



BEAUTIFYING *Farm Home Grounds*

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THE INSPIRATION

The attainment and enjoyment of beautiful home grounds are among the greatest privileges associated with country living. A beautiful home environment constitutes one of the greatest existing sources of inspiration for the finer and better emotions of life. Beautiful trees, shrubs, lawns, and flowers surrounding ones abode constitute a perpetual source of human satisfaction. With all the wonderful developments of the modern city, man has not discovered an adequate substitute for the enjoyment of the elements that constitute a beautiful landscape.

Planning and developing beautiful grounds about the farm home is not an especially difficult task. No elaborate effects are needed, nor are they appropriate. A simple unpretentious development to harmonize the home grounds with the larger landscape, but of a somewhat more cultivated, subdued, and refined character, should be the controlling aim.

BEAUTIFYING THE FARM HOME GROUNDS

By C. P. HALLIGAN

The development of beautiful grounds about the farm home begins with the selection of the site for the house. The location selected for the house should first of all be sightly, that is, it should be a pleasing spot to live upon. This infers that it should be somewhat higher than its surrounding ground, with plenty of light and pleasing views or scenes available from it. A beautiful vista of a distant lake or river, of a picturesque valley, or even a large expanse of landscape with its

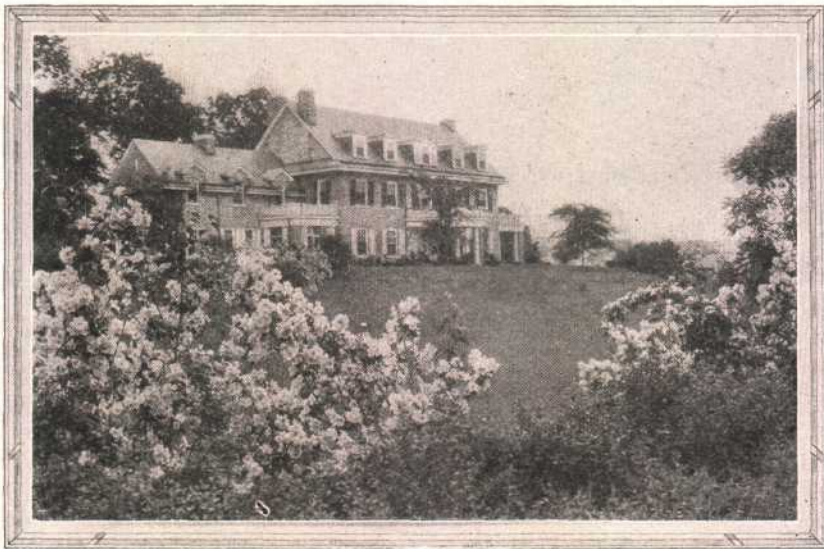


Fig. 1.—The selection of a sightly spot for the house is the first important step in the development of beautiful home grounds.

changing seasonal effects will enhance the enjoyableness of the place without adding to its cost. Pleasing landscape vistas tend to make pleasing home grounds.

The exposure of the site is also an important consideration. A bountiful supply of sunlight makes a dwelling bright, cheerful, and attractive, and exercises a beneficial influence in maintaining healthfulness. Sunlight is particularly welcome during the winter months. An ideal site possesses a good exposure to the south so that the more important

rooms of the house may be arranged to obtain the most sunlight at this period of the year. A location that is more or less protected from the north and west with an open exposure to the south and east is most desirable. On many farms, such a site sheltered from the north and west by a hill, woods, or other natural features, is available which, if selected as a site, would help much to shelter the house from the harsh winds of the winter months.

A slight knoll generally makes an ideal site for a building. If the land is level, much the same effect may be secured by setting the building rather high on its foundation, and grading up to it. A little additional filling will obtain at least a portion of these advantages. On farms which are hilly and rough, ideal sites may be found, sites, too, which would prove of very little value for farming purposes.

The house should be located an ample distance back from the public road. It has been a common error in the past to place the farm house

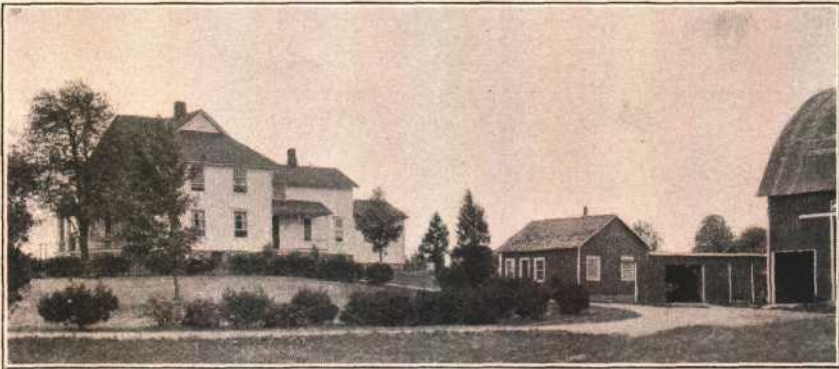


Fig. 2.—A well selected home site with a systematic arrangement of farm buildings.

too near the highway to give the privacy, dignity, and beauty which may be had by a proper treatment of the grounds where an ample area for a front lawn is available.

Since the living room, dining room, and other sections of the house should have a southern exposure, it is well to have the larger lawn area, the most desirable vistas, and pleasing landscape effects available from this side of the house. Sufficient space should be left, however, between the house and the boundary along the least desirable side for the placement of the drive and walks to prevent the necessity of breaking the unity of the lawn area by their presence upon the more important side.

Drainage

The site for a house should possess good soil and air drainage. Low areas where the under-drainage is poor or where inefficient surface drainage may exist should be avoided. A good natural circulation of air is more desirable than a site into which the cold damp atmosphere collects without channels through which it may drain away.

Divisions of Grounds

A home grounds may be considered as being composed of a number of major divisions each of which commonly serves rather definite functions. The more important of these divisions in relation to their functions are the entrance division, the service division, and the living division.

The entrance division usually includes the front lawn, the entrance drive, and walks. It generally is that portion of the property which the public sees from the highway and from which visitors receive their impression of the entire place. The general appearance of this division should be trim and tidy, simple, dignified, hospitable, and pleasing.



Fig. 3.—A few well placed trees are often the basis of all that is beautiful about the home grounds.

The service division usually constitutes the back yard. It is that portion of the grounds required for performing the necessary but often unsightly requirements of a dwelling. It is necessarily in close relationship with what may be considered the service section of the house. It should provide an entrance and exit to the service division of the house and to the garage. It should include a convenient and well-planned laundry yard for drying clothes and for such other functions as are needed about a dwelling. The vegetable garden may be included in this division or otherwise directly adjoining it. The unsightly appearance of many back yards is often due to a lack of arrangement of the service division to serve conveniently and efficiently these necessary functions.

The living division may be considered as that portion of the grounds where the family may enjoy out-of-doors the privacy of family life in

a most pleasing environment without being in full view of the service division, of the neighbors, or of every passer-by upon the highway. It should be in direct communication with the living room or living porch and is usually developed on the farm in the form of a spacious lawn area appropriately planted with shrubs and flowers and sheltered by one or more groups of wide spreading shade trees.

A study of the general arrangement and coordination of these divisions is the first step in the development of a home grounds. Such a study answers the question as to what purposes the home grounds are to serve and what general arrangements of the grounds will serve these purposes in the most convenient and pleasing manner.

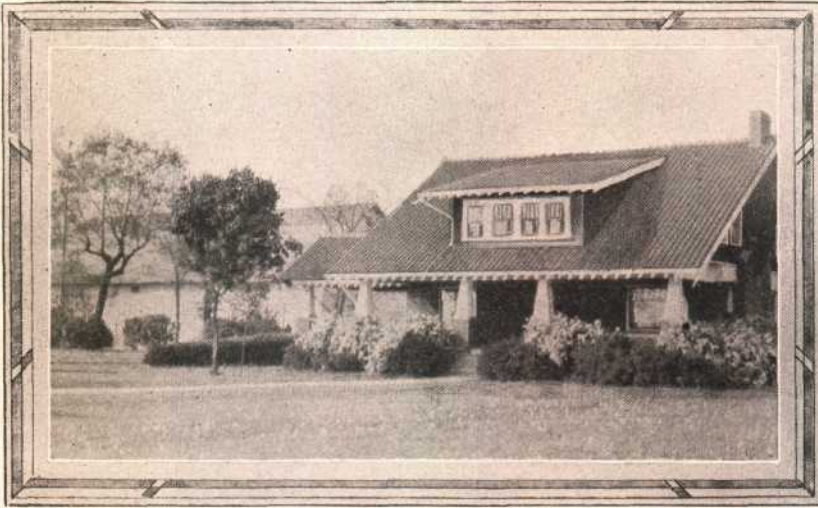


Fig. 4.—A farm home set well back from the highway with an open unbroken lawn and a tasteful shrubbery planting.

Grading

There is usually more or less grading which should be done before seeding and planting. In determining the grades, it is well to keep clearly in mind the fundamental objects of grading which are to produce a pleasing setting for the house, to provide surface drainage away from the building and for every portion of the grounds, and to smooth off the small irregularities of the surface of the lawn.

A building will generally possess an ideal setting from the standpoint of grades when it appears to be located on the summit of a slight knoll with the land sloping gracefully away from it on all sides. Except in some very special cases, a level lawn should not be constructed. In grading, endeavor to preserve the slight natural slopes and curves of the land, remembering that nature never produces perfectly level surfaces. This part of the grading should be carefully studied and considered before starting the work. The way in which it is done will determine whether a graceful, pleasing, natural lawn or a stiff, restrained, unsatisfactory one is secured.

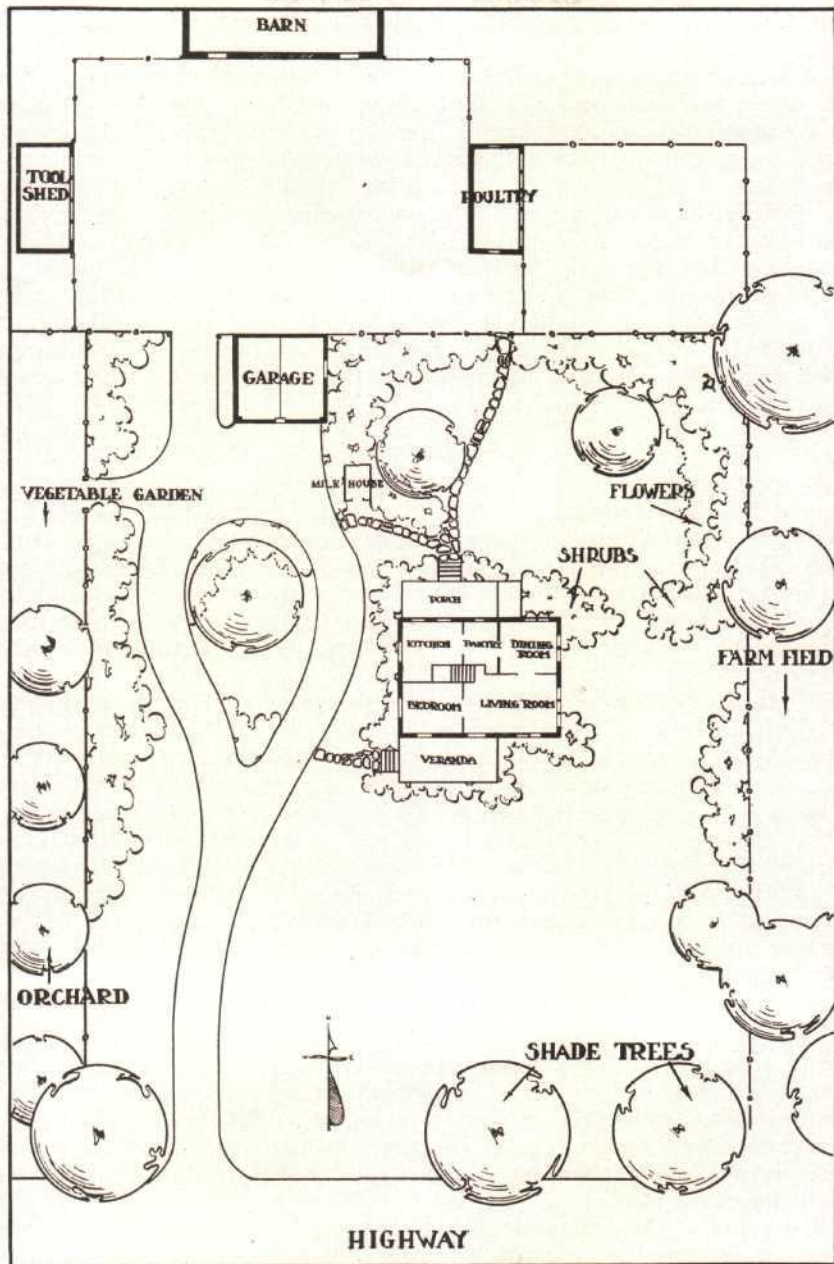


Fig. 5.—A planting design of farm grounds showing well designed entrance drive, systematic arrangement of the farm buildings and general arrangement of shrubs and shade trees to develop a sightly home grounds.

In doing the grading work, care should be exercised to save the top soil. Where cuts or fills are necessary, the top soil should first be removed and then replaced after the cuts or fills have been made. A top soil of six inches or more in depth is required for a lawn while a foot or more of top soil is desirable for the planting areas. If this work can be performed in the fall, settling will take place over winter. In the spring, the final work of grading may be accomplished. One should pick off all the stones which have come to the surface during the winter and then work the surface of the land with a harrow or rake. If it can then be rolled, the small uneven spots will become very apparent and they can then be leveled off with a hand rake. By re-rolling and re-raking the land in this way, the surface can be made as smooth and even as desired. In this manner, a more permanently smooth grade of the lawn is attained than if the seeding was done directly after grading and before settling had taken place.

Lawns

A good lawn is a most important feature of a well developed home grounds. It is often referred to as the canvas upon which the picture is created. It should possess openness and extent and should be framed with plantings of trees and shrubs about its borders. Never should it be cluttered with meaningless plantings of specimen shrubs and trees as is sometimes done. Being such an essential and permanent source of beauty, its construction and maintenance deserves the most careful consideration.

The soil for a lawn should be of good texture and should contain plenty of plant food and enough humus to retain moisture. A strong clay loam or sandy loam with a clay subsoil which contains enough sand or gravel for under-drainage most nearly approaches these conditions. When a lawn is to be constructed upon light sandy soil, a top-dressing of two inches or more of clay with a heavy application of well rotted manure should be mixed with the first three or four inches of sand. Frequently, in building a house, the soil excavated from the cellar is spread about, covering the good top soil with a subsoil which is infertile, of poor texture, and generally undesirable as a surface soil for lawns or plantings.

Preparation of Seed Bed

The proper preparation of the seed bed begins with the plowing or spading of the soil to a depth of six inches or more, depending much upon the depth of the top soil. It should then be thoroughly pulverized by harrowing, firmed by rolling, and smoothed by hand raking. After the surface has been rolled and re-raked until it is as smooth as possible, it should be finally rolled and raked to a very shallow depth just previous to seeding.

The application of a heavy dressing of well decomposed stable manure, thoroughly worked into the soil to a depth of two to four inches will tend to improve the physical texture of the soil as well as its chemical composition. Fresh stable manure contains so many weed seeds that it is not desirable for this purpose. If conditions are such that seeding can be deferred for a couple of weeks, many weed seeds in the manure and surface soil will germinate and may be destroyed by cultivation before seeding.

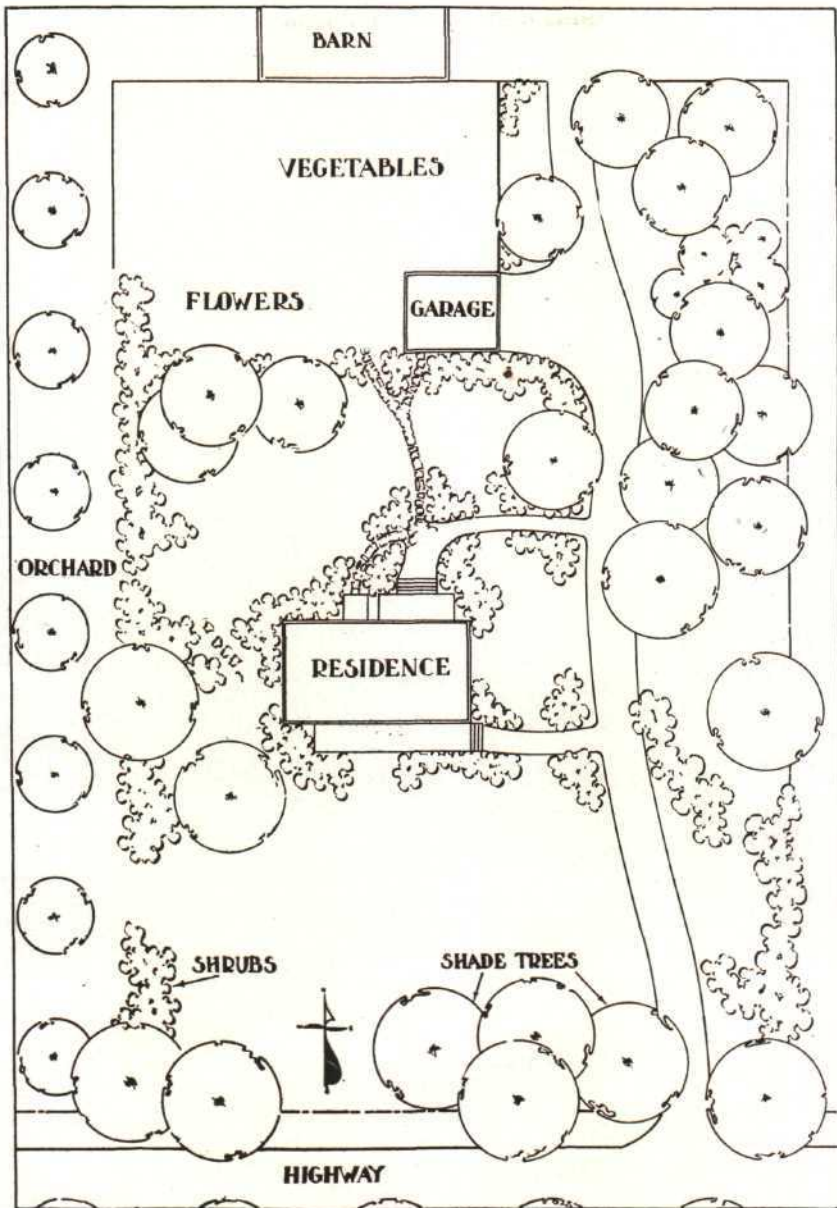


Fig. 6.—A design of walks, drives and plantings of a farm grounds where the buildings had already been placed.

Chemical fertilizers may be used to advantage, but whether they should be applied before seeding time or later depends upon the form of nitrogen used in the fertilizer. When nitrate of soda or sulphate of ammonia is to be used, it is better to defer its application until the grass germinates.

Varieties of Grasses

The question of the best varieties of grasses to use for a lawn as well as the best fertilizers for maintaining it should always be considered in relation to the condition of the soil.

For alkaline soils Kentucky bluegrass, otherwise known as June grass, which is our most common lawn grass, is a most cosmopolitan variety and is especially suited to moderately fertile soils having good drainage and plenty of sunlight.

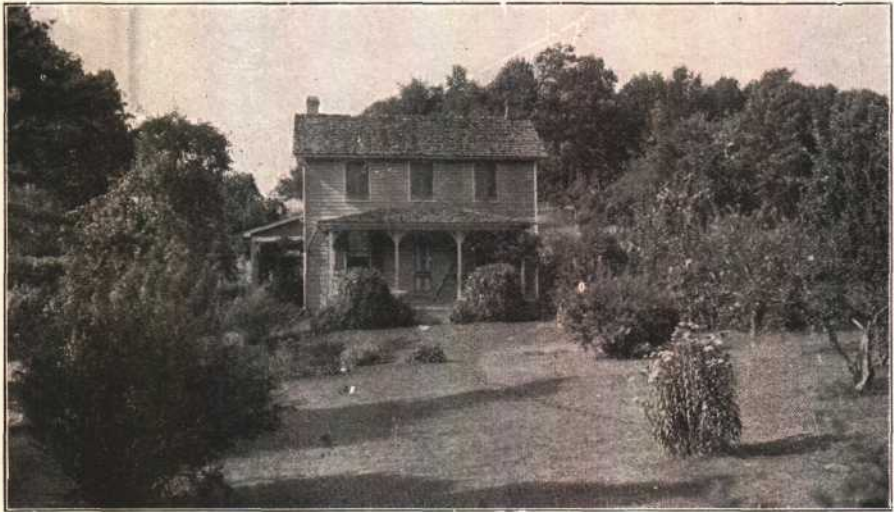


Fig. 7.—A typical ill-arranged home grounds showing the front lawn cluttered with meaningless plantings.

Although the most favorable habitat of Kentucky bluegrass is upon the limestone soils, it has been found by recent investigations that this grass is less adversely affected by an acid soil condition than most of the troublesome lawn weeds.

Redtop is better adapted to soils that are somewhat infertile, dry, and poorly drained and is not adversely affected by acid soil conditions. It is not, however, a turf forming grass and should be used primarily in a mixture as a nurse crop or for its quick effect. It is better than timothy or oats for a nurse crop. It is commonly used with Kentucky bluegrass, bentgrass or red fescue, all of which are turf forming kinds. White clover used at the rate of two to five pounds per acre is sometimes mixed with bluegrass and redtop for establishing lawns upon alkaline or sweet soils.

For acid or sour soils, there are many species of bentgrasses well suit-

ed to the production of ideal lawns. The differences between the several species are not great. Rhode Island bent, German bent, Velvet bent, and Creeping bent, the last more commonly established by the planting of stolons, are the most common species for lawns. Under favorable conditions, they produce the most dense and perfect turf and, with the least hand weeding, the most weedless lawns. However, they require too much care and attention for the average farm home grounds.

Chewings' Red Fescue is another kind of grass indifferent to soil acidity and producing a very fine texture turf. It does particularly well in partial shade and withstands drought and infertility better than most other lawn grasses. Its fine texture and light color tend to create a spotted effect when mixed with other grasses.

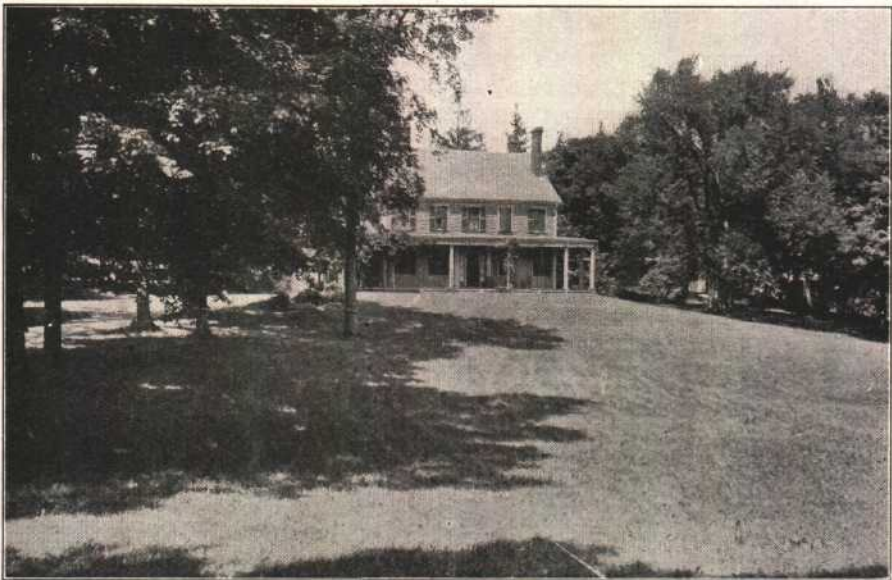


Fig. 8.—A simple harmoniously designed farm house set well back from the road with a wide unbroken front lawn framed along the boundaries and back with trees.

Rough bluegrass (*Poa trivialis*) is another species particularly suited to locations that are shaded. It is quite similar in texture and color to Kentucky bluegrass and redtop. Therefore, it is usually preferable to Red fescue when it is to be mixed and grown with these kinds upon strong soils.

Undesirable Varieties

Timothy, orchard-grass, and other coarse textured grasses are very undesirable in lawn mixtures. Quack-grass is not especially troublesome as it will not withstand frequent close clippings commonly given to lawns and will be crowded out under favorable conditions by the other kinds of grasses. Therefore, it is not necessary to pull out the roots of quack-grass in establishing a lawn where the land is infested with it

before seeding. It should, however, be kept out of the shrubby borders.

The choice of grasses for use in establishing a lawn should be determined by the amount of care to be given the lawn, its fertility and exposure, as well as by the condition of the soil from the standpoint of acidity. In Michigan, upon the farm home grounds where the amount of care given the lawn is necessarily very limited, such commonly used varieties of grasses as Kentucky bluegrass, redtop, and Rough bluegrass are generally the most satisfactory. Equal parts of Kentucky bluegrass and redtop make a satisfactory mixture for open lawn areas, using Rough bluegrass with such a mixture when portions of the lawn are shaded.

For unmixed sowings, the quantities used vary with the kind. For 1,000 square feet of surface, two pounds of redtop is sufficient, or two and one-half to three pounds of bentgrass, Kentucky bluegrass, or Rough bluegrass, or three to five pounds of Chewings' Red Fescue.

If the area to be sown is small and the conditions of soil and exposure somewhat variable, it is advisable to use a high grade prepared lawn mixture obtained from a reliable seedman. About three to four pounds of such a mixture should be used to 1,000 square feet of lawn area.

The purchaser of grass seed must depend on the reliability of the dealer since the general appearance tells little to the uninitiated. Many grass seed mixtures contain timothy, orchard-grass, weed seed, and a relatively high percentage of chaff and other debris. They are also apt to be low in germination.

Time For Seeding

Late August or early September is the most desirable time to seed lawns. Early spring is a less favorable season, particularly from the standpoint of weed control. It is the time, however, when most lawns are seeded and the earlier it is done after the ground has thawed out and settled the better. If watering facilities are at hand, however, seed may be sown at any other period of the growing season although some difficulty may be experienced in maintaining moisture in the soil for young seedlings in hot weather. It is desirable to seed new lawns at such times as will permit them to become well established before the heat and drought of summer or the freezing, heaving, and thawing of winter and early spring.

In sowing grass seed, uniform distribution should be sought. This is more easily attained when the air is calm as in early morning or at sunset. If half of the seed is sown in parallel strips covering the entire area, and then the other half is sown in similar parallel strips at right angles to the first, a more even seed distribution will be secured.

Raking or brushing the soil after sowing may be desirable if one is very careful to cover the seed very uniformly and lightly. More often, such a practice results in an uneven depth of planting the seed. Rolling after seeding is more beneficial as it presses the soil firmly about the seeds and thus tends to insure a uniform supply of moisture. The use of ground peat moss or mull as a surface mulch, spread uniformly over the surface after seeding, will help in maintaining a uniformly moist condition and tend to promote germination.

Where watering facilities are at hand, the soil should be sprinkled

after rolling with special care against washing. This sprinkling should be repeated as often as may be necessary to keep the surface soil moist. During bright, hot weather this may necessitate two or three sprinklings a day. With bright weather and with at least a moderate temperature, seed will germinate, if kept uniformly moist, in a surprisingly short time.

After germination and before the roots of the seedlings have become well established, they are very subject to drought, especially upon a bright day with a hot wind.

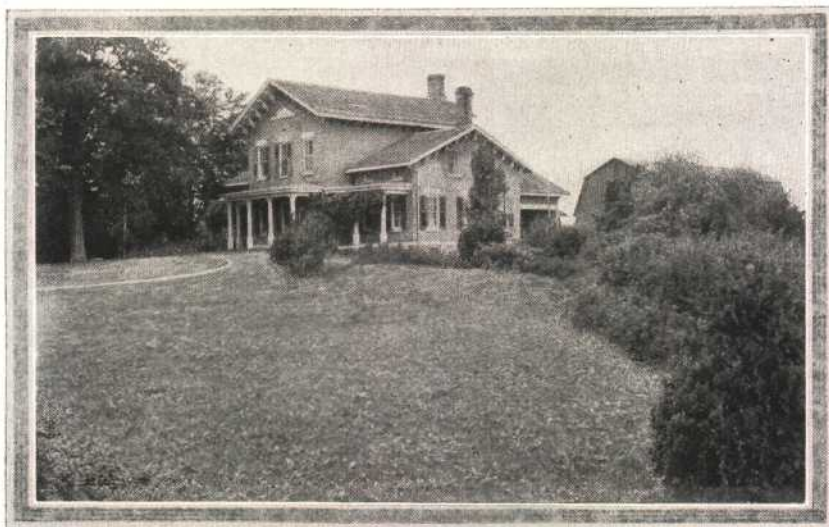


Fig. 9.—The selection of a slightly spot for the farm dwelling, sheltered on the north and west, but with a good exposure to the south, makes an ideal condition for the farm home.

FERTILIZERS

The question of the best fertilizer for maintaining a lawn should be considered in relation to the food elements most commonly deficient in the soil and to the effect of the fertilizer upon the acidity of the soil. Nitrogen is the element most commonly deficient and phosphorus is frequently not present in sufficient quantity. Potash is sometimes deficient in the soil. In contradistinction to common thought, an acid soil is more favorable for the production of a nearly weedless vigorous lawn than a soil of neutral or alkaline character. This is because most of the troublesome weeds of the lawn are more favored in their growth by an alkaline or neutral condition than lawn grasses, or, in other words, are less tolerant of an acid soil condition.

Some of the land in Michigan, being of a limestone origin, is strongly alkaline. It is doubtless impractical to attempt to change such soils to an acid condition. Most of the surface soil in Michigan is either acid

or neutral in character. Liming such soils, or the use of those forms of commercial fertilizer which tend to neutralize them is not to be recommended. Upon such soils, it is especially desirable to use such forms of commercial fertilizer as will not only furnish plant food but will also tend to maintain them in an acid condition.

Since nitrogen seems to be the most generally deficient food element in the soil for growing grass, sulphate of ammonia, a quickly available form of fertilizer furnishing nitrogen to the soil and leaving an acid residue, has been found most beneficial. Continued applications of this fertilizer over a period of years tend to create and maintain an acid condition. Superphosphate, a commercial form of phosphorus, does not create an acid condition, but, in soils already acid, it does not tend to



Fig. 10.—The living division of a farm grounds bordered by groups and masses of hardy trees and shrubs.

neutralize them as does the use of some other sources of phosphorus. Muriate of potash, a commercial form of potash, likewise is neutral in its effect; while wood ashes, containing lime as well as potash, would tend to create and maintain a neutral or alkaline condition of the soil.

The control and eradication of such common weeds as plantains, dandelions, crab grass, and chickweed by hand digging or spraying is not usually practicable on the small home grounds. Reinfestation takes place so readily by seeds blown in from near-by places or by seeds which are added to the soil when stable manure is used that these practices prove of little value. They do not correct the basic conditions which have contributed to the presence of the weeds in the lawn. Stimulating the growth of the grass by heavy feeding with fertilizers which tend to

maintain soil acidity has proved to be a more helpful means of weed control.

Sulphate of ammonia as a fertilizer should be applied in early spring just as growth begins. It may be used at the rate of four to six pounds per 1,000 square feet or from 150 to 250 pounds per acre. As there is some danger of burning the grass with this material, it is better to mix it with two to three times its bulk of sand, compost, or finely screened top-soil and to apply it at a time when the grass is dry. Watering directly after it has been spread tends to prevent burning. Another application should be given in early September and at any intervening period when the grass appears more yellowish than normal or otherwise in need of stimulation. It is apt to be especially injurious, however, if applied during the heat of summer. Other quickly available forms of nitrogenous



Fig. 11.—The bare and bleak appearance of many farm buildings as seen from the public highways, might be much improved by the appropriate planting of hardy shrubs and trees.

fertilizers such as nitrate of soda might be used in a similar way and may prove very beneficial although their effect upon the acidity of the soil from continued use may be very different.

Where potash or phosphate is needed as fertilizer, but one annual application is generally made. It is considered best to apply them in early spring just as growth commences. Under these conditions it is usually best to purchase a complete commercial fertilizer which tests relatively high in nitrogen, that is about 8 per cent, with about 6 per cent phosphate and 4 per cent of potash. Such a fertilizer should be applied at the rate of from 400 to 500 pounds per acre, or two to three pounds per square rod.

Use of Manure

The use of undecomposed stable or barnyard manure as commonly applied to the lawn during the fall, winter, or spring months cannot be

recommended. Experiments have demonstrated that areas seeded to Kentucky bluegrass and fertilized by an annual application of undecomposed stable manure have become more nearly monopolized by weeds each year. Large lumps of undecomposed stable manure upon the lawn tend to smother out the grasses beneath them and later make a favorable medium for the germination and growth of the weed seeds contained in them.

Well decomposed stable manure, however, is very valuable in maintaining lawns. For this purpose, it should ordinarily have stood for two or three years. For clay soils, particularly with bent grasses, this

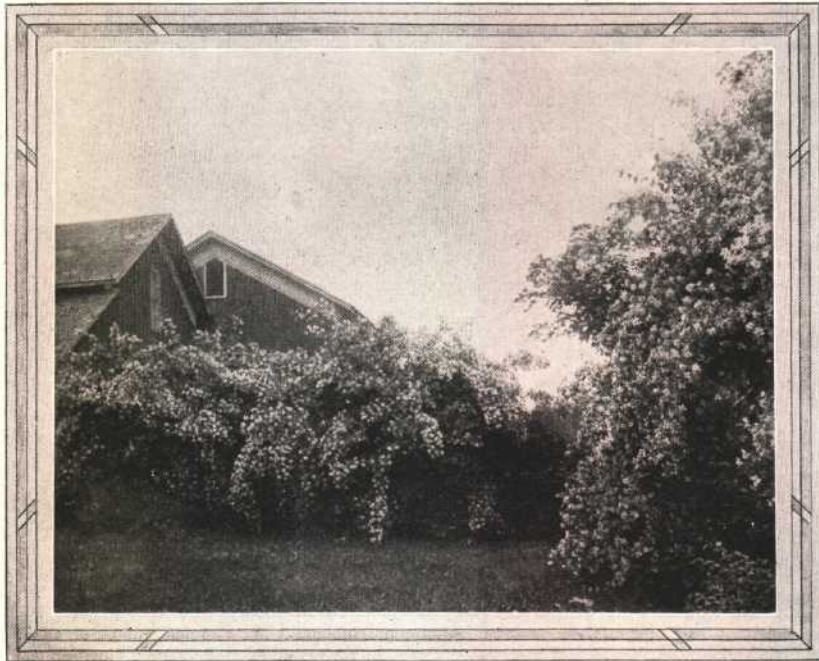


Fig. 12.—Plantings of high growing shrubs to screen the view of nearby barns from the house.

composted form of manure makes an ideal top-dressing when mixed with two parts of clean sharp sand and supplemented with five pounds of sulphate of ammonia to each cubic yard of the mixture. Creeping bent lawns should be top-dressed each spring and early fall with about one cubic yard of this prepared mixture to one thousand square feet of lawn area. Frequently Creeping bent lawns may be much benefited by lighter top-dressings of this character at intervening periods. All grasses would be much benefited by a top-dressing of this kind each spring. Watering the lawn directly after the application, especially if the mixture contains sulphate of ammonia or nitrate of soda, is desirable to prevent burning.

The secret of maintaining a good lawn is to begin with a good top soil, to provide efficient soil drainage, to prevent the lawn from drying

It is also recommended at the rate of two pounds per 1,000 square feet in new bent lawns as a means of controlling these weeds as well as of grubs and earth worms. When applied just previous to seeding, it tends to retard the growth or germination of bent grasses but this influence is soon overcome.

Since the use of arsenate of lead for these purposes is a recently developed practice, much information about its value and reliability under variable conditions will be found in the near future.

No single known method gives complete weed control. Every condition in the practice or establishing and maintaining lawns has its influence upon the presence of weeds. Under the best of conditions, it



perpendicular to the highway should approach the house in a sweeping, graceful line which will tend to keep the drive from intruding upon the front lawn area. Sometimes it may be desirable to construct the drive immediately in front of the house but, usually, a more reasonable plan is to carry the line of the drive toward the back of the property. In either case, the drive should pass within a reasonably convenient distance of the main entrance of the house as well as of the service entrance. From these points, it should be extended in such a manner as to provide for driving directly to the garage, to the farm yard, or to lead back to the highway. Usually this suggests the development of a turn-around drive.

If this is designed it should also be so arranged as to accommodate



will soon be overcome. It may be necessary to apply the spray from three to five times at intervals of about three weeks. Over small areas such weeds may be killed by placing a drop of commercial sulphuric acid in the crown of each plant. This may be expeditiously applied by the use of an oil can with a long snout.

Walks and Drives

Walks and drives are elements of utility rather than of beauty in the development of the farm home grounds. They are more expensive to construct and maintain than the same area in lawns or plantings and are not as pleasing to look upon. They also tend to break the unity of the

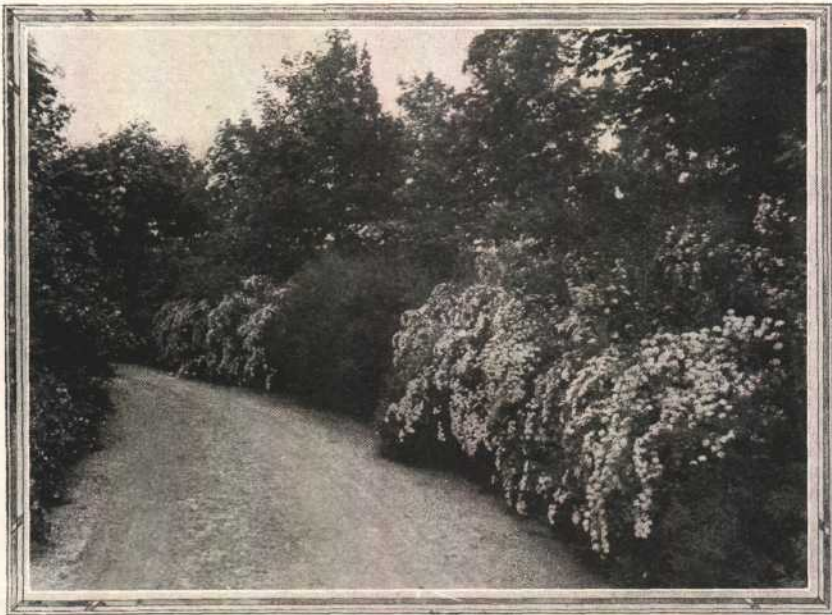


Fig. 15.—A shrubbery bordered entrance drive to the farm grounds.

area through which they pass. Therefore, their extent should be confined to the actual needs of the grounds.

Walks and drives should be designed to lead in a convenient and apparently direct way to the most common points of destination. They are the directing lines for traffic upon the grounds. In addition to being the most reasonable lines for traffic to follow, they should be pleasing in their development and should be harmonious with the landscape effect of the grounds.

The entrance drive to the farm home should enter the property near one of the front corners of the lawn area. This should be the one toward town unless such a selection for the entrance would result in the development of a drive through the most desirable portion of the lawn area to be reserved for the living division. The drive starting in a line

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Fig. 16.—A simple unpretentious but well developed farm entrance.

service traffic from the highway to the farm yard along that side of the turn-around most distant from the house. (See Fig. 5).

Usually as farm houses are designed and as farm drives are laid out, the main entrance to the house is in front while the entrance drive is along the side of the house. Under these conditions, the main entrance to the house is not conveniently accessible from the entrance drive and is, therefore, seldom used. Likewise the front walk leading directly from the highway to the front door is inconvenient and seldom used. It would seem that the most reasonable location for the main entrance to the house would be upon the side adjacent to the entrance drive rather than upon the front facing the public highway. Likewise, the entrance walk should be laid out from the main entrance of the house to the nearest or most convenient point of access along the entrance drive.

Where good drainage exists, the surface of the drive should be somewhat lower than the adjacent lawn. This makes the drive less apparent

as viewed from any point across the lawn and provides for the development of a pleasing graceful roll in the grade from the lawn elevation down to the drive. Abrupt banks along the side of the drive or public highway should be cut back for a considerable distance to form mild, pleasing grades that will unite harmoniously and appear naturally a part of the larger lawn grade.

The construction of a walk or drive should be such as to provide a most acceptable surface at the seasons of the year that they are to be used. The principles of their construction consist in first providing good sub-drainage, the lack of which is a most common cause of the breaking up of drives and walks. Tile draining of the beds upon which they are constructed may be necessary or the use of a base of gravel or cinders some six inches to a foot in depth may be required below the materials used in their construction. The second principle is to construct them so as to be impervious to water and as to provide good surface drainage. Muddy drives and walks lack these requisites. The third principle is based upon the fact that good walks or drives are composed of a hard impervious stone packed tightly together with only enough of other material to fill the spaces between the stone and to bind them.

The stones forming the basic structure furnish the supporting strength to a walk or drive and provide a surface to withstand the wear of traffic. Except with macadam or crushed stone drives, sharp, clean, coarse sand is the most available material which meets the requirements of a good filler for the spaces between the stone. The binder used to hold the stone and sand in place and to make the surface less pervious to water varies with the several kinds of walks or drives which are to be constructed. With gravel drives and walks, the binder is the clay contained in the sand or gravel, a small percentage of which is necessary for this purpose. When the drives are constructed of concrete, the cement used is the binder; while asphalt is the binder of an asphaltum drive. In all of these cases, however, the percentage of stone used, its imperviousness to water, and its degree of hardness determine to a large degree the strength and permanence of the construction.

Bank run gravel usually contains too much sand and clay in proportion to the stone to be most suitable for drives. Screened gravel or, better still, washed gravel are more suitable. Where hard stone is indigenous to a locality, it constitutes an ideal basis for road construction but unfortunately such stone is not usually found in southern Michigan.

Cinders from factories and power plants make good drainage material for placing under drives, particularly upon clay soils. Where gravel or crushed stone is not within the means of the home owner for the construction of drives, cinders alone are often a great improvement over a dirt drive. However, cinders are readily crushed and quickly ground down to a dust with much traffic and do not have the supporting strength of stone for heavy loads.

Planting

The plantings about the farm house determine to a large extent its degree of attractiveness. One can hardly visualize a pleasing farm home without a reasonable number of trees, shrubs, and hardy flowers tastefully arranged about it. Otherwise, a bare, bleak, unsheltered effect is

very apt to be the most displeasing characteristic of the place. It may be said that the less decorative the architectural features of the house the greater is the relative importance of the plantings. Hence, it is very important that considerable attention be given to the planting about the average farm home.

Before going ahead with this work one should first ascertain the functions or purposes of the plantings to be made. In planting farm grounds, let it be realized that the aim is to create a picture which has as its elements, a farm house and other buildings, roads, walks, lawns, and other more or less separated elements. To unite these several disconnected parts into the production of one harmonious composition is

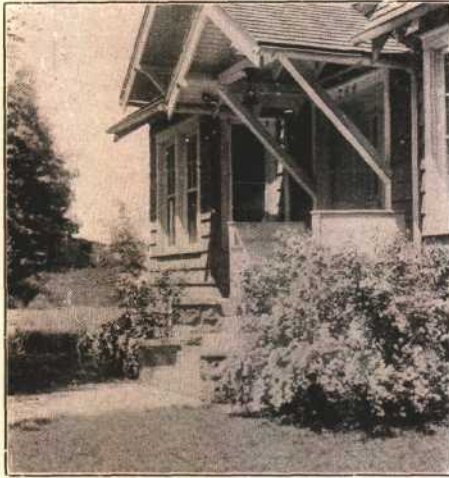


Fig. 17.—Shrubs planted in the corners of the entrance porch generally prove effective.

the leading function of the plantings. To arrange the plantings about the house so the building may seem a natural outgrowth of the spot and to so arrange the plantings on the grounds that each and every planting may seem dependent upon the presence of every other planting or other element in the design is the purpose of the planting. When it can be realized that these plantings are made not primarily for the sake of their own individual beauty but more because of their relationship to the design as a whole, to the picture about to be created, the first principle to guide one in planting has been mastered.

The planting of each and every grounds is a new problem, differing in certain respects from every other. No definite rules, therefore, can be given to guide one in the work and no plan may be drawn to serve all places but a few general principles underlie all problems. Before any planting design is made, the grounds should be studied in reference to the general arrangement that is most serviceable. The style of architecture of the house, the position and character of any large trees already on the grounds, the slope and general character of the land, and any other natural condition should be studied to "see what kinds of beauty, what general character of pleasing appearance these conditions most readily suggest." Each home grounds is more or less suggestive of a certain type of beauty which may be brought forth and emphasized with the least difficulty.

After perceiving this type of beauty, one may so proceed that the necessary details of arrangement will emphasize and enhance the character thus selected. One will find certain elements which detract from the beauty of the grounds, which are defects in the picture; these should be screened by the use of plantings. Views within the grounds, such as

of the henhouse, barnyard, a boundary fence, service drive, and other unsightly spots; views beyond the grounds, as of a neighbor's barn and other views hardly pleasing and acceptable to the sight, all these should be entirely hidden from view by the use of plantings or at least partially screened to minimize their unsightliness.

There are other elements in the design which should be just as carefully preserved and enhanced by plantings. The most pleasing lines and portions of the house, for example, may be emphasized and carefully preserved to the view. A wide sweep of open lawn, with a border and

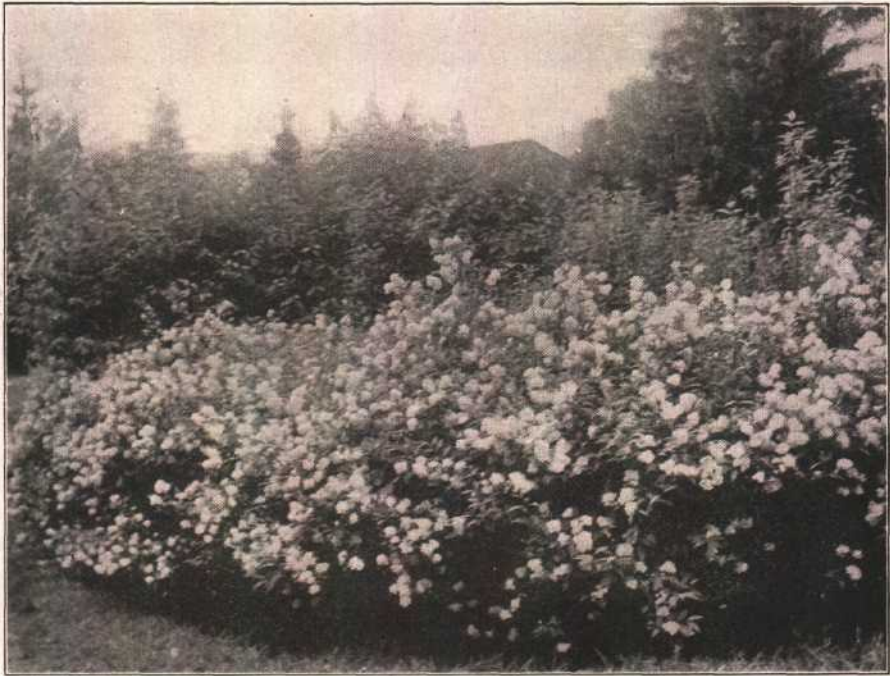


Fig. 18.—Shrubs should be arranged in naturalistic groups and masses along the borders of the lawn areas.

background of trees and shrubbery, is always a pleasing and acceptable sight. Vistas without the grounds, as of a distant woods, a winding river or a neighboring farm house, and even the travel upon a public road, are often welcome sights which add to the pleasure and value of the grounds. It is especially important that these vistas be carefully preserved from the living rooms of the house, not always from the parlor but from those rooms where the family spend the major portion of their time. The plantings then serve a very important function by concealing the defects in these places and by enhancing the parts that are most pleasing. With this thought in mind one can readily imagine

how beautiful and attractive some of the ordinary looking farms of today may become by the proper use of plantings.

Plantings, when improperly used, may detract from the value and looks of the farm as well. The effect of a well-designed farm house is very frequently ruined by the improper location or arrangement of plantings. Trees planted too thickly or too closely in front of the house, a lack of harmony in the design of the grounds with that of the house, or plantings placed to hide the house from its most pleasing point of view are a few of the many causes which often spoil the effect of a well designed house. Let it be remembered that plantings are to enhance rather than to detract from the expression already given by the design of the house and they should harmonize it with its site.

There are three general rules for guidance in arranging the plantings:

First, avoid straight lines. The general effect of all lines in planting should be graceful and natural rather than stiff, formal, or artificial. Plantings should seem to be a natural outgrowth of the spot rather than a crude piece of man's handiwork.

Second, arrange the plants in groups and masses, selecting few kinds and many of each rather than many kinds and few of each.

Avoid planting meaningless, isolated specimens over the lawn. Naturalistic masses and groups of plants are necessary to give structural character to the design and each group or mass should consist of many specimens of but a few kinds, rather than one or two specimens of several kinds. The particular shrubs selected should be used in several groups and masses, not precisely in the same combinations but sufficiently so that the effect of one planting may be harmonious with the others. In this manner, unity of effect may be obtained.

Third, plantings should be massed about the base of the buildings, grouped about the junctions of curves in the walks, massed about the boundaries and corners of the property but not usually along the front boundary of the property.

When arranged in this way, an open lawn bounded with naturalistic plantings of shrubbery and trees will be the general effect.

These plantings may perform other desirable functions also. They may be arranged to shelter the house from the winter storms and the summer heat or to frame desirable vistas and thus accentuate their attractiveness. Masses of shrubs may be used to replace an undesirable fence or hedge. They may be planted to prevent people from wearing paths across the lawns and to unify the walks, buildings, and other elements of the grounds into one harmonious design.

The planting should be done early enough in the spring so that the shrubs will be well established before the heat and drought of summer overtakes them. In preparation for planting, the beds should be dug to a depth of a foot or more and well manured. The distance of setting the shrubs depends largely upon the size of their growth. Japanese barberries should be planted two and one-half feet apart, spireas three and one-half feet and lilacs about four to five feet. In three years, when set at these distances the branches should be so intermingled that their individuality in the beds is lost and a unified mass effect produced. In transplanting, keep the roots moist and prevent them from being exposed to the sun and wind any longer than necessary. Set the plants slightly deeper than they stood in the nursery and pack the best fine

soil firmly about the outspread roots. If the soil is dry, water after planting. It will help to compact the soil about the roots and keep them moist. The tops may then be pruned back to balance the loss of roots, leaving a few large buds on each of the strongest shoots.

WHAT VARIETIES TO SELECT

Shrubs

The choice of varieties is perplexing because there are so many handsome shrubs all of which seem most desirable to the home garden maker. A few of the good old standbys that are handled by every nurseryman and sold by the millions, that are sure to give one his money's worth and are safest for the beginner to use are listed.

First of all there is the Vanhoutte Spirea, the most popular spring flowering shrub. Its remarkable freedom of bloom and beautiful foliage produced on branches drooping gracefully to the ground make it exceedingly attractive. This spirea, which is only one of a large group of related plants, is very hardy and grows well in any moderately rich and well drained soil. It attains a height of about six feet and is particularly suited to mass plantings about buildings and porches, along walks and drives or around the boundaries of the lawn. Another very widely used kind is Bridalwreath Spirea, a double flowering form with leaves that resemble those of the *Prunus* or plum. The Garland Spirea, although not as well known, is a most desirable early spring flowering shrub with small delicate foliage and white flowers. It is particularly suitable for planting in the foreground of other higher and coarser growing shrubs. For summer flowering, the genus is represented by the Froebel Spirea that blooms in late June. Its flowers are produced in corymbs or flat flower heads of a rosy crimson color, sometimes approaching a magenta. Where a low shrub is wanted for summer effect, this is one of the best.

It would be hard to name a shrub as cosmopolitan in its characteristics, combining as many desirable qualities as the Japanese barberry. It is one of the few shrubs that are attractive at all seasons of the year. In the spring and summer its graceful branches are clothed with small

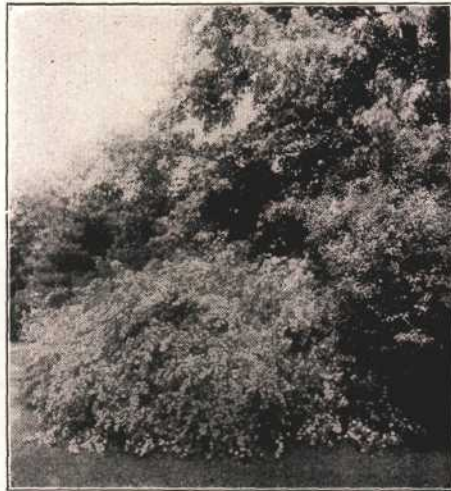


Fig. 19.—Shrubs massed about the base of trees relieve the bareness of the trunks and tend to harmonize them with the surrounding lawn.

yellowish green leaves that change to a bright scarlet in the fall. Later they are shed to expose the scarlet berries that enliven the landscape all winter. While a sandy loam soil seems ideal for the barberry, it thrives equally well on practically all types of soils that are well drained and it seems equally cosmopolitan as to exposure. The San Jose scale, plant lice, and other pests seem carefully to avoid it. The graceful form it assumes and its low habit of growth make it suitable for filling in small spaces such as between walks or buildings or for planting in front of spireas and other higher growing shrubs. There is nothing better

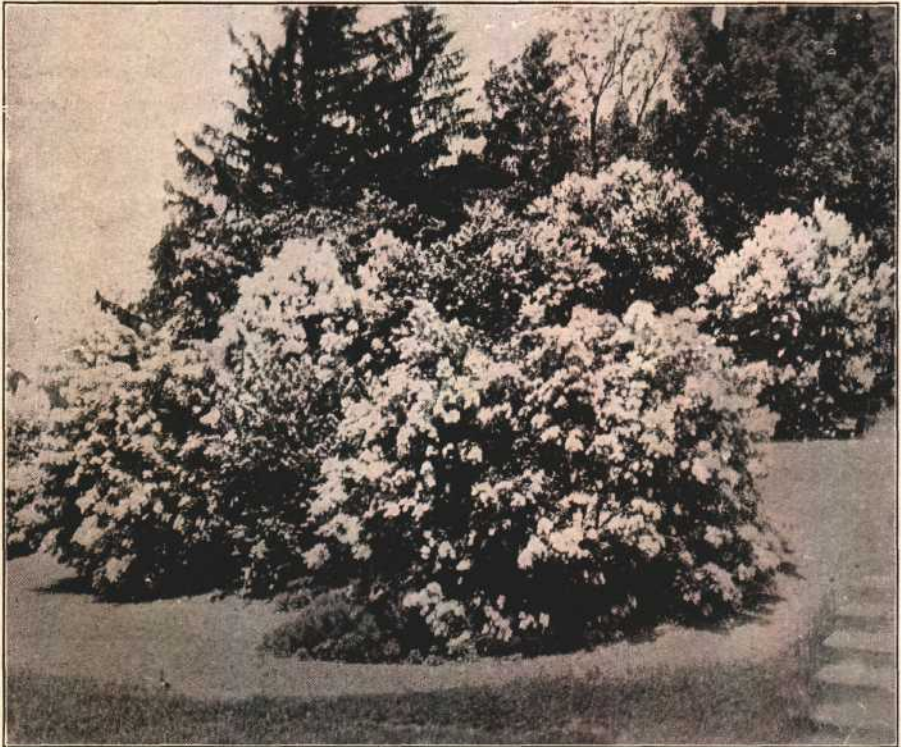


Fig. 20—Lilacs produce beautiful effects when planted in groups or masses with an appropriate background of trees.

to use where a low ornamental hedge is desired than this barberry that shifts for itself after it is once established. This species is not a host for wheat rust and may be planted in any part of the state.

The lilac is the most common and still most indispensable of the shrubs. There are so many desirable improved varieties of this old time flower that, even if one were given a few bushes of the old-fashioned type by some well meaning neighbor, one could not afford to plant them because the new improved kinds are so superior. They produce larger and better flowers over a longer season. Therefore, it is well to go to a nurseryman and get an improved variety that will be

superior to this old-fashioned type. There one may become acquainted with Marie Legraye, a beautiful white; Mad. Lemoine, the best double white; Dr. Regel, a handsome rosy pink; Chas. X, an attractive rosy lilac; Toussant L'Ouverture, a very dark carmine colored in bud, turning to a violet-red when in full bloom and an endless list of other improved sorts of the old-fashioned lilac. Then, the other species of lilac include at least one other type that should be used. For general landscape effects it is to be preferred to any of the first mentioned group because it is more graceful in its growth with smaller leaves and large, open, gracefully drooping panicles of reddish purple flowers. This is the lilac



Fig. 21.—The Ash-leaved Spirea is desirable for planting steep banks.

listed in the catalogues as *Syringa chinensis*. The Persian lilac is very similar to it but more dwarf in its growth. For screens and backgrounds of shrubbery masses, used in uniform colors rather than mixed, lilacs produce a most attractive effect in late spring.

The *Philadelphus coronarius* or Mockorange is another large, high growing shrub that is prized especially for its fragrant white flowers so abundantly produced in June. It is too high-growing and coarse textured for planting immediately about the house. Fortunately the Lemoine Mockorange is lower growing and finer textured, making it an excellent shrub for nearby plantings of about four to five feet in height. *Philadelphus virginalis* is a newer variety with double waxy-white flowers,

rather coarse in texture and not quite as high growing as the common Mockorange. The yellow leaved varieties are not as vigorous, high-growing, or free flowering. There are many other varieties and species of this shrub and as a rule they are hardy, generally free from insects and fungous troubles, and a most cosmopolitan class of plants.

The bush honeysuckles are very acceptable in border plantings about the home grounds. While many produce beautiful spring flowering effects in white or pink, they are prized more for the red coral-like berries that color these plantings in midsummer after most of the shrubs are through blooming. The Morrow honeysuckle is one of the best varieties for this purpose while the Rosy tatarian is one of the most effective in flower.

A class of popular shrubs often confused with the honeysuckles, possibly because of the trumpet shaped flowers, is the Weigela or Diervilla. Although the latter is now considered the standard botanical name, in most catalogues it is listed as Weigela. Of the many varieties in pink, white, or red that are now offered of this group, the old-fashioned pink flowering, *Weigela rosea*, continues to lead in popularity. At the Graham Experimental Farm, Grand Rapids, the pink flowering variety, Gustav Mallot, has proven of outstanding beauty in bloom. Another variety, *Weigela Eva Rathke*, is also used considerably by those familiar with its qualities. This variety has carmine-red flowers and somewhat darker foliage and it blossoms over a longer period than the former and almost as profusely in the shade as in full sunlight. It is very acceptable, therefore, for planting along the north side of buildings or in other partly shaded situations. Unfortunately, it is a poor grower.

Of the many other shrubs worthy of consideration, there are the golden bells, or Forsythias, whose yellow blossoms are produced in the spring even before the leaves, so early in fact that the flowers are often caught by late freezes; also the Slender Golden currant, *Ribes aureum*, with its sweet fragrant blossoms; and the Rugosa rose, with its luxuriant foliage and ever-blooming habit. There is no trouble about having enough kinds to select from but the difficulty is in limiting the list to those that are best. For the home garden maker, it will be wise to rely chiefly on the old standard sorts.*

SHRUBS FOR SPECIAL PURPOSES

Shrubs for Hedges

Acanthopanax pentaphyllum

Five-leaved Aralia

Berberis thunbergii

Japanese Barberry

Deutzia lemoinei

Lemoine Deutzia

Hydrangea peegee

Peegee Hydrangea

Ligustrum amurense

Amur Privet

Lonicera morrowi

Morrow Honeysuckle

Rosa hugonis

Hugonis Rose

Rosa rugosa

Rugosa Rose

Rosa rugosa hybrida

var. Grootendorst

Spiraea vanhouttei

Vanhoutte spirea

Thuja occidentalis

American Arborvitae

Shrubs for Border Planting**a. Low Growing**

<i>Spiraea Bumalda</i> var.	<i>Kerria japonica</i>
<i>Anthony Waterer</i>	Kerria
Anthony Waterer Spirea	<i>Spiraea thunbergi</i>
<i>Berberis thunbergi</i>	Thunberg's Spirea
Japanese Barberry	<i>Symphoricarpos racemosus laevigatus</i>
<i>Deutzia gracilis</i>	Garden Snowberry
Slender Deutzia	<i>Symphoricarpos vulgaris</i>
	Coralberry

b. Medium Growing

<i>Deutzia lemoinei</i>	<i>Ribes odoratum</i>
Lemoine Deutzia	Golden Currant
<i>Philadelphus lemoinei</i>	<i>Rosa rugosa</i>
Lemoine Mockorange	Rugosa Rose
<i>Rhodotypos kerrioides</i>	<i>Spiraea prunifolia</i>
Jetbead	Bridalwreath spirea
<i>Spiraea vanhouttei</i>	
Vanhoutte spirea	

c. Tall Growing

<i>Diervilla florida</i>	<i>Lonicera tatarica rosea</i>
Rose Weigela	Rosy Tartarian Honeysuckle
<i>Euonymus americana</i>	<i>Philadelphus coronarius</i>
Brook Euonymus	Mockorange
<i>Forsythia intermedia</i>	<i>Syringa</i> (In Variety)
Border Forsythia	Lilac
<i>Lonicera morrowi</i>	<i>Viburnum</i> (In Variety)
Morrow Honeysuckle	Viburnum

Shrubs for Specimen Use

<i>Caragana arborescens</i>	<i>Cydonia japonica</i>
Siberian Pea-tree	Flowering Quince
<i>Cercis canadensis</i>	<i>Prunus cerasifera</i> var. <i>pissardi</i>
Red-bud	Purpleleaf Plum
<i>Chionanthus virginica</i>	<i>Prunus glandulosa</i>
White Fringetree	Flowering Almond
<i>Euonymus alatus</i>	<i>Rhus cotinus</i>
Winged Euonymus	Common Smoketree
<i>Exochorda grandiflora</i>	<i>Tamarix</i> (In Variety)
Common Pearlbrush	Tamarix

*See Special Bulletin No. 154 entitled "Hardy Shrubs for Landscape Planting in Michigan" for more detailed information concerning shrubs.

Shrubs for Exposed Lake Front

<i>Elaeagnus argentea</i> Silver Thorn	<i>Rosa rugosa</i> Rugosa Rose
<i>Rhamnus cathartica</i> Common Buckthorn	<i>Rosa setigera</i> Michigan Prairie Rose
<i>Rhus</i> (In Variety) Sumach	<i>Syringa vulgaris</i> Lilac
<i>Philadelphus coronarius</i> Mockorange	<i>Tamarix</i> (In Variety)
	<i>Viburnum opulus</i> High-bush Cranberry

Shrubs for Shady Situations

<i>Calycanthus floridus</i> Common Sweet Shrub	<i>Symphoricarpos racemosus laevigatus</i> Garden Snowberry
<i>Cornus</i> (In Variety) Dogwood	<i>Symphoricarpos vulgaris</i> Coralberry
<i>Ligustrum amurense</i> Amur Privet	<i>Weigela Eva Rathke</i>
	<i>Viburnum</i> (In Variety)

Shrubs for Sandy Soils

<i>Berberis thunbergii</i> Japanese Barberry	<i>Rosa setigera</i> Michigan Prairie Rose
<i>Caragana arborescens</i> Siberian Pea-tree	<i>Rhus canadensis</i> Fragrant Sumach
<i>Forsythia intermedia</i> Border forsythia	<i>Rhus glabra</i> Smooth Sumach
<i>Lonicera tatarica</i> Tartarian Honeysuckle	<i>Rhus cotinus</i> Purple Fringetree
<i>Rosa rugosa</i> Rugosa Rose	<i>Tamarix</i> (In Variety) Tamarix
<i>Spiraea vanhouttei</i> Vanhoutte spirea	

Shrubs for Steep Banks

<i>Rosa setigera</i> Michigan Prairie Rose	<i>Sorbaria sorbifolia</i> Ash-leaved Spirea
<i>Rhus</i> (In Variety) Sumach	<i>Symphoricarpos vulgaris</i> Coralberry

ROSES**Hybrid Perpetuals**

For Cut Flowers

(Half Hardy, Requiring Some Protection Over Winter)

- Frau Karl Druschki (White)
George Arends (Pink)
General Jacqueminot (Red)
J. B. Clark (Red)
Mrs. John Laing (Pink)

Hybrid Teas

For Cut Flowers

(Requiring Protection Over Winter)

Souvenir de Claudius Pernet (Yellow)
 Kaiserin Augusta Viktoria (White)
 Gayety (Yellow)
 Miss Cynthia Forde (Pink)
 Mme. Segond Weber (Pink)
 Ophelia (Salmon Pink)
 Radiance (Pink)
 Red Radiance (Red)
 Robert Huey (Red)
 Mme. Edouard Herriot (Orange)
 Talisman (Reddish Orange)

Roses for Landscape Effect

Polyantha roses in variety
 Rosa hugonis
 Rosa rubiginosa (Sweetbriar)
 Rosa rubrifolia (Red-leaved rose)
 Rosa rugosa (Japan rose)
 Rosa rugosa hybrida var. Grootendorst
 Rosa setigera (Michigan Prairie rose)
 Mary Wallace rose

TREES

*"Among all the materials at our disposal for the embellishment of country residences, none are at once so highly ornamental, so indispensable or so easily managed as trees or wood."**

Trees are especially valuable as screens, windbreaks, backgrounds for buildings, for shade, and for their own individual beauty in a design. By a natural arrangement of trees in the improvement of the country home grounds, places which might otherwise seem bare and bald may be made interesting and often picturesque. They should be disposed around our houses in groups, masses, and as single trees in such a manner as to rival the most beautiful scenery of nature as well as to provide all the comforts and conveniences of a rural home.

In selecting trees for home planting, form, hardiness, adaptability, rapidity of growth, shade production, freedom from insects and diseases, neatness, and general beauty should be considered.

In purchasing trees, one should obtain healthy, well shaped trees.

*Section 111, Chapter on "Wood," Treatise on the Theory and Practice of Landscape Gardening, by A. J. Downing.

This book was the first landscape gardening book published in America and is considered one of the best at the present time. It started a great popular movement toward the development of beautiful home grounds and its author by his many writings and landscape gardening work probably exerted more influence in the development of American horticulture than any other single figure.

It is generally a waste of time and money to set poor, deformed trees. Wild trees may be used but they are less likely to withstand the shock of transplanting than those that have been previously transplanted in the nursery. It is possible to set out trees as large as a foot in diameter but the cost is so great that few can afford to transplant trees of such size. As a rule, smaller trees transplant more successfully. Trees for street planting should be about two inches in diameter and 10 to 12 feet in height.



Fig. 22.

move at least a cubic yard of the soil or rubbish and provide as much good loam. In planting the tree, spread a layer of fine mellow soil mixed well with about one-third its bulk of well decomposed stable manure, if available, in the bottom of the hole. Never use fresh manure. The tree should then be planted by packing the fine soil firmly about the roots, setting the tree about two inches deeper in the soil than it stood in the nursery. If the soil is dry at planting time, watering directly after planting will be beneficial as it will help much in packing the soil about the roots and supplying moisture.

In transplanting trees, as many roots as possible should be preserved because trees with large root systems do much better than those whose roots have been severely pruned.

As the tree is purchased from the nursery, the top or crown is usually already formed. This general shape of the top should be preserved in pruning after transplanting. If the root system has been severely pruned, it will be necessary, however, to cut back the branches of the top to maintain a balance between the roots and foliage, although it is better to maintain this balance by saving the roots than by sacrificing branches.

During transplanting, the roots of the trees should never be allowed to become dry. If a choice is allowed, transplant a tree on a cloudy day as a bright sun or a dry wind exhausts the stored up moisture. As soon as the trees arrive from the nursery they should be "heeled-in" in moist soil until planting.

The hole in which the tree is to be set should be slightly larger than is necessary to accommodate the roots without bending or twisting them. If the site, as is often the case, is on "made" ground, re-

DECIDUOUS TREES

Oaks

Of all the trees that may be used on the home grounds, the oaks are undoubtedly the best shade trees for, with few exceptions, they are beautiful, long lived, and little subject to damage by insects and diseases. Though oaks are generally considered slow growing, some make very rapid growth when given good care. The white oak is probably the best known and one of the longest lived trees. It is slow in growth and is in such small demand that nurseries do not generally grow it. The red oak seems to be satisfied with a comparatively poor soil, develops a straight sturdy trunk and a symmetrical top, and its foliage turns a brilliant color in the fall. It is the most rapid growing of the oaks and good for both lawn and street planting. The scarlet oak is much like the red oak, although it is smaller and does well even on poorer soil. Its foliage becomes brilliantly colored in the fall, hence the name. The pin oak grows taller and more slender than most other oaks with usually a straight trunk. The leaves are small and quite persistent through the winter. This tree thrives upon moist ground but grows equally well where the soil is quite dry. It is especially suitable for street planting and also makes a very desirable lawn tree, the foliage being less brilliantly colored than the red oak although beautiful during all parts of the growing season.

Elms

The American elm is probably the stateliest tree grown in this country. Usually the tree assumes a high, upright, spreading form and produces shade which is not too dense for either lawn or street purposes. As a street tree, it combines more desirable qualities than any other kind although it grows too large for narrow streets. It prefers a reasonably fertile soil and plenty of moisture, and under these conditions, is a comparatively rapid grower.

Maple

No trees have been more widely used for planting the home grounds than the maples, as they are very satisfactory as shade, ornamental or street trees. The *white*, *silver*, or *soft maple* is largely planted because of its rapid growth although it is a short lived tree, very susceptible to borers and very subject to splitting and breaking. The *Norway maple* is the best tree for streets of moderate width and is a very desirable lawn tree.

It is adaptable to almost any soil and is hardy and little subject to serious insects or diseases. It is one of the first maples to come into foliage in the spring and the last to drop its leaves in the fall, although the foliage does not take on such brilliant color effects as the sugar and red maples. The red leaved variety of the Norway maple is an especially attractive tree when properly located on the home grounds. The common red maple thrives best on a moist soil and is sometimes

used as a street tree although more suitable for lawn planting. In the fall, the coloring of the foliage is brilliant and in the spring its red blossoms make a very attractive early spring effect.

The *sugar maple* is the most widely known and one of the best of all the maples. It is a larger tree than the Norway maple although in many other respects so much like it that the two are often hard to distinguish. It thrives in cool situations and does not do as well under adverse soil conditions as the Norway maple. Its foliage becomes brilliantly colored in the fall, varying from yellow to scarlet. The ash leaved maple or box elder is frequently planted as a lawn tree and it accommodates itself well to adverse conditions. Like the silver maple, it is a short lived tree and not recommended for general planting.



Fig. 23.—The Norway Maple is one of the best shade trees for the home grounds.

Beech

The beech makes one of the most attractive and beautiful lawn trees. It requires a rich well drained soil and grows rather slowly. The tree branches too low to produce a desirable street tree and the crown develops such dense foliage as to cause a heavy shade. During the winter, the light gray tint of the bark produces an excellent landscape effect while in the summer the silvery effect of the foliage is very beautiful. The American beech is largely used in this country although many ornamental forms of the European species such as the purple-leaved, cut-leaved, and drooping beeches are also popular. In planting upon the lawn, it is well to place these trees well away from the buildings or from any spot where sunlight is desired either in winter or summer.

Many other desirable kinds of deciduous trees are valuable under special conditions. Where quick temporary effects are desired, the poplars are favorite trees while the attractive and graceful white birches, the golden willows, the stately sycamores, or the much overplanted catalpa may sometimes find an appropriate setting in the home planting.

EVERGREENS

There are few home grounds where a few evergreens cannot be advantageously used for producing permanent screens, wind breaks, shelterbelts, or hedges. They are very valuable if planted sparingly about the lawn as they contrast well with the deciduous trees and enliven the landscape effects during the winter. When used too much about the grounds, they are apt to produce a somber effect. They should never be used near the south or east side of buildings where they might shade them during the winter months. When placed well in the background of shrubs or deciduous trees, they give excellent results.

More spruces have been planted about home grounds than any other kind of evergreen. They are fast growing, very hardy, and do well on most kinds of soil. For quick effects under average conditions, the spruces are generally the best. They are much used for windbreaks and hedges as well as for planting in groups about the lawn.



Fig. 24.—The Norway Spruce is one of the best hardy evergreens for lawn planting.

Norway Spruce

The Norway spruce is one of the best and commonest planted of all the spruces. It adapts itself well to any soil and almost any condition. The tree is clean, trim, and bright both in summer and winter. For windbreaks upon the farm, it is one of the very best. To maintain a thick growth at the base of the trees, it is often necessary to top them. Care must then be taken to prevent the formation and growth of two leaders. The beauty of all evergreens depends largely upon the preservation of a good healthy growth about the base of the tree whether they are used as hedges, windbreaks, or lawn specimens.

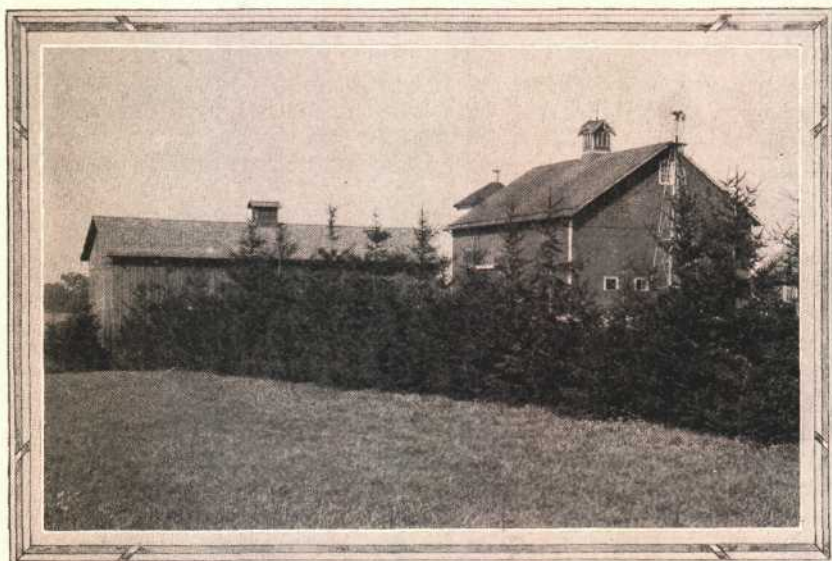


Fig. 25.—Norway Spruce planted in a line as a windbreak.

Colorado Blue Spruce

This spruce is one of the most beautiful of the evergreens. The branches are produced in whorls around the trunk and the foliage is dense and bluish. It thrives in almost any soil and locality, is a vigorous grower, and does well in cold exposed situations. These trees are propagated in the nurseries by grafting cions from the finest bluest trees on vigorous seedlings, thus producing trees that are uniformly of a comparatively intense blue color. When seed of this variety is planted, some of the seedlings come true blue while others revert to the green.

White Pine

White pine is the most valuable species of pines both for planting about the home and for producing windbreaks or shelter belts. When planted for windbreaks, white pine should be placed farther apart than other evergreens as the limbs grow out close to the ground and spread

widely. The foliage is softer and finer than most other evergreens. The young trees look neat all the year around while the old specimens are very picturesque.

Austrian Pine

The Austrian pine is especially recommended for planting in the middle west. The growth is very dense and the trees attain a large size. As planted singly on the lawns, the trees produce a beautiful effect while when planted in groups, the dark foliage shows in excellent contrast with spruce or other evergreens.

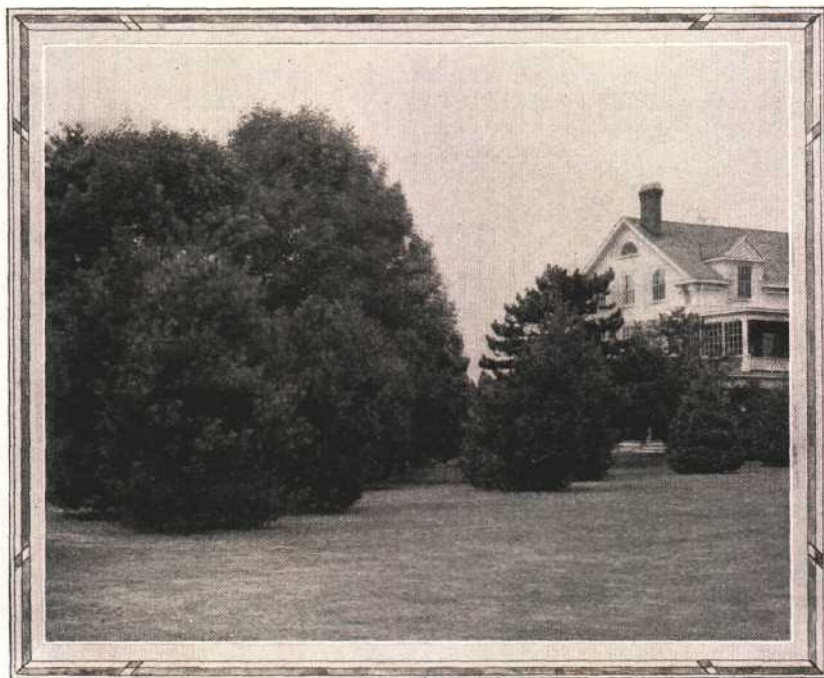


Fig. 26.—Spruce and other hardy evergreens when arranged in naturalistic groups as a windbreak are more harmonious and beautiful in the landscape.

Hemlock

The hemlock is a beautiful evergreen but does not thrive well in this State. The foliage is very fine, producing a delicate effect and the trees are graceful and usually long lived. They stand shearing well when planted in hedges and will grow in the shade. For planting in groups with other evergreens, they are excellent. The trees do best with a northern or eastern exposure and when protected from the drying winds. They prefer a moist soil and a moist atmosphere. Sometimes the trees have a tendency to grow quite straggly and should be frequently topped to maintain a dense growth of the lower branches.

Arbor Vitae

These evergreens, commonly known as the white cedars, are usually small growing, formal shaped trees. They are quite different in texture from other evergreens and very beautiful when properly used. The varieties vary much as to their form, size and color of foliage but the pyramidal varieties are most largely used. These may be especially valuable in grouping with other evergreens or in planting as screens or hedges. They stand pruning very well and can be trained to almost any shape. They prefer a moist deep soil but will thrive on any moderately fertile, well drained soil. They may be found growing wild in many of the low moist places in the State.

TREES FOR SPECIAL PURPOSES

a. Street Planting

<i>Acer saccharum</i>	<i>Ulmus americana</i>
Sugar Maple	American Elm
<i>Acer platanoides</i>	<i>Quercus palustris</i>
Norway Maple	Pin Oak
<i>Quercus rubra</i>	<i>Tilia vulgaris</i>
Red Oak	Linden

b. Trees for Specimen Planting

<i>Acer platanoides schwedleri</i>	<i>Pyrus</i> (In variety)
Schwedler Maple	Flowering Crab
<i>Magnolia soulangeana</i>	<i>Cercis canadensis</i>
Saucer Magnolia	American Redbud
<i>Crataegus oxyacantha splendens</i>	<i>Betula</i> (In variety)
Paul Double Scarlet Hawthorne	Birch
<i>Cornus florida</i>	<i>Prunus cerastifera pissardi</i>
Flowering Dogwood	Purpleleaf Plum
<i>Quercus</i> (In variety)	<i>Morus alba pendula</i>
Oak	Weeping Mulberry
<i>Populus nigra italica</i>	<i>Thuja</i> (In variety)
Lombardy Poplar	White Cedar
<i>Sorbus americana</i>	<i>Picea</i> (In variety)
Mountain Ash	Spruce
<i>Fagus</i> (In variety)	
Beech	

c. Trees for Exposed Lake Front

<i>Caragana arborescens</i>	<i>Betula populifolia</i>
Siberian Pea-tree	Gray Birch
<i>Betula pendula</i>	<i>Crataegus oxyacantha</i>
European Weeping Birch	English Hawthorne
<i>Elaeagnus angustifolia</i>	<i>Crataegus oxyacantha pauli</i>
Russian Olive	Paul English Hawthorne
<i>Pyrus baccata</i>	<i>Populus Eugeni</i>
Flowering Crab	Carolina Poplar
<i>Robinia pseudacacia</i>	<i>Juniperus communis hibernica</i>
Common Locust	Irish Juniper
<i>Pinus nigra austriaca</i>	<i>Pinus montana mughus</i>
Austrian Pine	Mugho Pine
<i>Pinus sylvestris</i>	<i>Sorbus americana</i>
Scotch Pine	Mountain Ash
<i>Picea canadensis</i>	<i>Quercus macrocarpa</i>
White Spruce	Mossycup Oak
<i>Picea excelsa</i>	
Norway spruce	

d. Trees for Windbreaks

<i>Pinus strobus</i>	<i>Thuja occidentalis</i>
White Pine	Arborvitae or White Cedar
<i>Picea excelsa</i>	<i>Pinus resinosa</i>
Norway Spruce	Red or Norway Pine
<i>Pinus sylvestris</i>	
Scotch Pine	

VINES

Vines are as essential in harmonizing the house with its surroundings as the trees and shrubs we plant about it. When used in this manner, their principal function is to tone down the stiff, bold angles and bare surfaces of the house, producing a softness in the landscape that could be obtained in no other way. They are also valuable in covering steep banks, walls, and fences, in the production of screens, and in the covering of stumps or conspicuous trunks of trees.

Success in their use depends upon selecting the proper places to plant the vines and upon choosing the most appropriate vine for each place. As one frequently sees them used, they are covering spaces which would be far more beautiful if left open or leaving spaces exposed which should be covered, thus ruining the architectural features of the building. If correctly used, they should embellish rather than conceal the architecture. Porch columns, cornice lines, corners and angles of buildings should be left open here and there to reveal the form and design of the structure. By planting the less sightly portions and leaving the more beautiful elements of the design exposed, even the most ordinary looking houses may often become very attractive. The style of architecture of the building will largely determine the character of the vine that should be selected to embellish it. The Dutchman's Pipe and Boston Ivy are more suitable for the development of the formal style of treat-

ment than the freer growing vines such as the Clematis and Honeysuckle. Some of the flowering vines that do not produce a dense shade are particularly valuable for draping porch columns and training about windows or along the cornice of a porch. The flowering Clematis, Wisteria and Honeysuckle may often be used in this way, while on porches with a western exposure where a dense shade is desirable, the Virginia Creeper, Bittersweet or some of the vines producing a heavier foliage may be most desirable.

The planting of vines too closely to the foundation of buildings is a frequent cause of failure in their development, as the cold wall and dry soil in such a location are not conducive to the growth of vines. It is better to plant them a foot to eighteen inches from the wall where the soil is moist and the roots may develop vigorously. Exposure is also an important consideration in planting vines. Many of the vines such as Wisteria, Climbing Roses, and Clematis prefer a southeastern exposure while the Virginia Creeper, Dutchman's Pipe, and the Honeysuckles thrive in shady places with a northern exposure. Most vines, however, flower more freely if given plenty of sunlight. The soil is a very important factor in growing vines successfully. They require a well drained soil, fairly moist, and fertile, although they often survive and struggle along under adverse conditions. Poor soil should be replaced with rich loam if this can be obtained. Otherwise, it should be enriched with well decomposed stable manure or commercial fertilizer, being careful that this material is not allowed to come in direct contact with the roots. After planting, the soil should be kept well cultivated and never allowed to become hard and dry.

The dust and gases of the cities ruin many of the vines although certain kinds such as Boston Ivy and Virginia Creeper seem to thrive even under these conditions. These vines, however, should not be allowed to climb upon wooden structures as they are apt to make the house damp and to cause the wood to decay. Vines are very acceptable in planting steep banks and thus preventing washing, while by covering bare and unsightly places under trees or over dead stumps, they may be made to produce excellent landscape effects. For covering stone walls, fences, arbors, and in countless other ways, vines will be found most effective.

VINES FOR SPECIAL PURPOSES

a. Flowering Vines

<i>Clematis jackmani</i>	<i>Campsis radicans</i>
Jackman Clematis	Trumpet Creeper
<i>Clematis paniculata</i>	<i>Wisteria sinensis</i>
Sweet Autumn Clematis	Chinese Wisteria
<i>Lonicera japonica halliana</i>	
Hall Japan Honeysuckle	

b. Vines for Covering Brick, Stone, Masonry

<i>Ampelopsis tricuspidata veitchi</i>	<i>Euonymus radicans vegetus</i>
Boston Ivy	Bigleaf Wintercreeper
<i>Ampelopsis quinquefolia engelmanni</i>	
Engelmann Creeper	

c. Vigorous Climbing Vines with Heavy Foliage

<i>Celastrus scandens</i>	<i>Lonicera</i> (In variety)
American Bittersweet	Honeysuckle
<i>Campsis radicans</i>	<i>Wisteria sinensis</i>
Trumpet Creeper	Chinese Wisteria
<i>Ampelopsis quinquefolia</i>	<i>Aristolchia macrophylla</i>
Virginia Creeper	Dutchmans-pipe
<i>Clematis paniculata</i>	
Sweet Autumn Clematis	

d. Hardy Climbing Roses

American Pillar (Crimson Rose)	Hiawatha (Crimson)
Climbing American Beauty (Carmine)	Mary Lovette (White)
Dorothy Perkins (Pink)	Paul's Scarlet Climber (Crimson)
Evangeline (Light Pink)	Star of Persia (Yellow-Pillar rose)
Excelsa (Scarlet-crimson)	Tausendschon (Pink)
	White Dorothy (White)

HARDY PERENNIALS

Hardy perennials will always remain a most popular class of flowering plants. There is not a time during the whole flower season in which some hardy perennial is not in bloom, while during July and August, when almost all the woody shrubs have ceased blooming, these plants are mainly depended upon for flower display. They are not fastidious about the soil they grow in although many have a preference. For planting under trees or shrubberies, on sloping dry banks, or along the borders of ponds or brooks suitable perennials may be selected which thrive under such conditions. Their ability to thrive with little care makes them a very suitable and desirable class of plants for the home grounds.

Perennials are especially suited for border planting and are most effective when placed in front of shrubbery masses. They are also used to advantage when planted along garden walks, walls, fences, against buildings, and in innumerable other places about the home grounds. Perennials should be planted in groups or naturalistically massed as the effect produced by a colony is more attractive than the effect of a number of varieties scattered aimlessly with few plants of each together.

Many of the perennials can be grown from seed. It is best to sow the seed in hotbeds or cold frames very early in the spring and



Fig. 27.—The Spike-Speedwell produces beautiful spikes of lustrous blue color.

the seeding may be afterwards transplanted out-of-doors. Usually, however, they are propagated more easily by division.

Of the old time favorites, there



Fig. 28.—The Iris is one of the most ideal perennials for home plantings.

are the foxgloves, larkspurs, hollyhocks, sweet-williams, and phlox which are so characteristic of the early colonial gardens and which are just as desirable today. There are the columbines, blanket-flowers, coreopsis, peonies, and poppies, favorites for their beautiful flowering effects. For planting about ponds or upon deep moist soil, the iris, forget-me-nots, lily-of-the-valley, bee balm, trillium, cardinal flower, and the ornamental grasses are especially suitable, while for late summer and fall effects the hardy chrysanthemums, golden glow, asters, and anemone or wind flower are best. So, from early spring until fall when the ground is finally covered with a blanket of snow, the hardy perennials lend their flower color to brighten the landscape.

PERENNIALS FOR SPECIAL PURPOSES

a. Standard Types for General Planting

Iris germanica

German Iris

Phlox paniculata

Garden Phlox

Paeonia

Peony

Delphinium

Larkspur

Aster

Aster

Rudbeckia laciniata

Golden Glow

Coreopsis lanceolata

Lance-leaved Tickseed

Dianthus barbatus

Sweet William

Aquilegia

Columbine

Chrysanthemum

Chrysanthemum

Althaea rosea

Hollyhock

b. Perennials Which Should Be More Largely Used

<i>Achillea ptarmica</i> var. <i>Boule de Neige</i>	<i>Gaillardia aristata grandiflora</i>
Ball of Snow	Common Perennial Gaillardia
<i>Monarda didyma</i>	<i>Narcissus poeticus</i>
Oswego Beebalm	Poet's Narcissus
<i>Hosta plantaginea</i>	<i>Anemone japonica</i>
White Plantainlily	Japanese Anemone
<i>Gypsophila paniculata</i>	<i>Iberis sempervirens</i>
Babysbreath	Evergreen Candytuft
<i>Papaver orientale</i>	<i>Aquilegia formosa</i>
Oriental Poppy	Sitka Columbine
<i>Phlox subulata</i>	<i>Chrysanthemum coccineum</i>
Moss Phlox	Painted Lady
<i>Hibiscus moscheutos</i>	<i>Veronica spicata</i>
Common Rosemallow	Spike Speedwell
<i>Miscanthus sinensis</i>	
Eulalia	

Choice Varieties of Peonies

Festive maxima (Paper White)	La France (Soft Pink)
Le Cygne (Cream White)	Mon. Jules Elie (Pink)
Solange (White)	Sarah Bernhardt (Mauve-rose)
Therese (Violet-rose)	Baroness Schroeder (White)
Lady A. Duff (Shell Pink)	Mme. Emile Lemoine (White)
Marie Crousse (Lilac-rose)	Milton Hill (Flesh)

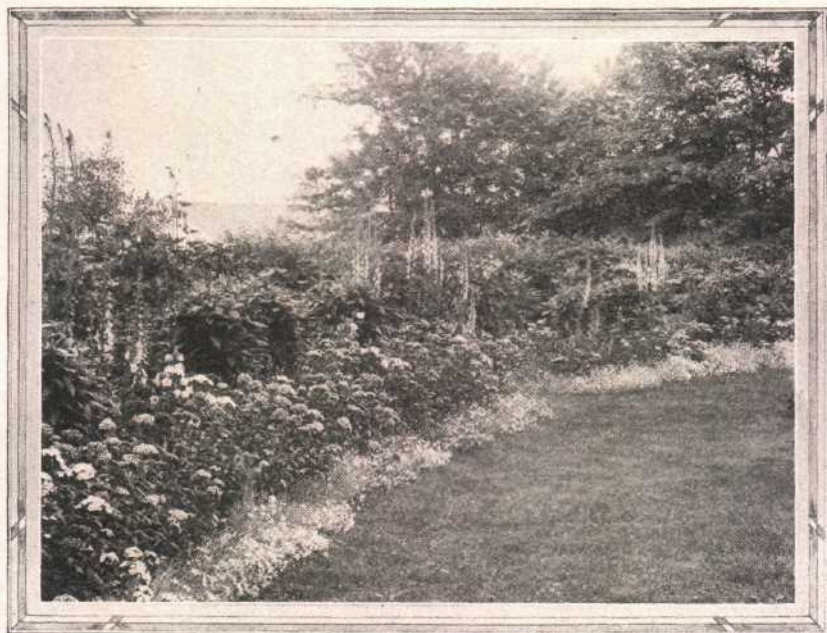


Fig. 29.—Plantings of hardy shrubs about the boundaries of the lawn with hardy perennials in front of them make very pleasing effects.

Choice Varieties of Phlox

Mrs. Jenkins (Late White)	Elizabeth Campbell (Salmon Pink)
Fraulein Von Lassburg (Midseason White)	Miss Lingard (Early White)
B. Comte (Purple)	Rijnstroom (Rose-pink)
Bridesmaid (White, Carmine Center)	Thor (Salmon-pink)

Choice Varieties of German Iris

Florentina (White tinged with blue, early)	Madame Pacquette (Bright Rosy Claret, early)
Gracchus (Yellow and Crimson, early)	Pallida Dalmatica (Lavender, Blue)
King of Iris (Yellow and Brown)	Silver King (Silvery White, early)
Madame Chereau (White tinged with Blue)	Her Majesty (Lilac Pink)
	Caprice (Rosy-red)
	Crusader (Lavender-blue)
	Isoline (Mauve-pink)



Fig. 30.—Hollyhocks should be planted against buildings, walls or in front of higher growing plantings.

ANNUALS

Annuals are always desirable on every home grounds as they are most essential in producing the best and most continuous display of flowers during the summer months. Their great variety and their adaptability to all soils and conditions as well as the many beautiful ways in which they may be used about the home grounds make them almost indispensable. As cut flowers, they are the particular favorites of nearly every one, and the planting of the home grounds without a few such annuals

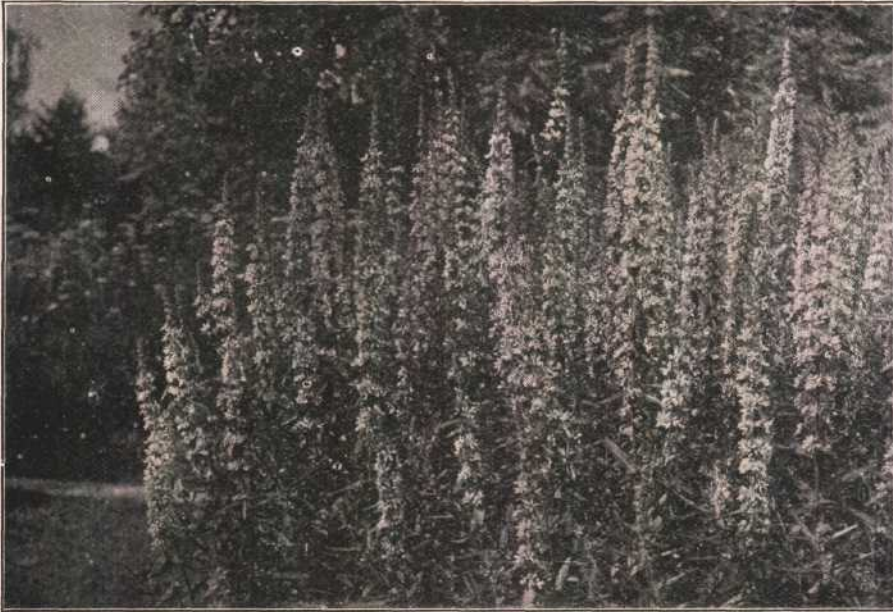


Fig. 31.—Purple Loosestrife is a late summer flowering perennial that delights in a moist soil.

as sweet peas, asters, pansies, or nasturtiums would hardly seem complete.

Annuals are also especially valuable in producing quick effects as well as for beautifying the grounds of the renter or person who has not the means to plant the more expensive perennial or permanent kinds. When planted in the foreground of shrubs or among perennials, annuals are most pleasing but it is an unfortunate mistake to grow annuals in flower beds dotted over the lawn. In the free and natural style of landscape gardening, they should be planted in naturalistic beds about the borders of the home grounds, and, when so arranged, they enhance the beauty of the entire grounds. They may also be appropriately placed as border plantings along garden walks, about the base of buildings, or in front of walls or fences.

Annuals are fortunately very easy to grow. Almost all of them may

be grown successfully by sowing the seeds of the plants directly in the permanent beds, but usually better plants are obtained by seeding them in hotbeds or cold frames or in boxes of earth in the house, from which they may later be transplanted to the beds. Frequently, the plants come into blossom a month earlier when grown in this manner and a longer flowering season is obtained.

The kinds of annuals are so numerous that a selection is largely a matter of personal preference. The pansies, if sown in July or August, produce an excellent early spring display, while, if seeded indoors in late winter and planted in a partially shaded location, they should bloom



Fig. 32.—The Goat's-beard, grown for its large showy panicles of white flowers, thrives in a rich moist soil in partly shaded locations.

continuously during the summer. The sweet alyssum, dusty-miller, candytuft, and lobelia make excellent edging plants; while, for summer flower displays, nasturtiums, petunias, coxcomb, stocks, verbenia, annual phlox, poppies, salvia, zinnias, and balsams are all easily grown and very effective. Portulaca is most accommodating in covering dry sandy banks and the heliotrope, marguerites, stocks, and mignonette in furnishing the gardens with their delightful fragrance. For large foliage effects there is nothing to compare with ricinus or castor oil bean, while the large beautiful colored flower spikes of the snapdragon compare very favorably with the beauty of any of the perennials. In late summer, the asters, cosmos and burning-bush add their brilliance to the flower display and nearly all of these annuals continue to bloom till frosts dismantle their robes of beauty.

Annuals Valuable for Cut Flowers

Asters, late branching	Bachelor Buttons
Sweet Peas	Zinnias
Cosmos, early flowering	Snapdragon
Pansies	Corn Flower
Nasturtiums, dwarf	Heliotrope
Mignonette	Stocks
	Dianthus

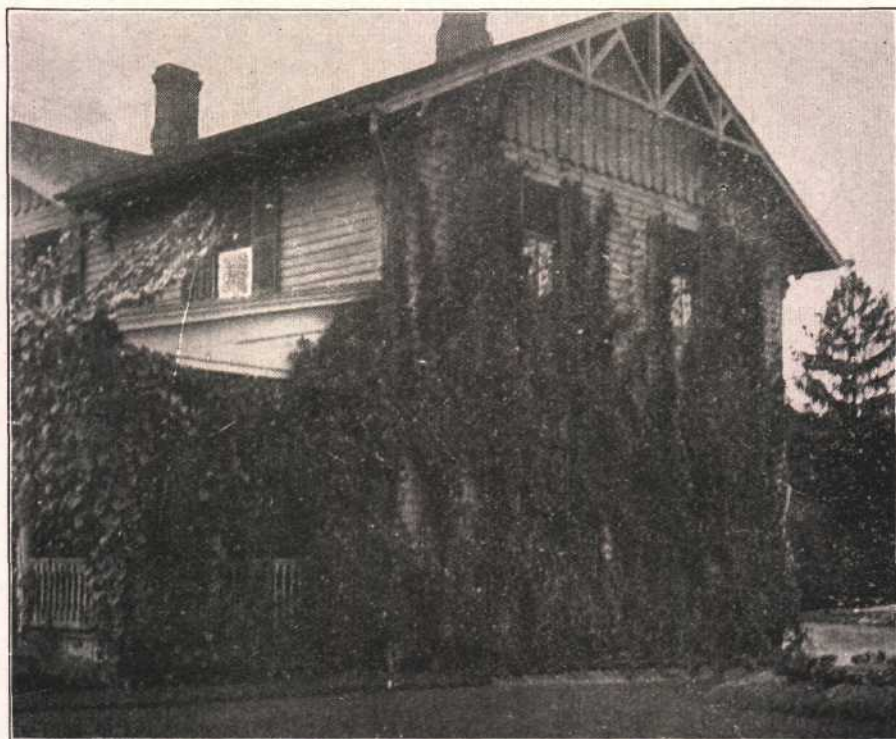


Fig. 33.—Cobia is one of the most rapid growing of the annual vines and hence is excellent for quick effects.

Annuals for Garden Effects

For edgings:

Sweet Alyssum
Lobelia
English Daisy
Dwarf Cockscomb
Dusty Miller
Ageratum
Candytuft

For bedding effects:

Annual Phlox
Verbena
Annual Poppies
Petunia, var. Rosy Morn
African Daisy
Marigold
Balsam
Celosia
Portulaca

Tall growing annuals:

Castor Oil Bean
Sunflower
Cosmos, late

Annual Vines

Cyperus Vine
Balloon Vine
Gourd, Ornamental
Climbing Nasturtiums
Scarlet-runner Bean

Wild Cucumber
Morning Glory
Hop Vine
Moon Vine
Cobea

out by thorough watering when necessary and to keep the lawn well supplied with plant food. Rolling the lawn each spring, and, with Creeping bent lawns, a light rolling at least two or three times during the growing season, is also very beneficial.

After the grass has grown to a height of four to six inches it should be given the first clipping, which should not be very close. A scythe is even better for this cutting than a lawn mower as it will not pull out the young plants or cut as close as the mower. The grass should be cut frequently enough thereafter to permit the clippings to remain on the lawn without being unsightly. These clippings, if allowed to remain, will form a dense mulch around the base of the plants and tend to

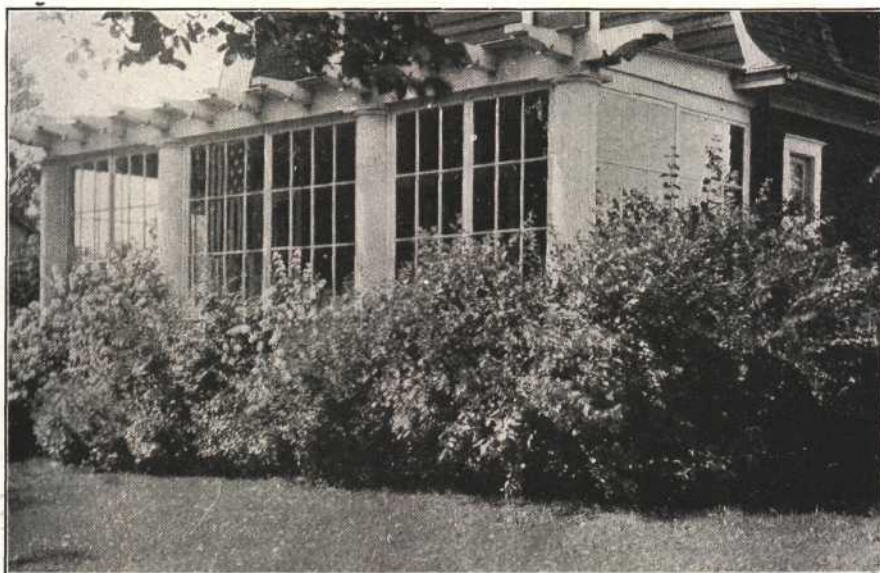


Fig. 13.—Plantings of low growing hardy shrubs about the base of the sun-parlor tends to harmonize it with the lawn.

protect the soil from drying out during the summer months. Lawns should be cut frequently but not too close.

Weed Control

The use of arsenate of lead powder in the proportion of two to five pounds per 1,000 square feet has been recommended as a means of controlling earth worms and grubs in bentgrass lawns as well as a means of controlling Crab grass, Mouse-ear chickweed, and Annual bluegrass. For these purposes it should be thoroughly mixed with a bushel of fine moist sand or sifted top soil, for each 1,000 square feet. An initial application of five pounds is frequently followed with two pounds the succeeding year. Early June is a seasonable time for applying it as a means of controlling crab grass. For the control of Annual bluegrass and chickweed, it may be applied in early spring or at any time thereafter until about the middle of September.