

It is stated that there are 1,200,000 sheep in the United States now when the war began, and the United States is manufacturing more than twice as much wool as it produces. These facts seem to point to opportunities in sheep raising where conditions are favorable.

New York led all States in cabbage production last year with nearly 250,000 tons, which was almost half of the combined cabbage crops of the next eight States. Wisconsin, which came second in cabbage production, raised a little less than 100,000 tons.

Persons who may be interested in buying a New York farm may find

MAULE'S SEEDS
Once Grown Always Grown
Make this your best year's garden will be beautiful and more productive if you plant Maule's seeds. Every lot is tested for health, vigor and growing power before the seeds are sent to you.

THE MAULE SEED BOOK
175 pages full of valuable planting and growing information FREE
Write for it today.
Include 10c for a packet of Maule's Giant Peas—the largest and most beautiful you can buy.
You save money and get fresh seeds when you buy from
WM. HENRY MAULE, Inc.
2116 Arch Street Phila., Pa.

Vegetable Seeds
WE SHIP ORDERS THE DAY THEY ARE RECEIVED
Write for Our Catalog
Maurice Fuld
PLANTSMAN—SEEDSMAN
1457 BROADWAY, NEW YORK
PHONE BRYANT 2926

"How to Grow Roses"
will guide you straight to success in growing roses. We will send this 20-page booklet and our big 1918 Floral Guide to you free of charge. Write for it today.
ONARD & JONES CO.
30 ROSES, Box 24 WEST GROVE, Pa.
Sole, Phila., Pa., & Wilkes-Barre, Pa.

SALAD
Everybody likes Lettuce and Tomato Salad. Try Simon's Cabbage Head Lettuce. Best for spring and fall—pkts. 6 cts. extra 25c. 4 lb. 75c. 10 lb. \$1.50.
Simon's Hot Weather Lettuce stands the heat—best for summer—pkts. 6 cts. extra 25c. 4 lb. 40c. 10 lb. \$1.50.
Large, solid and almost seedless.
The kind that fills the cans for winter—pkts. 6 cts. extra 25c. 4 lb. \$1.10. 10 lb. \$4.00.
Write for Wholesale Market Gardeners Catalogue for 1918.

I. N. Simon & Son,
434 Market Street, Philadelphia, Pa.

Bearing Age Trees
fruit 10 years after planting
WILLS BONE GARDEN COLLECTION
5 Trees each for \$1.85
10 Trees each for \$3.50
15 Trees each for \$5.00
25 Trees each for \$8.00
50 Trees each for \$15.00
100 Trees each for \$25.00
Write for our illustrated catalogue and price list.
Wills Wholesale Nurseries
1111 West 10th Street, St. Louis, Mo.

Vegetable Plants
Book Your Order Now
My plants are grown from choicest seed. Extra Early Fancy Tomato Plants, in pots, large and strong, in bud and bloom, will produce abundant extra early crops, \$1 per doz. Special prices on quantities.

Early, strong, twice transplanted Tomatoes, Cabbages, Cauliflowers, Peppers, Eggplant and Celery, \$3 per 100. Special prices on quantities. Reserve your plants, which will be shipped at any desired time.

L. K. MATHEWS,
Pioneer Plant Grower, Linesville, Pa.

PLANT A GARDEN
and enjoy fresh, crisp vegetables as you never before. Of course, to have success in your garden you must grow the finest vegetable seeds. For 36 years farmers who plant for profit have depended on
BRUNJES' RELIABLE SEEDS
produce their finest crops and all home gardeners sending an order to us can rely on getting seeds of the same high quality. Our 64-page Garden Book which tells the best way to grow the finest vegetable seeds and the most beautiful flowers. We urge all, more than ever, to send for this book and plant a garden. It is free.

M. H. BRUNJES & SONS
1881 Morris Ave. Brooklyn, N. Y.

some suggestions of value in Cornell Extension Bulletin 23, which deals with the general types and characteristics of the various agricultural regions of the State.

English Ivy, roses, oleander and many other cuttings can be rooted by simply inserting them in a bottle of water. Rainwater is best, with a piece of charcoal in the bottle. Set in a warm window.

KOCHIA OR SUMMER CYPERUS.

This is a rapid growing annual of graceful habit and finely cut foliage, which changes to deeper hues and colors in the autumn. It makes a good pot plant, and it is also good for sub-tropical and summer beds, setting it out after the last frost. The seeds can be sown at once in a temperature of 60 degrees. Pot the seedlings in small pots and keep in the light. Water fairly liberally and provide larger pots as soon as the first are filled with roots. If allowed to become pot bound the plants will be checked and restrict in size. Encourage continuous growth by proper attention and timely shifts into larger pots.

CANNING MEAT.

METHOD I.
Free the meat from the bone and cut it in pieces of such a size that they will go into the jars easily. Pack the raw meat solidly into clean glass jars, filling the jars to within three-quarters of an inch from the top. Sprinkle over the top of the meat one-half teaspoonful of salt for each pint of meat. Add no water. Celery leaves, onion, pepper or other seasoning may be added if desired. Adjust on the jar a new rubber of good quality. Place the cover on the top of the jar and adjust, but do not fasten, the upper wire clamp, or if a Mason jar is used partly screw on the cover. Place the jars on a rack in a tightly covered container, such as a wash boiler, in which there is warm water that reaches to within about one inch from the tops of the jars. Sterilize the meat by cooking it from four to five hours, beginning to count the time when the water around the jars reaches the boiling point. A steam cooker is particularly convenient for this process, and a pressure canner reduces the sterilization period, but a wash boiler answers the purpose satisfactorily. Before removing the cans from the sterilizer complete the sealing of each jar by adjusting the lower wire of the clamp or, in the case of a Mason jar, by screwing the top tight. Keep the jars in a cool, dark place.

METHOD II.
Soak the meat in a hot oven, in hot fat, or in boiling water, and steam it or simmer it until it can be torn apart. Pack the meat into the jars, fill the space with stock and add one-half teaspoonful of salt to each pint of meat. Sterilize the meat for three hours, as in Method I. Unless the meat is first browned it does not have so good a flavor as that of raw meat steamed in the can.

CANNED CHICKEN.
Chicken may be successfully canned by either of the two methods suggested. Canning surplus chickens that have reached the proper age does away with the necessity of feeding and caring for them during the winter months. A fowl weighing two pounds when dressed should make a pint can of solid meat and a pint of stock thick enough to jelly. A fowl weighing three pounds should fill one and one-half pint cans.

CHICKEN STOCK.
All bones and trimmings of the chicken should be covered with cold water, salted and slowly simmered until the flesh drops in shreds from the bones and the liquid or stock is concentrated. Seasoning, such as onion and a bit of celery leaf, may be added. Strain the stock, if desired, reheat it and boil it for ten minutes. Pour it into sterilized jars, and sterilize it as described under Method I. for one hour on each of two successive days.

The Connecticut State College of Agriculture states that the 1918 peach crop has been killed in New England.

Use horse manure, not cow manure on clay soils. Do not manure the seed bed where seedlings are to be grown.

Scarlet salvia cuttings made now root quickly and make good bedding plants.

LADIES' GARDEN TOOL BAG AND KNEELING CUSHION.

For planting, transplanting, seed sowing, &c., put into the bag a trowel, hand fork, shears, memorandum book and pencil, scissors, seeds, bulbs and labels. For trimming, cutting back, seed gathering, carry shears, memorandum book and pencil, raffa, potting, envelopes for seeds. The cushion is waterproof, so it keeps the clothes from becoming damp.

Experiments at the Pennsylvania State College conducted for thirty-five years give definite information relative to the value of nitrate of soda on corn and wheat grown in the common four year rotation of corn, oats, wheat and grass. These results show that even at present high prices of grain crops little profit will result from the use of nitrate of soda for corn and wheat. Of the other two

crops, wheat gives greater assurance of profit than corn.

Figuring corn at \$1.25 a bushel in the field, nitrate of soda an average for a period of thirty-five years has been worth, when applied to this crop, \$44.75 a ton. Valuing wheat at \$2 a bushel, the average profit is more than the 1918 guaranteed price. Nitrate has been worth \$95.04 a ton. The residual effect of the nitrate applied to corn and wheat on the following oat and grass crops has been of some additional value.

Additional phosphate has given far greater increases in much more profit on these crops than has nitrate of soda. For any assurance of profitable increases in yields of corn and wheat from nitrate of soda phosphoric acid must first be supplied in liberal amounts. Where the grain crops are clover sod there would be little chance of profit from nitrate at present prices.

VICK'S GUIDE
Features: Based on our extensive experience as the oldest mail order seed concern and largest growers of Aster and other seeds in America. 500 acres and 12 greenhouses in best seed land in the world. Our Guide is full of helpful information about planting, etc.—an invaluable aid to a successful garden. Illustrates and describes leading Vegetables, Flowers, Farm Seeds, Plants and Fruits. With our Guide, the best we have issued, we will gladly include interesting booklet, "A Liberty Guide to the Value of Nitrate of Soda on Crops." Send for your copies today, before you forget.
JAMES VICK'S SONS
25 Stone Street, Rochester, N. Y.
The Flower City

Latest figures from the Federal Department of Agriculture show New York second in number of milch cows, being led by Wisconsin and followed in order by Iowa and Minnesota.

FERTILIZERS CHANGE ANALYSIS OF WHEAT

Commercial fertilizers can affect the composition of wheat and flour, the protein and phosphorus of the grain varying with differences in the quantities of nitrogen and phosphorus in the fertilizer added to the soil. This conclusion, set forth in Bulletin 318, just issued by the Agricultural Experiment Station at Wooster, is based upon investigations of soils cropped and fertilized alike in rotation for twenty years.

Phosphorus in fertilizers plumped the wheat kernels, increased the yield of grain, but lowered the protein content. Nitrogen generally increased the protein content of the grain, but it tended to cause small or shriveled kernels and to depress the phosphorus content. The highest content of protein was found in wheat grown on soil deficient in available phosphorus and soil supplied with available nitrogen.

The protein in the flour tended to parallel the increased protein content of wheat where the available nitrogen in the soil was increased. The loaf volume of bread from these wheats varied as the protein content of the wheat and flour.

NICOTINE SULPHATE KILLS LEAF HOPPERS.

Nicotine sulphate ("Black Leaf 40") diluted with 700 parts of water will kill leaf hoppers that infest grapes and most garden vegetables. If two pounds of soap is added to each fifty gallons the material will stick better. Since this is a poison that kills the insects only by hitting them, thoroughness in spraying all parts is necessary for greatest effectiveness. This spray is effective only before the leaf hoppers acquire wings. The young of most species are numerous in the latter part of July and early August. This is the most favorable period for treatment.

PROPER WAY TO PLANT TREES.

By M. G. KAINS.

Now that spring is at hand in the northern half of the north temperate zone many people are preparing to plant fruit and ornamental trees. Often they feel there must be some trick about this matter, so they engage laborers who are ignorant of the proper methods but who make pretense of knowing a great deal. Such men are to be avoided, because they usually injure, if not destroy, many valuable specimens or plant the trees so poorly that only poor results follow. For these reasons the following methods will be found of value by prospective amateur planters, who if they do not actually perform the work themselves can be present to insist upon the right way of doing it.

Too often trees are allowed to remain out of the ground with their roots exposed to the air. When the atmosphere is dry, when the sun is shining hotly and when the wind is blowing, this is the best insurance that the tree will die if allowed to remain so exposed for any considerable length of time. Trees should never be allowed to remain in the sun and air a minute longer than is absolutely necessary at the time of transplanting. Whenever it is necessary to have them out of the ground for any length of time their roots should be placed in water, or better still in a creamy mud, preferably composed of clay and water, so that the loss of moisture from the twigs may be offset by the absorption of moisture by the roots. When this plan is followed the planter can work with greater leisure and without the fear that the plants will suffer.

Whenever time will permit the hole in which a tree or a shrub is to be planted should be made at least a foot broader than the spread of roots of the tree to be placed in it. Care should be exercised in digging the hole to throw the surface layer of good soil in a pile by itself and then to place the poorer layer of subsoil in a separate pile. Some of the finer soil should be placed in the bottom of the hole before the tree roots are lowered in it, and then the tree, previously pruned, should be held with its stem vertical and the earth from the topsoil pile gently thrown in and worked among the roots with the fingers. As this work is continued the soil should be pressed down as firmly as the hands can press, and after all the roots are covered with two to four inches of soil the feet should be used to press the earth still firmer. After all the topsoil has been placed in the hole the poor or subsoil should be placed on top. This should also be firmly tramped down and a little soil thrown loosely over the surface.

Trimming the roots previous to planting need not be very extensive; merely the removal of any jagged or torn pieces. Such injured ends should be cut off cleanly with a sharp knife, preferably from the under side, so that the cut surface will press downward against the soil rather than upward or straight outward. It is also a good plan to shorten all of the directly downward pointing roots. Callouses will form over all of these cut surfaces, and in a very short time new roots will push through.

In setting a tree in the hole as just described the trunk should be placed so that the collar is not deeper than the tree stood in the nursery row. This collar can be easily seen because of the difference in the color at that point between the trunk above the

ground and that below. In general it may be said that the depth at which trees and shrubs should be planted will be such that the collar will be about two inches below the surface of the soil when the work is finished.

Usually the roots will be found growing from several different points on the stem, hence the reason for applying the earth gently, as noted above. It is also essential that the roots be not jammed, as is sometimes the case when ignorant and careless workmen do the work. The lowest roots should be spread out carefully just as the earth is being applied, then the next group, and so on till all have been evenly distributed. After the work has been finished if the soil is dry it may be well to give the soil around each tree one thorough soaking. To do this properly a trench should be made around the tree deep enough to hold three or four pails of water; not little pails, but large ones. Enough water should be applied to soak the earth to the depth of at least a foot.

After the tree has been set it should be pruned. It should never be allowed to continue with the same amount of top as it had in the nursery, because there must be a new balance established between the injured roots and the so far uninjured top. Otherwise the amount of moisture that would be transpired could not be supplied by the main roots. In doing this trimming it is advisable to cut out uniformly from the top of the tree, next one of those that would form a more or less vertical Y crotch, because such a formation favors splitting in after years. The limbs to be left should be reduced to not more than seven, and these should be shortened more or less, depending on the amount of other work that has been cut off. Seven limbs is too large a number to have on a fruit tree or more years from planting. The only reason for leaving so many is to have one to four, which may be removed later, but which may be considered as insurance of a good top in case of accident, such as breakage by an ice storm. Three to five limbs are enough for the framework of a fruit tree.

After the tree is set it should be firmly tied to a stake if there is any danger of its whipping in the wind. The best way to tie is to use one or two strips, which should be placed between the stake and the tree, the ends wound around the tree from opposite sides, brought back around the stake

and tied between the tree and the stake. This method will allow for expansion and will prevent the rubbing of the tree against the stake. If there is danger of injury from mice and rabbits the trunk should be protected with a guard of galvanized hardware cloth or wire netting with meshes half an inch apart and reaching to a height of about two feet. From the start the surface of the ground around the tree should be kept loose and open and free from weeds by weekly hoeing. Every one who practices these methods should succeed well in making trees grow.

Herbert C. Chivers, the well known St. Louis architect who has planned artistic homes that have been built in practically every State in the country, now has a rapidly growing department devoted entirely to ready built homes, more particularly of the summer home type, which are in great demand.

At a trifling cost above that of the lumber and mill work, a summer home may now be had, built in sections, in portable form. Mr. Chivers has put art into the work; the average portable house is not always artistic. Any one can erect these houses without the aid of a builder. Poultry houses, garages, corn cribs, summer coops, sleeping houses and buildings for other purposes are supplied complete at the lowest possible cost.

Herbert Chivers is not only a landscape architect, but is also a landscape painter, in addition to designing practical, artistic homes and laying out the grounds. The whole work is planned and delivered at a definite cost, relieving the owner of all responsibility.

AERIAL GARDENING.

It solves the whole question of small gardens with large results. While this method of suspended flowering vines is widely practiced in Europe it is rarely demonstrated on this side of the world except in the jungles of South America. Given the factors of success, supports, good soil and attention, any one may have a hanging garden and, if not of Babylonian dimensions, it will suggest those famous gardens in miniature.

The first essentials are saplings at least twenty feet long, preferably cedar, or if these are not obtainable

condemned gas pipe from the junk dealer will economically supply their place. They should be set firmly in the ground close to the fence posts, to which they may be stapled or wired. A few pounds of the triple screw joints such as gasfitters use are essential. The uprights may then be connected with each other, surrounding the garden and traversing it diagonally from corner to corner. If saplings are used the connections may be made of strong wire, tarred to prevent rust, or of copper.

At the base of each upright a surrounding trench must be dug at least eighteen inches deep, not near enough to the uprights to endanger their hold. This trench should be filled with good garden soil enriched with crushed bone, leaf mould from the woods and decayed manure.

Place two flowering vines on opposite sides of the supports, beginning with the wisterias, the early blooming Chinese and the later American. The next to bloom will be the Bignonia Caprolata or cross vine. The earliest climbing rose is the Gardenia or climbing Marechal Niel. The other climbing roses need no description. Hawthorn, Dorothy Perkins, Tausenchen, Van Fleet, Souper and the others are legion. The various conyevrals are valuable. The wild grape and Virginia creeper can be obtained from the woods. Those vines that have their crimson garlands until Christmas must not be forgotten, nor the morning glories either. The cardinal climber, the polygonum, are valuable and the bignonia family are sufficient in themselves if well chosen. There are seven, hardly as far north as Boston. They are grandiflora, Caprolata, Sangunia, Madam Galen, Thunbergia, Hyblen, Praxos, Hunter and the old fashioned that is found in every woodland. The Caprolata or cross vine is especially valuable because it is the first to bloom and its foliage is an extremely beautiful evergreen, as persistent as the English ivy. It is to be found all through the woodlands of Virginia, Indiana and the South. It thrives in the cool uplands of the Blue Ridge Mountains and it is the only evergreen flowering vine that grows in our latitude. If it winter kills to the root in some localities it is when exposed to severe western winds, but planted against a south wall it is a never failing joy. It is a most profuse bloomer.

The bignonia must be pruned to a single stem, like the grape, or they

will run to foliage instead of flowers. All lateral growths must be removed on these vines must be removed in early growth. This air garden, properly cared for, will yield a constant succession of roses and flowers in great variety and charm until severe frost.

An indispensable adjunct is the Clematis family. The Jackmann type is the earliest to bloom—May and June—in all shades of mauve, crimson, purple and white. For August and September the Panclata, with its billows of fragrant white blossoms, is a most picturesque and precious plant and its earliest sister, Vitalba or traveller's joy, is an addition of importance.

The roots of all these perennial vines take up small garden space. They cast but little shade, leaving the lawn unbroken. They require cultivation and improve year by year, if fertilized. They are a valuable asset to any garden, requiring no protection.

A ball of twine to tie in the branches should always be at hand, otherwise the wind will whip the garlands to pieces if left to its mercy. Some of the rambler roses are such rampant growers that they will monopolize the supports if not kept in subjection. Care should be used in choosing the vines. Some are almost constant bloomers. The Coral and Heckrott have the most vivid coloring and others are almost evergreens. The nurserymen's books will guide one in the selection and experience will drive the lesson home.

It is possible to support climbers upon trees without injuring the trees by planting them in pockets of roof soil a few feet distant and leading the vines upon a wire to the branches. They soon seek the light and air above. Then they can be conveyed to the next tree on a wire. In every climatic wisteria and the Gardenia rise over 100 feet long from the roots to the brackets under a roof of a three storied house, with thousands of blossoms basking in the sunlight and dancing to every breeze—a joyous sight. Grapes grown in the same way are both useful and ornamental.

If one wishes to cultivate the half hardy vines, like the passion flower, Jessamine, Marechal Niel and the Banksians, Marechal Niel and others, it can be accomplished by dropping them from their supports in November and laying them close to the garden wall or fence, covering with leaves and a board, slightly elevated for air. In the spring, when the apple trees are

in blossom, the covering must be removed and when they start into growth they can be uplifted and tied to the supports. They will then keep pace with the hardy climber.

In some parts of the Northern States the climbing tea roses and the macrophylla are treated in the same way successfully. A neglected class of climbers are our brambles. The pink and white flowering raspberry is as true as the roses. Another lovely hardy vine is the Chinese yam, which grows wild in the middle States. It is called Ipomea pandurata.

The roots are immortal, the top dies down, but returns early in the spring to make a marvelous growth and comes into profuse bloom in mid-summer until frost. The convolvulus like flower is as large as a silver dollar, white with a purple throat.

Finally the winter charm of the bitter sweet must be remembered. The red fruits persist nearly all winter. To describe all the beautiful things that love to climb to the ether would transcend the limits of this article and your garden—but just try the scheme.

These garlands, when in flower, would drive Eve, in the garden of Paradise, mad with envy. If one is at all emotional an ecstasy of daily delight will be the reward of what may truly be called a labor of love, with varied and continuing interest.

The vegetables produced in the home garden or on the farm are now in a class with war munitions. It seems to be necessary to urge planting in every available piece of soil as an imperative war measure. The supply of vegetable seed and commercial fertilizer is seriously short, and it is therefore highly important that each grower get the most efficient results from what he has. Since the home garden is often a waster of seed, the New Jersey State Agricultural College calls attention to the following most common errors in gardening:

- Too large a garden.
 - Too much variety.
 - Too heavy fertilizing.
 - Too close planting.
 - Too much intercropping.
 - Too much seed.
 - Too thick a stand of plants.
- Gardeners will get better results if these are avoided.

See other farm and garden news on pages 5, 6 and 8.

Couldn't Build Better

ARTISTIC HOMES
a 1000-page plan-book sent to you for \$1

All home-loving home-building people need it in their library for style guide and economy in construction. It contains 2000 plans and designs

—let me build that new home

Show me your lowest bid and let me point out improvement of plan design and landscape effect saving 5% to 10% on any ready-cut house offered

—ready-cut houses include:

- (1) all framing and finishing lumber, lath, etc.
- (2) all sash, doors, floors, frames and finish
- (3) all nails, tinwork, fancy hardware, paints

—an architectural effect

Unless you get a truly clean-cut architectural effect—impossible through planing mill and carpenter alone—where the incentive to build

You can erect these unit-planned, machine-cut notched-to-fit, mill-framed houses as easily as your child would build a little house of blocks

You should see the goods before parting with your money—seeing is believing—therefore call or send some one or write some one to call

Figuring lumber to exactness—art combined—with harmony throughout is my profession like figuring dollars-to-bushels is probably yours

By promptly writing me (preferably getting the above book) or referring to some of these or other ready-cut houses offered you get first call

HERBERT C. CHIVERS
617 Olive —CONSTRUCTING— St. Louis
ARCHITECT

Free Landscape Gardening Service

Ready-Cut No. 1 \$1474
Ready-Cut No. 2 \$1505
Ready-Cut No. 3 \$1180
Ready-Cut No. 4 \$1608
Ready-Cut No. 5 \$1054
Ready-Cut No. 6 \$1545

Get a Redibilt—
No. 100
No. 101
No. 102
No. 103
No. 104
No. 105
No. 106
No. 107
No. 108
No. 109
No. 110
No. 111
No. 112
No. 113
No. 114
No. 115
No. 116
No. 117
No. 118
No. 119
No. 120