

BACK YARD FARMER

Interesting Pointers on Gardening for the City Man or Suburbanite.

WHAT TO PLANT AND WHEN

Advice by an Expert on Agricultural Matters—Care of the Garden—Raising Sweet Peas—Hot Weather Pointers.

By PROF. JOHN WILLARD BOLTE. Every man with available land should make some kind of a garden on it. About one man in three who could have a nice little garden plot in the city has one. Almost everybody in the suburbs has both lawn, flowers and a vegetable garden.

The fascination of this delightful pastime is amply demonstrated by the fact that so many people make gardens every year and yet the majority of these gardens are failures to a greater or less degree. They start out beautifully, with the warm, fresh mellow earth turned over from its winter's rest, and the little delicate seedlings following the warm rains.

The first crops, small things like radishes and lettuce, develop fairly well and the gardener puts in his late crops with great expectations. When the hot, dry weather of late June and early July arrives the plants begin to shrink and shrivel. They turn brown and enter into a kind of dormant state, neither advancing nor retreating, worthless as food providers and certainly unhandsome to view.

This unthrifty summer condition breaks out the most satisfactory crops, corn, beans, tomatoes, cucumbers, etc. The worst of it is that the same thing happens to the same gardens, year after year, and the best of it is that it need not happen at all if the gardener will use his head as much as his back, and use both of them a good deal.

The two great causes of garden failures are lack of proper cultivation and lack of available plant food. In a humid climate it should never be necessary to water the garden if the soil is in proper condition to hold the natural rainfall. It needs to be plowed deeply, cultivated finely, firmed down well to make capillary connection between the soil water below and the plant roots above, and then the surface must be hoed, and hoed and hoed. Never let up on the hoeing.

A single weed will evaporate many times its own weight in valuable soil water every day. If you permit the top soil to bake or a crust to form, direct means is established for the soil water to evaporate and it will leave the soil as rapidly as it would an open dish and possibly more rapidly. Do your best to keep your garden covered with an inch of fine, dry dust all the summer through. The roots will go deep and the plants will get all the water there is.

Next, fertility: A garden must contain plant food and the best plant food is rotten vegetable matter. Make a compost heap in some out-of-the-way corner or in a large box. Here throw your stable manure, grass clippings, leaves, waste vegetables, hen manure, in fact, anything that will rot. Keep it moist and keep flies away from it. Grass sod is an excellent foundation for a compost heap and it is extensively used by florists. Use plenty of the compost on your garden, plowing it under, and be careful not to put in too much straw, as that will dry out the soil. The compost will increase the water-holding capacity of the soil, it will permit of better ventilation, it furnishes plant food of all kinds, it lightens a heavy soil and stiffens a sandy one.

If you wish to brace up weak plants and force them this summer, fill a barrel full of manure and cover with water. The liquid resulting is the finest kind of quick acting fertilizer. Pour it about the plants to be forced, and the effect will be immediately perceptible.

Sweet Peas.

No flower is more generally beloved than the old fashioned Sweet Pea. It was dear to the hearts of our great grandmothers and their great-grandmothers as well, and for no telling how many generations back of that.

It belongs to a large family whose scientific name is taken from the peculiar butterfly-like form of the blossoms. The garden varieties of green peas, string, wax, navy, pole and lima beans and the ornamental beans, are its first cousins. Some of our most valuable field crops, notably alfalfa, red, crimson, alsike and white clover, are first cousins once removed, and every wild flower that has the butterfly blossom is more or less distantly related.

Really, we have immense cause to be thankful for many members of the leguminous plants. As field crops they form the finest kind of hay and pasturage, and they are the only cultivated plants that possess the power of transferring nitrogen from the air to the soil. Without them it would be practically impossible to keep our soil productive.

In the floral field, this family is not so numerous prominent as some other groups, but the Sweet Pea makes up for any shortages in number by its rare merit.

The Sweet Pea grows better under an open sunny conditions at this one. Light and air, heavy, fertilizer or no fertilizer, deep trench or shallow

which care or little, it will do its very best to bloom early and often, and it will succeed most remarkably well.

Did you ever know any persons who did not like the perfume of the Sweet Pea? We do not, and we are sorry for them if there be any such.

In variety of tints the most fastidious can be suited, as there are 40 or 50 different shades and mixtures to choose from. They range from a deep pearly purple through all shades and mixtures of blue and red, to the purest vivid white. The colors are not merely surface colors. They are deep colors that actually live.

The proper way to grow sweet peas to their greatest perfection is to dig a trench a foot wide and a foot deep, as early as possible in the spring. Fill in six inches with rich, loose loam and plant the seed three inches apart and one-half inch deep after soaking them in water. As soon as the seedlings are six inches high fill in with earth around them until only two inches of the plant shows. This treatment will insure a more extensive root development and more resistance to drought. Fill in from time to time until the bottom of the trench is level with the land. Furnish a support for the vines, either woven wire, branches, or a fence, and they will run up several feet.

Be sure that you pick all of the blossoms as soon as they are perfect and the plants will bloom from early summer until frost. If allowed to go to seed the plants will promptly cease blooming.

The Sweet Pea might well be our national flower. May it bloom forever.

Garden in Hot Weather.

When hot weather visits us the fate of most gardens hangs in the balance. At this time, the garden needs our care more than at any other and we feel less like giving it the necessary care. The weather is hot and the air is still, and a hammock in a shady nook looks better to father than any "Man With the Hoe" tableau, especially after a hard day's work. Remember that the kind of weather that gives you a very tired feeling, makes the weeds grow rank and bold and dries the garden soil until it is almost water-proof.

Probably you feel that you don't need the exercise nearly as much as you did in the spring, and probably you are right; at the same time it will do you good if you take it properly, and you cannot afford to have the garden go to pieces just when a little work will pull it through in grand shape.

Get up half an hour earlier than usual and do your garden work then, instead of waiting until the tired evening or trying to lump it all into a week's end job. A little daily work in the cool of the early morning will send you to your regular bread-and-butter job feeling many times better than that little extra sleep would.

Gone is that brown tasp—gone the dead-alive feeling that the long stifling summer night brings.

Nature is at her loveliest while the dew is on and half the fun of gardening is getting close to nature. Do your gardening before you are tired out and enjoy it to the utmost.

We have previously told you what to do for the weeds, which, like the poor, are always with us. Unlike the poor, however, they need no assistance, but the strongest possible resistance, because they are altogether too well able to fend for themselves. Cut off their heads, cut off their feet, burn their middles, and do it before they have any offspring. Then start in and do it all over again, because they resurrect mighty fast if given the slightest opportunity.

Keep the soil surface in a dry, pulverized, weedless condition, and never let it harden. Pull the weeds out of the rows, where the hoe cannot reach them, because they do more harm here than between the rows.

If the garden shows lack of moisture, it must be furnished, and the best way to do this is to irrigate at night. This is better than sprinkling, because the water soaks in deeper and evaporation is much less at night than in the daytime. A thorough soaking once a week is plenty and the soil should be cultivated the next morning to hold the water.

This, then, is the time when a soil full of manure is appreciated. It holds more water and does not bake.

Foods for Brood Sows.

Brood sows should have bulky and succulent foods. Grain feeds do not furnish these elements. Roots, vegetables and forage should be given in abundance.

Value of Salt.

Salt not only promotes digestion and assimilation, thus keeping the dairy herd in good health, but it is a big factor in causing the butter to come at churning time.

Big Price for Hen.

The prize Missouri hen which laid 281 eggs in the contest last year recently sold for \$800.

Meaning of Ventilation. Ventilation means fresh air—not a draft.

Tonic for Hogs.

Common coal is an excellent tonic for hogs.

Make More Profit.

More alfalfa and less high priced feed will make more profit.

Command Big Prices. Well-matched teams are the ones that command the big prices.

FILLERS FOR WOOD.

Hard, Soft and Medium Woods Require Different Treatment.

The woods employed in furniture making and house furnishing may be placed in three groups as regards their filling as follows, according to A. Ashmun Kelly in the National Builder: Open Grained Woods.—These require paste filling, being "hard woods": Ash, beech, butternut, baywood, black walnut, chestnut, elm, mahogany, oak and rosewood.

Close Grained Woods.—These are filled with liquid fillers, being soft woods: Bass, cedar, California redwood, gum, Oregon pine, poplar, spruce, tamarack, white pine, Washington fir, white wood and yellow pine.

There is another group of woods that occupy an intermediate place, though they might properly be classed with the close grained woods—namely, birch, cherry, Circassian walnut and maple. They are sometimes filled with paste filler, sometimes with liquid filler.

Chestnut and some oaks are very open pored and not only require paste filling, but often two fillings and a stiff paste. The purpose of the paste filler is to fill up the openings in the tissue of the wood, the liquid part of the filler saturating the tissue and so to some extent preventing the wood robbing the varnish coat and occasioning pinholing, etc. For this purpose it is sometimes best to apply a coat of liquid filler over the paste filling, and in some instances another coat of paste filler over the liquid is best. In any case the idea is to form a hard and impermeable foundation for the varnish coats that are to follow. Where staining and wax finishing are to be effected there is no need for filling the pores of the wood.

A filler should be colored to match the wood, but should be made a shade or so darker, whether the wood is stained or not. The following is a very good formula for making a paste filler: Mix two parts of best coach Japan and three parts of raw linseed oil, both by weight. To this liquid add enough finely pulverized silica to form a stiff paste. If this can be run through a hand mill all the better. The thorough mixing of the mass should be accomplished in some manner, and the mill does it better than the stirrer or paddle. Then add such pigment as desired for color.

AUTOMOBILE MIRROR.

Overhead Location Gives Driver a View of Vehicles Behind.

The use of a small mirror to reflect a view of the following traffic is fairly common practice, though the location of such a mirror is not always the best. One difficulty is that traffic close behind a vehicle equipped with a mirror



OVERHEAD MIRROR FOR AUTO.

is in the usual position cannot be seen. In order to obviate this difficulty a driver of a limousine placed the mirror on the roof of the car. The mirror is mounted in a hood, which protects it against rain or snow. Through a glass covered hole in the roof the driver has a good view of the mirror without undue exertion, and the traffic directly behind can be plainly seen.

Gelatin a Protector.

Gelatin belongs to the class of protective colloids possessing the ability to surround minute particles of suspensions with a film that prevents their aggregation into precipitates. Since the formation of crystals is a growth from very small nuclei, this process also may be hindered by a small amount of gelatin. Commercially this principle is applied in the making of marshmallows. The presence of a little gelatin does no harm—in fact, it is a food—and it effectually prevents the crystallization of sugar within the marshmallow. Commercial ice cream contains some gelatin for the same purpose, to prevent the graininess of sugar crystallization. But further than this the gelatin surrounds the particles of casein in the milk with a protective film which hinders curdling and greatly aids digestion.

Man's Knowledge of Fire.

We have no evidence of the time when man did not have the knowledge of producing fire. It is certain that man possessed fire as far back as quaternary time. In the case of the earliest cave men we find numerous hearths, ashes and cinders, bones wholly or partly calcined and fragments of pottery blackened by smoke. As far back as we can go we find man cooking his food. As to how men came by their knowledge of fire there is room for a wide difference of opinion. Its use was probably first known in some volcanic region, where it was suggested by nature itself. Then came the two sticks and later on the flints, by means of which men could produce the necessary agent at will.

Heat of Sun's Rays.

One square yard of the earth's surface receives each day averaging six hours of sunshine an amount of heat equal to that contained in 1.8 pounds of coal, according to an Italian chemist. At this rate an area of about 1,200 miles receives during a year an amount of energy from the sun equivalent to that obtainable from the 1,100,000,000 tons of coal mined annually in Europe and the United States.

BEAUTIFUL

SUCCESSFUL MERCHANTS AID IN CLEANING CITY.

Co-operation in Observance of Cleanup Day Brings Business.

Thousands of business failures are recorded annually. Small dealers make up the largest part of these. In almost every community one or more go on the list. Sometimes they are more invested their last cent in an undertaking, with nothing in reserve for an emergency. They soon find themselves hopelessly involved, with debts constantly creeping up around them, until the pressure of creditors is so great that they can no longer sustain it, and bankruptcy is the result.

The wages of thoughtlessness is failure. Go into business with your eyes fully open and know what you are doing. If you have \$500 to \$1,000 or more to invest in a local enterprise keep out at least 25 per cent as a reserve fund. This will help to tide you over any difficulties which may arise.

When you start in a small way and overburden yourself by accepting too great a credit from some wholesaler on the capital invested you at once invite difficulties. Unless you have a remarkable run of business when you first open up your heavy obligation to the wholesaler will come due and you will find yourself entangled.

At once you will try to borrow money to protect yourself, but this is hard to get if you are indebted to the wholesaler for the amount of all the goods in your store.

One of the chief causes of failure is the lack of ideas by which to make your business attractive to customers. Advertising in the right way and at the right time is the best means of stirring up trade. Several years ago a man who had learned the grocery business in a large city went back to his home town and started in a small way. He was a willing, hard worker, but through lack of ingenuity and initiative he had to close his place, losing the money he had invested.

Two years ago, with a resourceful silent partner, he again went into business in the same town. This time, with the assistance of his partner, the business was given life and made to live and expand. The partner at once inserted an advertisement in the local paper which read: "Our homemade pies are good enough for Mayor John. Aren't they good enough for you?" The personality entered into in this advertisement at once focused attention to it. The mayor was running for reelection at the time, and the advertisement helped him also.

This was only the starter. Others even more original were brought before the people through the medium of the local paper and at once caught and held the attention of all. Day after day new features were tried. They showed clear mental vision and an insight into human nature. The advertisements offered the things that people needed.

Last year the town had a cleanup week. The new store at once advertised brooms and paint and other necessary commodities at reduced prices. Recently it started on its own account a town beautiful campaign, adding to its stock many things that could be used in this connection, thus creating a bigger field for development.

The returns on the original investment have enabled the partners to open two other stores in nearby towns, where the same plans for getting business are being successfully used.

MAPLE TREES HIS MONUMENT

Pennsylvania Man Beautified Streets of Espy Fifty Years Ago.

Fifty years ago in Espy, Pa., M. C. McCollum planted many maple trees on the streets. He said that these trees would always be a monument honoring his memory. During these years Mr. McCollum has taken great interest in the growth and development of his trees.

This is a type of patriotism worth far more than that aroused by war's alarms. It makes for better living because it is constructive and permanent and bears on home life. In deed, men reared in such surroundings will be better citizens and, if need be, better soldiers, because their homes are more than walls of brick or wood. Just as Mr. McCollum has transformed Espy from a village of houses to a village of homes, so countless other villages and towns may be transformed. It needs only the awakening of a genuine, peaceful patriotism to make oneself a public benefactor in this kind of way. Such a movement will surely keep one's memory green better than "storied urn or animated bust."

Nasturtiums For Bare Spots.

Plant nasturtiums wherever there is a bare spot in your back yard. Plant them wherever you think there is going to be a bare place. They are among the most easily grown of flowers, and the showy blossoms, which flower until frost can be used for cut flowers for the house all through the summer.

One householder who has a back yard garden always plants nasturtiums about her hollyhocks. When she cuts down the stalks of the hollyhocks after the flowers have passed by—a practice, by the way, which keeps the plants strong and the flowers big—the nasturtiums are just ready to demand every inch of ground in sight.

HOLD BIG PICNIC TO MAKE TOWN RECREATION PARK.

Wenonah Men Swing Axes While Women Prepare Dinner For Tailors.

The good folk of Wenonah, N. J., recently decided to have a public recreation park. Just how to get it, however, was the question. Mayor O. Fowler Cline and the officers of the Wenonah Mutual Improvement association after discussing various plans decided that the best way was to call on the citizens and boys and girls of the town for aid.

A big picnic was organized, and after a day of labor, mingled with merriment, the picnicers saw their new recreation park well established. All day the men swung axes or scythes, the boys chopped with hatchets, and the women and the girls raked or prepared good things to eat.

When darkness put an end to the work the little army of axmen and rakers had cleared a large tract in the thirty acres of woodland skirting Wenonah lake and made it suitable for picnics and all sorts of healthy recreations for the townspeople.

The thirty acre tract was acquired by the borough a year ago, when it purchased its waterworks, and is one of the most beautiful spots in this region. The council recently voted to permit the Mutual Improvement association to establish a park on this land. Without waiting for a municipal appropriation to improve the place the association called for volunteers and held its town picnic, with the result that the park is now assured.

While the men worked the women of the town prepared a picnic dinner in a large circus tent on the shore of the lake and at noon fed more than 150 hungry workers.

The roadbed of the old Cape May railroad runs through the park, and this is to be later converted into a boulevard, skirted by artificial lakes, running from Wenonah to Woodbury and avoiding the dangerous crossings of the electric shore line. Ties torn from the old railroad, which was abandoned several years ago when the line was strengthened, were torn up and the sound ones used for building bridges. Great quantities of brush were cut away, and an expert forester marked diseased trees, which will later be felled.

ADVERTISING TO GET RESULTS

The Right Kind Certain to Bring an Increase of Business.

Advertising is simple to some people and very difficult and complicated to others. The former class never spends a dollar on printing ink without the assurance of good returns. The other class sometimes spends thousands of dollars without the slightest result.

Is it a mystery? Not at all. A thoroughly experienced person can tell beforehand whether an advertising campaign will pay. It is not easy to say just what form of advertisement will give the best results, but it is easy enough to select the method of advertising which will give such results.

There is a right way and a wrong way of conducting an advertising campaign, and good advertisements and good mediums may prove worthless if the advertiser has chosen the wrong way.

Speaking generally, the mail order system is one of the wrong ways, although it may pay individuals. It is merely a substitute, a temporary substitute, for the true and tried old system of retailing merchandise. Take the case of the retail grocer who sells a private blend of tea and who is trying to build a big demand through the mails. He may ultimately create a fair business by mail, but it should be obvious even to himself that a far wider outlet awaits a similar article pushed through the usual trade channels.

Mail order business is an unnatural business and is not likely to be a permanent feature of the country's commerce. The magic of advertising? That's right. The magician's wand cannot do the expected job with one wave, however, nor can it work its wonders through a single class of mediums.

The public must be reached, and each of these branches of the advertising job must receive proper treatment. If one is neglected in the least there will be disappointment. The retailer's advertising task is, as a rule, much simpler than the manufacturer's, except, of course, when he wishes to push his own private brands into general distributive channels.

To Kill Germs in Streets.

The destruction of dust germs in streets and gutters through the use of a city street sprinkler is recommended by Thomas H. Ham, an attorney of Albany, N. Y. He suggests that a bag of sulphate of iron, placed in the water tank sufficient in amount to make a 1 per cent solution, would kill innumerable dust germs and parasites.

"The mayors of the cities of the state should try the plan in the interest of public health," said Mr. Ham. This method would prove very inexpensive and tend to lessen those diseases which are spread through the germs in dust.

Pupils Raise Money For Schools.

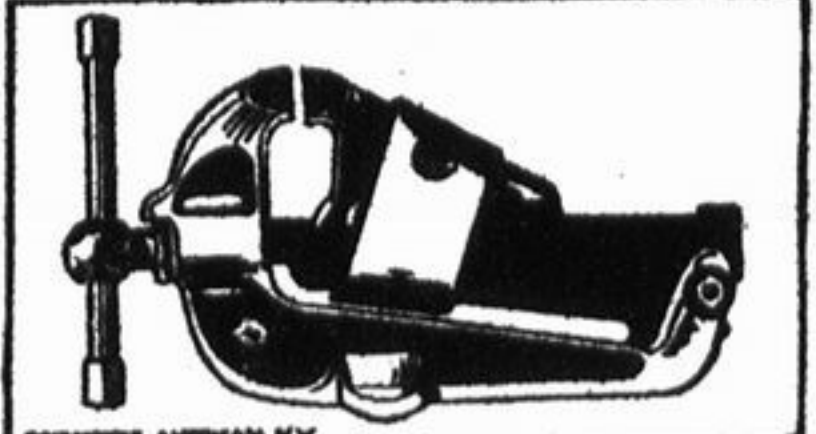
Money for the operation and maintenance of the public schools of Blue Island, Ill., when taxes were inadequate was raised when 800 school children participated in a brilliant pageant of nations. This plan was hit upon by the kids themselves, and teachers aided in the event.

QUICK ACTION VISE.

Jaws Instantly Adjusted by Means of a Movable Collar.

Pictured in the accompanying engraving is a quick action vise, which differs from the ordinary in the fact that it contains no notches, teeth or springs. Instead, the locking of the jaws is effected by means of tapering surfaces. An adjustment of the jaws is accomplished instantly by simply moving a collar forward which carries the riding jaw with it.

The work is first held between the jaws with one hand, and the collar is moved forward until the jaws close upon the object, after which the jaws are tightened upon the work by a quarter of a turn of the screw. A quarter revolution is all that is necessary, whether the jaws be open one-half inch or ten inches. The screw consists of a stub threaded into the end of the bar on which the movable



QUICK ACTION BENCH VISE.

jaw is supported. The shoulder of the screw head extends into the overhanging lip of the stationary jaw, so that when the screw is turned in the opposite direction it will bear against this lip and force the jaws open.

A thumbcrew on the side of the collar is a means to prevent the collar from changing its position until it is necessary to open or close the jaws further. The thumbcrew is threaded through the side of the collar and extends into the recess in the side of the movable jaw. The supporting bar on which the movable jaw is carried is secured to the tail end of the fixed jaw and is provided with sufficient lengthwise movement to enable the screw to tighten the jaws upon the work.

Simple Diving Apparatus.

To walk into and under the water with one end of the source of air supply clutched in the mouth was an experiment carried out recently by an ex-sailor of the French navy in demonstrating the simplicity of a diving apparatus he has invented. The apparatus consists merely of a tube fixed at the mouth of the diver by means of a rubber band which covers the lower part of the face and passes around the head, a small rubber hose of any desired length and an air pump of the type used to inflate automobile tires. Tooth grips are provided to help keep the tube in the proper position in the mouth. With this simple apparatus the inventor, dressed in an ordinary bathing suit, entered the river Seine, in Paris, and walked out along its bottom, remaining under water ten minutes. By the bubbles caused by his breathing his course along the river bed was followed, the government officials witnessing the experiment. The automobile pump kept the diver supplied with the necessary volume of air, and the test was declared a success from every point of view. So far the trials have not been made in very deep water.

Extending the Erie Canal.

Writing in the current issue of the National Waterways Magazine, Representative Cyrus Cline of Indiana suggests that by canalizing the Maumee river from Toledo to Fort Wayne, a distance of 120 miles, and then cutting through a fairly level country along the shores of Indiana to some point in Lake Michigan, a distance of 120 miles more, the Erie canal can be extended to Chicago. This would provide a direct waterway of sufficient size to float heavy freight from Chicago to New York and eastern cities without reloading. It would cut off 850 miles from the existing circuitous round trip between Chicago and Toledo via Lake Michigan, the strait of Mackinac, Lake Huron, the Detroit river and Lake Erie. He asserts that the Erie canal without the assistance of trade by this direct route to Chicago will not carry 10 per cent of the freight it is capable of floating.

Kerosene a Rust Softener.

Kerosene is of great value as a softener of rust, but in four cases out of five it is not given sufficient time to do this work. Kerosene splashed on and immediately rubbed off will do practically no good. It must be given time to penetrate, the longer the better. Several hours at least ought to be allowed, and if the rust is heavy all day or all night or both will be found necessary to give the oil an opportunity to do what it is capable of doing. The same principle applies, of course, in cases where kerosene is applied to a nut rusted on a bolt or stud, only in this case the oil has to penetrate between the metal faces in addition to permeating the film of rust.

A Bright Dip For Metal.

Articles of brass, copper and bronze may be given a bright luster by dipping them into a solution composed of fifty ounces of nitric acid, twenty-five ounces of sulphuric acid, liquid measure, and one-half ounce of salt, by weight. After the articles are dipped into the solution they are removed and thoroughly washed, then dried in sawdust to prevent streaks.

Preserving Inscriptions.

Inscriptions and carvings on the rocks, the work of ancient Indian tribes, are being preserved by the government by means of an impression made in paper.