if this work is done in February and March, it is so near the period of the flow of sap that bleeding becomes inevitable.

Much Depends on Age. In pruning a tree to secure good fruit, the amount of work to be done depends upon the age of the tree, and previous work which has been

done upon it to keep it in shape. A tree which has been entirely neglected until it is ten years old presents a hard problem when you wish to bring it into shape,

Three-fourths of the top should be

removed, but as to take that amount off at once would be a serious shock to the tree, it is customary to take two years for the work, cutting out half of the superfluous branches one ling over the wound as soon as possiwister-and as many more the next year.

The wise way is, never to let trees get into that crowded, overgrown condition.

Been Carried on at the Mis-

souri University.

During recent years the University

Columbia in co-operation with a num-

ber of practical orchardists has been

ing and the general renovating of neg-lected orchards in Missouri.

During 1917 the results of proper

profit than in any previous During the last year neglected

spraying and pruning have shown

orchards have set very little or no

fruit. The little fruit which was set

here and there was for the most part small, wormy and of low market qual-

ity. Orchards properly sprayed and

up to a heavy crop of fruit. The qual-

Dispose of Inferior Stock.

Now that poultry foods are high in

price only the best pullets and yearling

fiens should be kept. Any Inferior

stock, or hens too old to lay, will not

make a profit on the food consumed.

Valuable Food Ammunition.

Keep the hens in laying trim. Their "shells" are valuable food ammunition.

Cow and Sow.

The arm of the farm is the cow

the sow.

chard.

Avoid All Crotches. When three-year-old trees are first planted, all crotches should be avoid-

IN APPLE ORCHARDS and the

full-grown man walking about them upright.

As the trees get larger, naturally more and more work will be needed in pruning. Thrifty eight to ten-year-old trees will make an astonishing growth of wood in one season.

Bear in mind that the tops should be kept thin enough so that the sun-light can penetrate to all parts. It is light which makes perfect fruit-other conditions being favorable. Remove Weak Limbs.

In general, remove the weakest limbs, and where two interfere cut one. Then shorten in all branches which show an abnormal growth, thus preserving the symmetry of the tree. Water sprouts—those sappy shoots which have started since last pruning, should be cut without mercy, excepting in cases where one is needed

to fill a vacant place.

If you have followed the rules for pruning, you will have a spreading. open-topped tree-so scattered in foliage that it will be a poor shade tree for a hot day, but exactly adapted to the growing of large, showy apples.

Owing to the prevalence of strong southwest winds, it is best to plant trees with a little inclination to the two-o'clock sun, and in pruning encourge the heaviest top on the same side of tree.

It is customary to say: Make

smooth cut; and a very little thought ing over the wound as soon as possi-ble. But if a rough, uneven surface is left, it is difficult, or perhaps im-possible for the bark to cover it.

All cuts above an inch in diameter should be painted with a soft grafting wax. This is needed, because the hot sun will check the wound and water

and the expense of growing the or-

SUCCESS WITH SHEEP FLOCK

on Feeding and Breeding and

Care of Ewes.

A great deal depends on the future

lamb crop, not so much for mutton as

lamb crop depends a great deal on the

Filth In Summer

In the busy season, by the pressure

of other supposedly more necessary work, it is very easy to neglect the

poultry house and to allow filth to col-lect. This should not be, for the hen

is one of the best crops on the farm.

Ground Feed for Chicks.

Provide for the chicks fresh, ground

feed when the grass becomes tough. Allow them access if possible to the cornfield. Here there is sufficient green

feed and abundance of shade.

will penetrate.

the same neighborhood hardly yielded bealthy can usually set fruit even dur-

pruned during the last two or three for the production of wool and the in-

chards this year has been the best ewes during the next few months, says

produced in Missouri in recent years. a writer in an exchange. The impres-Orchards properly sprayed and sion that a sheep can subsist on any-

well managed have yielded anywhere thing may be partially true, but in our

from \$100 up to several hundred dol-lars per acre, net. Neglected orchards I found that it pays, in the thrifty con-

in the same neighborhood have yielded dition of both ewes and lambs, to give anywhere from nothing up to \$18 to the sheep careful attention.

ears have set anywhere from a fair crease of farm flocks. And the future

apples on well-managed or feeding and breeding and care of the

interest on the valuation of the or- ing trying weather.

COWS REQUIRE PURE WATER Supply Constitutes. Three-Fourths of \$20 per acre, hardly enough to pay inme of Milk and Demands terest on the valuation of the land

als require plenty of good Some orchardists have hesitated to pure water. This is especially true of Demonstration Experiments Have spraying, and of employing the labor the milking cow, as water constitutes more than three-fourths of the volume necessary to properly prune the orof milk. The water supply, therefore, demands the dairyman's most careful chard. There is a fear that should the crop fall the orchardist would not attention. Stale or impure water is be in position to pay for his spraying outfit and his spraying material. distasteful to the cow and she will not drink enough for maximum milk of Missouri College of Agriculture at Many Missouri orchardists last production. Such water also may carry disease germs which might make spring complained that the rainy weather and cold nights during the the milk unsafe for human consumpcarrying on demonstration experi-ments in the value of spraying, prun-from setting fruit, or killed set fruit tion or be dangerous to the cow herself. During the winter, when cows age stabled the greater part of the on frosty nights. The killing was due time, and unless arrangements have been made to keep water before them almost entirely to the fact that in neg-The results of these demonstrations lected orchards the blossoms were show that apple orchards well managed can be made to yield the largest aged orchards, at least-a fall crop of all the time, they should be watered two or three times a day. If possible, the water should be 15 or 20 degrees profits of any Missouri farm crop. On fruit set and matured to fine condithe other hand neglected orchards in tion, due to the fact that trees kept above the freezing point, and sh

PUREBRED SIRE OF BENEFIT

Use of Animal Will Result in Great

Improvement of Herd-Have Better, Cattle.

There never has been a time when

the compon cow was at such a dis-advantage to her owner as the pres-ent time. It takes a good cow to pay

her way these times. A great many cows will be sold this fall because

they would be unprofitable this winter, and yet every cow that will produce a culf is needed by the country.

Is it not a good time to make a reso-

lution and live up to it, to have bet-

ter cattle? The common cow was all right for cheap land and cheap feed.

Superior Purebred Bull.

cows, for the great majority of farm-

ers who still have common cows. Get a purebred, sire this fall, and if you can, one that can be used this fall. The

use of purebred sires for ten years will generally result in a herd that passes

in appearance for purebreds, Surely it is worth while. A man is not as good

FISH MEAL GOOD FOR COWS

Nutritive Value as Affecting Milk or

The use of fish meal as a feed for

dairy cows is not strictly a new feed,

but only lately has the government seriously undertaken a study of it as

practical ingredient in dairy ratio

Fish meal is a by-product of the fish

industry. Waste from salmon and

sardine canneries is especially excel-lent for the manufacture of high-grade

Preliminary experiments made by

the U. S. Dairy Division show that

the meaf has no detrimental effect on the quality of milk or butter, and that

the nutritive value of fish meal as

affecting production compares favor-

ably with cottonseed meal. An aver-

age analysis, of fish meal is as fol-

lows: Water, 5 per cent; ash, 16; protein, 60; fat, 14; salt, 5.

Fish meal is manufactured from the fresh waste of fisheries by a process of steam cooking, pressing, and drying. It is preferably made from fresh

ing. It is preferably made from freshwater fish to avoid too high a content of salt. Dried-fish products, known

as fish scrap of "pomace," are used considerably for fertilizing purposes and fish meal fed to farm livestock re-

tains all its valuable fertilizing prop

Dairyman's Attention.

Butter Production Compares Well With Cottonseed.

a farmer as he can be, unless he is

proving his herd.

must still do to mother

URGE SKIMMING RICH CREAM

temperature every day.

be supplied at practically the same

Saving Can Be Accomplished by Turn Future Lamb Crop Depends Great Deal of Cream' Screw, and Is Well Worth Effort Required.

> In skimming a hundred pounds of 35 per cent cream, 15 more pounds of skim milk is kept on the farm than when the same amount of 20 per cent cream is taken. This saving can be accomplished by a turn of the cream screw, and at present feed prices is well worth the effort required. More skim milk on the farms also means more calves raised to furnish meat and milk for all. Milk producers are paid for the butterfat in cream; not for the water and other constitu This makes it advisable to skim a rich cream.

> Keeping Milk Clean. One of the best helps toward keep ing milk clean, is the use of a pail with a partially closed top for milking. This keeps most of the dirt out of the milk.

> Good Judgment Tells. Not the feed used but the a judgment with which it is fed de ines the size of the cream check and the amount of profit.

Pen an Abomination.

A fithy calf pen is an abomination.