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## Attractive Farm Homes

Frank I. Rockwell

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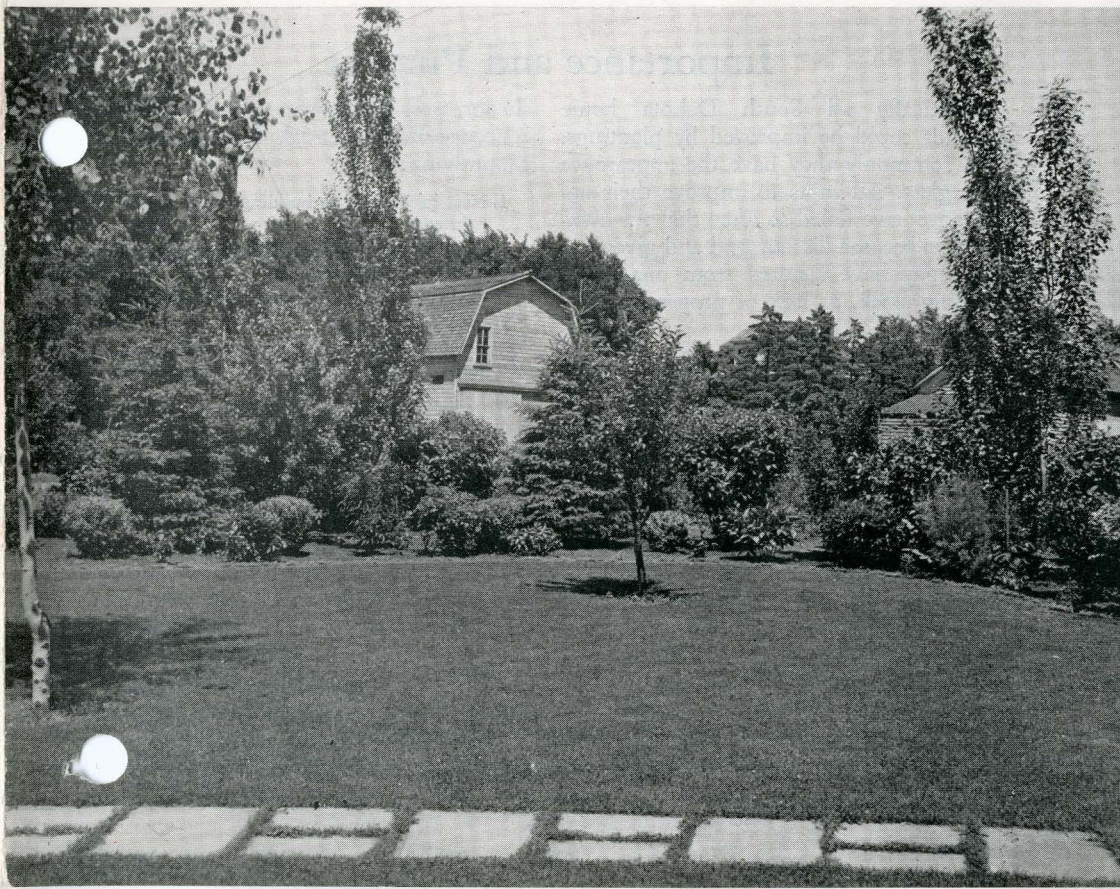
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*Attractive*  
**FARM HOMES**

By Frank I. Rockwell

**Improving The South  
Dakota Landscape  
With Trees and Shrubs**

EXTENSION SERVICE - South Dakota State College - U. S. Department of Agriculture



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**ON THE COVER:** Undesirable views are screened out, leaving but glimpses of outbuildings and vistas where desired. The varied skyline adds interest.

## Importance and Purpose

Practically all South Dakota home grounds could be improved by plantings. Too commonly they have the appearance of neglect. Attempts to improve their appearance have failed so often that the owners have become discouraged and given up. This may have resulted from unadapted planting stock, or lack of proper planting methods.

Our innate love of beauty causes us to be dissatisfied with bare surroundings. The beautification of urban and rural landscapes creates a more satisfactory environment, makes for a contented people, and invites outsiders as well as ourselves to share our contentment and happiness.

The principles of lawn beautification here outlined are generally applicable to parks and other landscapes as well.

Beautiful home surroundings are an important goal of every family. Bare yards can be made attractive by the use of a few

shrubs, trees and flowers. Careful planning is needed. Four essentials of attractive home grounds are:

1. Neat grounds with buildings well placed and painted.
2. A well-kept open lawn, forming a suitable setting for the dwelling.
3. Trees located to frame the house and furnish shade.
4. Attractive shrubs and flowers tastefully located about house foundation and lawn borders.

A good landscape planting is designed to enhance the appearance of the home. It adds brightness and interest and at the same time blends house and lawn in such a way that the house appears to be a natural part of the grounds rather than a blemish in the landscape. Convenience is essential and can be attained without sacrificing appearance. The greatest value of home beautification is derived from the satisfaction of living in attractive and comfortable surroundings.

# *Attractive* **FARM HOMES**

by FRANK I. ROCKWELL\*

## Location of the House

The area that should be set aside for the house is dependent on many factors. A desirable location is on a slight rise of ground possessing attractive views. Pleasing landscape vistas tend to make pleasing home grounds. A site protected from the north and west with an open exposure to the south and east is more desirable.

In order that the grounds may have a satisfactory appearance, the house must be considered the main feature of the landscape picture. All planting should be done with that in view. There should be sufficient room in front for a good lawn. Ample space at the sides and back is also desirable. The larger and more pretentious

the house the more land should appear to be with it. Cramped grounds dwarf the effect.

But too much ground is undesirable because of labor necessary for upkeep. Even though the lawn is small it may be possible to increase the apparent size by plantings so arranged as to make adjacent areas seem to belong to it. It is important also that the connection of the house with the outdoors be adapted to the everyday life of the family. A most satisfactory arrangement is to have the entrance open directly into the living rooms while at the same time it is convenient for visitors.

## Walks and Drives

The farmstead's approaches should be direct but if possible not straight toward the buildings. When the distance is short and the terminal in sight they should usually be straight. If the road or walk is curved, trees or shrubs can be planted ahead of the bend to give an apparent excuse for its turning.

One fault common to many a farm driveway is that it leads directly in to the barnyard with no convenient stopping place that invites people into the front door. This may be remedied by providing a parking place or turn-around that branches off from the main drive.

## Making a Plan

The planning of the home surroundings should begin along with the selection of the building site. The relation of the house to the grounds is so intimate that when possible they should be planned together. Definite relationships should exist between the rooms in the house, the features of the lawn and garden and the views from the windows.

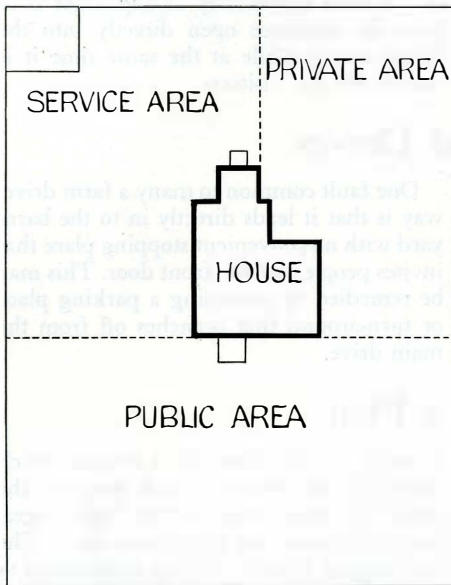
The grounds about the house like the house itself may be thought of as being divided into rooms or areas. The division

is made on the basis of activities which normally take place in each part of the yard. The three areas are the "public area, the service area and the private area." The landscaping of each of these areas needs to be considered separately. As illustrated in the accompanying diagrams, it is logical to set off the front yard from the back by drawing a line across the yard somewhere near the front of the house. The area into which the front door opens is called the "public area." The area around the back door and toward the out-buildings consti-

tutes the "service area." The third area toward the back or side of the house, known as the "private area," may be developed into an outdoor living room.

In working up a plan of the yard on paper, these divisions are first indicated by lines; then ovals or circles are drawn inside the lines just touching the sides wherever they seem to fit. These oval areas are given over entirely to grass. The irregular spaces at the margin of the ovals are then shaded in and indicate roughly the location of the areas which are to be kept cultivated and devoted to trees, shrubs and flowers. As the shrubs and other plants are confined to the areas indicated by the shading, the effect of patchiness and scattered plantings which often results will be avoided. Exceptions to this rule occur in the placing of shade trees.

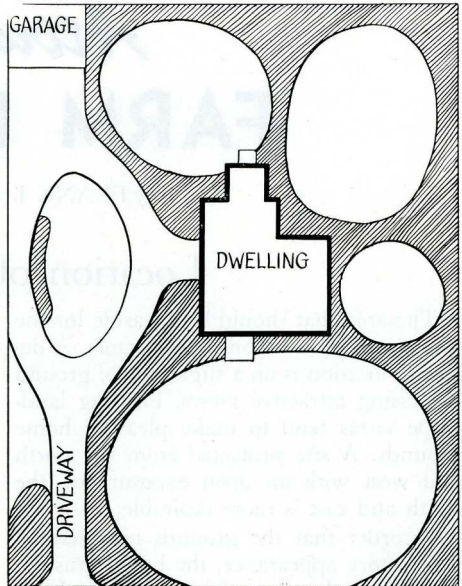
### Steps in Development Of a Landscape Plan



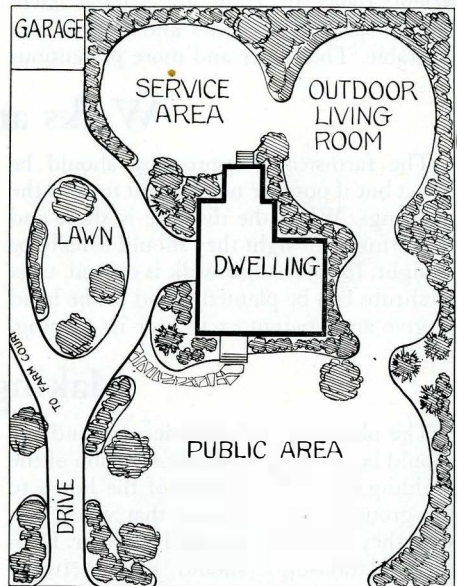
Dividing lawn into areas.

### The Public Area

This is the front yard. The house is seen across the open lawn. The public area thus becomes the setting for the house. The public's first impression of the home is



Separation of lawn areas from cultivated areas by circles.



Connection of lawn areas.

gained here. It is an area of spaciousness and dignity with simple plantings confined to the borders and corners and unmarred by unsightly objects.

The house should be the main point of interest dominating the scene to the exclusion of other features. It consists principally of open lawn free from flower beds and shrubs. These are confined to borders and foundation. It may contain a few shade trees, but they should be placed so as to frame the house from the front and not conceal it.

A home so framed by well-placed shapely trees, and masses of foliage and flowering shrubs, conveys the impression of finish and refinement to the home picture.

### The Service Area

The service area is the work area where all the odd jobs are performed. It confines such objects as clothes lines, garbage cans, milk cans and wood piles. A well-screened place should be provided here for the dumping of ashes and other rubbish. If necessary to drive up to the house for delivery of fuel, this approach may be made through the service area. No great effort needs to be made toward beautification other than neat and convenient arrangement. Sufficient trees may be planted to provide shade for outdoor work if desired.

### The Private Area

The private area or "outdoor living room" is a comfortable secluded area for rest, recreation, and the entertainment of friends. To meet these requirements it needs to be cheerful and interesting with plenty of shade and adequately equipped with outdoor furniture. It is out of view of passers-by or neighbors and in direct communication with the living room or porch. It is developed as a spacious lawn bounded by groups and masses of shrubs and flowers and sheltered by trees. Special features such as rock gardens, pools and arbors may be added.

Surrounded by walls of living green, brightened with colors of flowers, and perfumed by their fragrance, it invites the family and visitors to recreation and rest.

### The Lawn

The lawn gives a setting to the house and blends with plantings to make the yard a pleasing unit. It is often referred to as "a

canvas upon which the picture is created." It should be in as large and unbroken stretches as possible. The surface is smooth but natural and may be rather undulating. It should never be cluttered with meaningless plantings of specimen shrubs and trees or flower beds.

Shrubs and flowers should be confined to the borders forming a frame for the lawn which is separated from the borders by a sharply defined boundary. Individual shade trees are permissible when trimmed up to afford an uninterrupted view to the edge of the lawn. The boundaries are always curved but may be more or less irregular which increases the apparent size of the grounds by not revealing at one glance their actual limits.

### Starting The Lawn

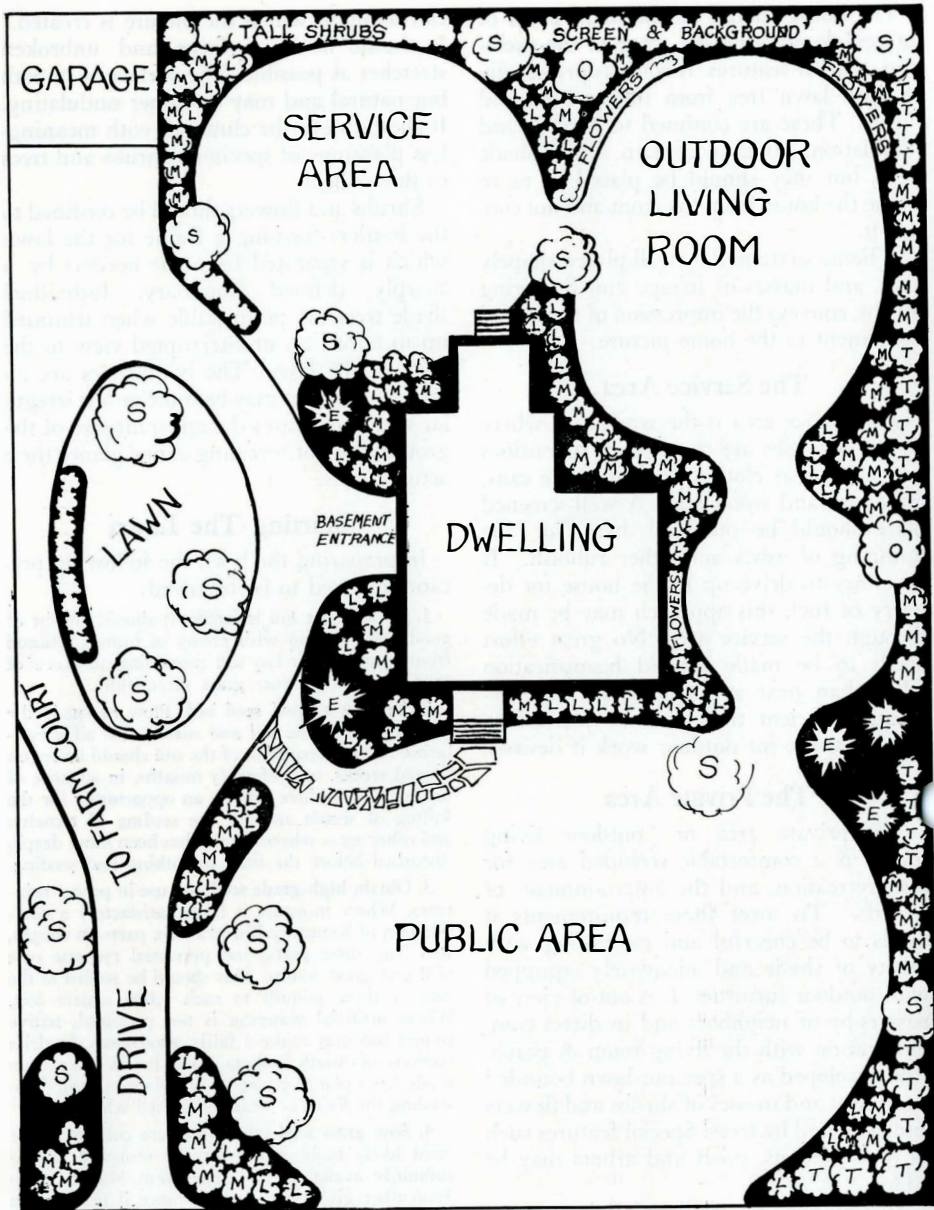
In preparing the lawn the following precautions need to be followed:

1. **Be sure the soil is fertile.** It should consist of good black topsoil with plenty of humus. Subsoil from basements or any soil containing an excess of sand will not produce grass successfully.

2. **Prepare a good seed bed.** Plow or spade the yard, pulverize the soil and smooth out all irregularities. The preparation of the soil should be begun several weeks, or preferably months, in advance of seeding. Then there will be an opportunity for the killing of weeds and for the settling of trenches and other areas where the soil has been more deeply disturbed before the final smoothing and seeding.

3. **Obtain high-grade seed** and use in proper mixtures. Where moisture is fairly satisfactory a combination of Kentucky Bluegrass six parts by weight, Red Top three parts, and perennial rye one part will give good results. This should be seeded at the rate of three pounds to each 1,000 square feet. Where artificial watering is not practiced, native prairie sod may make a fairly good lawn. In drier sections of South Dakota good lawns have been made from planting tufts of buffalo grass and from seeding the Fairway strain of crested wheatgrass.

4. **Sow grass seed** when moisture conditions are most likely to be satisfactory. If moisture is continuously available, any time from May to mid-September gives good results, since it permits the development of a good stand before freezing weather. Seeding in moist soil immediately after the snow goes off in spring, or under protection of dead stubble in the fall, may be necessary where artificial watering or summer rains cannot be counted on. Covering should not be more than a quarter inch in depth. A firm seed bed is necessary. Not only should the surface be smooth and reworked beforehand but the ground should also be rolled subsequently to compact the soil and promote the rise of soil water. Grass seed must be kept uniformly moist



The Completed Landscape Plan

Key: T-tall shrubs. L-low shrubs. M-medium shrubs. S-shade trees. E-evergreens. O-ornamental tree.

after seeding until the seedlings have shown themselves. The most critical times in the life of a grass plant are during germination and directly after when the roots of the young plants have not yet become established in the soil. Drying out at these periods is fatal. Watering should be repeated as often as is necessary to prevent the surface from becoming dry.

Under trees it is often difficult to maintain a good sod owing to the shade. Trimming off the lower branches helps by in-

creasing the light. Failure to grow under trees is also partly due to shortage of plant food and moisture. Soil under trees must be more heavily and frequently fertilized and watered if grass is to be maintained. Without artificial watering, it is practically impossible in South Dakota to have both good grass and good trees on the same ground.

## Plantings

Plantings may consist of trees, shrubs, vines and perennial or annual flowers, or of combinations tastefully arranged. Grouping of shrubs and trees in mass plantings such as is customary in modern landscaping is especially necessary in South Dakota for protection against wind and drouth. This is nature's way of establishing tree and shrub associations. The streamlined effect of taller trees and shrubs surrounded by the shorter varieties provides minimum wind resistance and maximum protection.

Landscape plantings are important to compose a pleasing setting for the house. The environment thus created adds its share of appeal to that of the house itself as a place in which to live. There are other desirable functions. Masses of shrubs may replace an undesirable hedge or fence. They may be planted to prevent people from wearing paths across the lawn. They unify the walks, buildings and other portions of the grounds into one harmonious design. They may be arranged to shelter the house from winter storms and summer heat. They frame and accentuate desirable vistas.

### Windbreaks

A shelter of trees is of first importance for protection against South Dakota winds and storms. Without adequate protection against the extremes of climate, a beautiful environment is impossible in much of South Dakota.

In the establishing of a windbreak one should aim to protect not only the house and dooryard but also the other buildings, the livestock, orchard and garden. To keep drifting snow under control the outside

vs of windbreaks need to be at least 100

feet back from the buildings. A belt seven rods in width or more and streamlined, with taller trees surrounded by hedges of hardy shrubs, and two or three rows of evergreens on the side next to the buildings should be adequate. As a rule this is placed to the north and west of the farmstead.

Some protection from the hot winds of the south is also desirable. Instructions on the planting and care of windbreaks are given in Extension Circulars "Planting Windbreaks to Survive Drought" and "Planting and Care of Trees in South Dakota."

### Vistas

Views from the house are often responsible for determining the house location. Views of distant woods, a winding river or a neighboring farm house and even the traffic on a public road add much to the pleasure of the home. The views from windows and doorways should always be considered in the garden design. A wide sweep of open lawn with a border and background of trees and shrubbery is a pleasing sight. "Vistas" or views framed between tree or shrub masses or over low parts of the border are especially fascinating. The beautiful views both from within and without the grounds should be carefully preserved.

The plantings serve a very important function by concealing the defects and enhancing the beauty of views which are most pleasing. The effect of a well designed house is frequently ruined by the improper location or arrangement of plantings. Un- sightly views as of a garage, boundary fence or a neighboring barn may be screened from view by the use of plantings. It is to



be remembered that plantings are to enhance and improve rather than to detract from the appearance of the house.

### General Rules of Arrangement

1. **Avoid straight lines.** The general effect of all lines should be graceful and natural rather than stiff, formal or artificial. Plantings should seem to be a natural outgrowth.

2. **Arrange the plants in groups and masses** selecting a few kinds and many of each rather than many kinds and few of each. Avoid meaningless isolated specimens.

3. **Plantings should be massed** about the base of buildings, grouped about the junction or curves of walks or drives and about the boundaries and corners of the property, but usually not along the front.

### Background Plantings

Background plantings are essential both to screen off undesirable views and to provide an attractive setting. Tall, dense-growing and dark-colored trees fit in best in the background. The windbreak may often serve this purpose. Groups of striking-looking trees to make a more varied skyline add interest.

### Foundation Plantings

The first shrub planting to consider is the foundation planting. This is made around the base of a house. Its purpose is to soften the harsh effect of the corners and angles. Plantings are nearly always needed to blend the upright straight lines formed by the corners with the horizontal line of the lawn.

In most instances it is unnecessary to hide the entire foundation with plantings. The taller shrubs are placed at the corners but these should not be so tall growing as to dwarf the house and make it seem small. Lower growing shrubs should be placed beneath the windows and along low porches.

A frequent mistake of foundation plantings is to use shrubs which grow too large. To avoid monotony the height of the shrubs should be varied. The variation should conform to, or harmonize with, the lines of the house.

Special care should be exercised in choosing shrubs that are adapted to their location. Those which will tolerate hot dry situations must be selected for the hot sunny side.

Plants which thrive in the shade are needed on the north side of the buildings. There is a tendency to use too few or too many varieties. Only a few different kinds well placed are needed around the average foundation. Certain kinds should be repeated at various places on the grounds in order to secure unity and harmony in the design.

The doorway is the most important point in the public area. Because of this importance it should be emphasized by drawing attention to it. Emphasis can be gained by arranging the planting so that the observer's attention is directed to the doorway first before being allowed to wander elsewhere. The easiest way to place emphasis on the doorway is to make the plants around it stand out from the rest by differences in height, shape or color.

Interest and brightness may be added to the foundation planting by grouping flowers along the margin. These are arranged in masses in front of the background provided by the shrubs. Evergreens are effective and acceptable for use in foundation plantings but care should be exercised in their selection. There is a tendency to overdo in the use of evergreens. The larger growing types—spruce, fir and pine—will grow too large unless care is given to rigorous pruning. Evergreens are not harmonious with all types of houses. They are most satisfactory when used with brick, stone or formal styles of houses but it would usually be more pleasing to use the evergreens in combination with shrubs.

Shrubs should seldom be planted closer than 2½ feet from the foundation as this space is usually too dry. Space between plants will depend largely on their ultimate size. Four feet is a good average distance for medium-sized shrubs.

### Borders and Hedges

The boundaries of a yard are often marked with hedges or shrub border plantings. Division of the yard into areas and the separation of the areas is also accomplished in the same way through the use of plants. A hedge formed by planting one variety in straight rows and clipping to a uniform height is a very common method of division. A shrub border is more nat

and usually more pleasing. It also requires much less labor for maintenance. There are four common purposes for which tree and shrub borders are used:

1. To mark the limits or boundaries of the home grounds.
2. To divide the various areas of the grounds.
3. To form a background for the flower border.
4. To screen or hide unsightly objects or views.

A shrub border, unlike a hedge, will vary in width and also in height. There should be a sharply defined boundary line between the edge of the lawn and the border, produced by use of a sharp spade. The lawn edge should be made in long pleasing curves, avoiding those which are short and abrupt.

In planting a border tall shrubs are placed at the back or in the wider portions of the border. Such tall shrubs allowed to grow naturally without trimming in time become bare and open at the bottom. They are, therefore, faced with a row of intermediate size shrubs directly in front. The intermediate shrubs may in turn require facing with

still smaller ones or with perennial or annual plants. Such a border may occupy a space as wide as 12 feet in places, or even considerably more.

If the area is too limited for a wide border a hedge only three to six feet wide may be used. However, hedges do not lend themselves to informal design as well as borders. The appearance of a hedge especially when trimmed or clipped is necessarily more stiff and artificial. Low hedges are useful in indicating boundaries where it is not desirable to entirely shut off the vision.

Where space is extremely limited, materials for screening undesirable views and making divisions should take up no more ground than necessary. In such cases vines trained on trellis or fence will serve effectively.

Spacing between plants should be sufficient to accommodate them when they are full grown. Large growing shrubs may be spaced as far as 6 to 7 feet apart; low growing ones 2 to 4 feet apart and the medium sized in proportion. In hedges, spacing should be much closer.



Borders are kept clean-cultivated with boundary line curved and sharply defined.



The lawn is unbroken save by occasional shade trees and walks. Plantings are confined to borders.

## Flower Plantings

There is a wide difference between the flower border and the garden where flowers are planted in rows for ease of cultivation. To arrange flowers in a garden picture is a mark of distinction and refinement. The success of a flower border is in proportion to the descriptive knowledge which the gardener has of the subjects he is to use. Flowers give life and color to landscape plantings. They may be used in three locations:

a. **As a part of the foundation planting.** Many foundation plantings consist of shrubs for permanent effects and flowers for additional color and interest.

b. **In the flower border.** This border needs to be combined with some of the more permanent features of the grounds, such as the fence line, the shrub border or the foundation planting. A flower border which can be seen from the living room, dining room or kitchen windows will give additional pleasure.

c. **In the flower garden.** A formal flower garden

should have a setting of its own and be enclosed by either a shrub border, a hedge or a fence.

In developing a flower border where it is desirable to provide blooming flowers throughout the season, some of the principles to be kept in mind are as follows:

1. **Always provide a background** of good green foliage against which flower colors may be advantageously displayed. To avoid serious root competition allow at least 2 to 2½ feet between flowers and background plants.

2. **Place the tall varieties toward the back** with the medium growing kinds next while the low growing are used in the front as edgings.

3. **Fine foliage plants are most suited for foreground** while coarse-textured, large-leaved plants are used in the background for bold contrast.

4. **Repeat the dominant masses** sufficiently throughout the border so there will be an abundance of blooms during each blooming period. For instance, clumps of iris located at appropriate intervals even though of different colors will give such a mass effect for several weeks.

5. **Vary the height of background plants** and use tall spire-like forms occasionally to secure an interesting skyline.

6. **Do not plant in straight rows** but scatter plants so one group blends into the next.

7. **Colors should be harmonious and varied.** Mistakes will be made in choice of plants but part of the pleasure of gardening consists in rectifying and improving each year. If the perennial border does not supply blooms from early spring until late autumn, well chosen annuals can be grown to supplement the off season blooms.

8. **A satisfactory proportion of color** to have in bloom at one time is about one-fourth in the darker, one-half in the middle, and remaining one-fourth in lighter shades.

### Garden Accessories

"Garden features or ornaments" must have an attractive setting if they are to appear at their best. A background of trees, shrubs or flowers will provide this setting. Features, as a rule, should not be located in the broad lawn areas where they will give a spotty appearance and detract rather than add to the landscape picture.

The feature selected should be in scale with the plantings and area in which it is to be placed. It also must harmonize with the style of the general development. A formal rectangular pool has no place in a setting of informal plantings.

Rustic furniture should be used only on an informal lawn. Chairs and seats for the lawn should be of a simple and sturdy construction. Most of the special features will be in the private area. Besides furniture needed to make it comfortable, such items as rock gardens, arbors, bird baths and bird houses may form a part of the development. Each one, however, requires a setting or background to be provided by the surface contours and plantings of the area.

A good picture has only one center of interest. It is necessary to be cautious in selecting only those accessories which will harmonize with the general atmosphere of the grounds.

### Maintenance

The development of beautiful home grounds is a waste of time unless the plantings are properly maintained. We might have a beautiful plan and have it properly executed but the result will never be an attractive garden unless there is intelligent and adequate maintenance. Important problems are those concerned with pruning, cultivation, watering, fertilizing, spraying, care of the lawn and winter protection.

All shrub and border plantings must be kept clean-cultivated and free of both weeds and grass if the plants are to thrive. The sharply defined boundary between lawn and border should be kept in shape with the frequent use of the spade and the hoe.

Never allow a crust to remain long on the beds.

The lawn should be kept mowed at all times to keep it in healthy condition. It is never desirable to clip a lawn to less than two inches particularly in hot weather. If mowed frequently it is not necessary to remove the clippings. If left they form an excellent mulch and, when rotted, the best of humus. Frequent mowing plus proper fertilization will kill out most weeds.

To prevent burning of foliage, grass should be dry when fertilizers are applied. During drouths watering should keep the grass growing. The most satisfactory way is to give the ground a good soaking every 10 days or two weeks. This encourages deep rooting. Pruning is an important part of maintenance. Dead limbs should not be allowed to remain on plants. Cutting back and removal of the older wood is also necessary as the shrubs get older. It is also important to watch for destructive insects and diseases and take whatever measures are necessary to keep them under control.

# Planting Materials

## Use of Vines

There are many valuable uses for these climbing plants:

1. **On a trellis or house** where the space is too narrow for shrubs.
2. **On porches** where they give shade and privacy.
3. **On brick or stucco buildings**, they help to soften the harsh lines.
4. **On fences** they help blend the general plantings.
5. **On banks** they make excellent cover.

A vine which clings to brick, stone or stucco without support is the Engleman Virginia Creeper or ivy. Other hardy vines often used on lattices, pergolas or the garden arbor are the Virginia creeper or wood vine, the wild grape, the beta grape, the trumpet creeper and bitter-sweet. These hardy vines are more permanent and desirable than annual vines for these purposes.

Success in the use of vines depends on the selection of proper places for planting. Frequently they are used in covering places which would be more beautiful if left open; or frequently spaces are left exposed that should be covered. Columns, corners and angles need to be left open here and there to reveal the design of the structure. Some of the vines from warmer climates do best in a southern exposure, while honeysuckle and Virginia creeper thrive in shady places. Most vines, however, flower more frequently if given plenty of sunlight. Vines should not be allowed to climb wooden structures where they increase dampness and cause wood to decay. For covering stone walls, fences and arbors they are most effective.

## Trees; Their Use

Trees are the backbone of most landscape plantings. There are two important groups: Deciduous trees which lose their foliage during the winter and evergreens which hold their foliage throughout the year. Both are satisfactory and needed in the South Dakota landscape. Trees are especially useful for the following purposes:

1. **To provide shade** in the desired locations on the lawn and house at different periods of the day.
2. **To form a frame** for plantings and views.

3. **To provide a background** and an interesting skyline for garden areas and buildings.

4. **To screen** undesirable views.

5. **To break** the cold winter winds.

These reasons should be kept in mind in locating trees. They should be placed where they will cast shade when it is desired at definite times of the day. They should never be planted directly in front of a house but diagonally from the corners so as to form a frame for the picture which the house creates.

Background trees are important in giving a pleasant setting. A few additional ones near the boundaries are desirable to mark the limits of the yard. Generally speaking, the choice of trees for locations near the house should be those with upright high-branching shape such as the hackberry and the American elm. Other desirable species are green ash which thrives everywhere and the honey locust which is especially good in the south half of the state.

A variety of trees on the home grounds as well as in general plantings helps in warding off damage from insects and diseases which infest certain species. The background or border plantings may contain trees of denser growth and low branching habits such as Russian olive, flowering crabs, boxelder, weeping birch, willows and evergreens. The smaller trees are useful in a shrub border to give additional height and interest to the skyline.

Select good long-lived trees for the permanent plantings. It takes but a little longer for them to grow and they are much more satisfactory than the fast growing trees which are usually short-lived and frequently break down in wind storms. In securing trees one should obtain healthy, well-shaped trees. Poor deformed trees are a waste of time and money. Wild trees may be used but they are more likely to succumb to the shock of transplanting than those grown in a nursery. Small trees are usually transplanted more successfully than larger ones. In transplanting, as many roots as possible should be preserved because the larger the root system the better the trees grow.

Deciduous trees usually need pruning at the time of transplanting, in proportion to the loss of roots, because a balance between roots and top must be maintained if the tree is to thrive. The general shape of the top should be preserved but the branches may be shortened and thinned out to secure the needed balance. Needless to say the roots of the trees should never be allowed to become dry in the transplanting.

#### Cause of Tree Losses.

Severe losses have occurred in South Dakota in spite of increased precipitation generally favorable for tree growth. Species which have suffered most damage are Chinese elm, cottonwood, Russian olive, honey locust and hackberry.

Disease conditions are usually much more serious when the humidity is high. The extent to which disease may have been responsible for such losses is a matter for study. The principal cause of the losses, however, seems to be weather injury. Unusually heavy precipitation in late summer and early fall has stimulated excessive

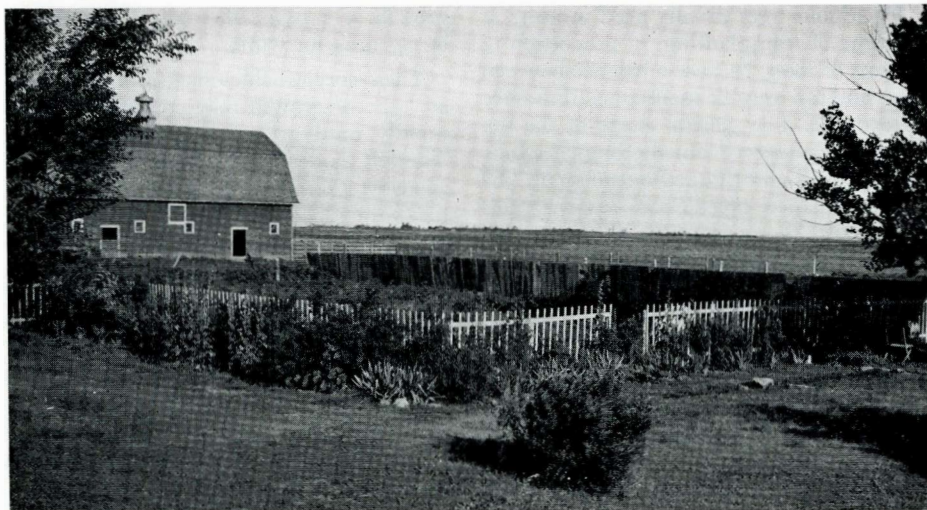
growth at a time when the wood should be ripening for winter.

These species which have an indeterminate type of growth may continue to grow rapidly until growth is stopped by frost. The soft tender tissues are then easily damaged by severe freezes. This may result in the killing back of the leading tips of branches or it may injure portions of the "cambium layer," the growing tissue just inside the bark. This tissue is frequently injured on one side of the trunk or the roots and especially around the crotch of branches. It appears that trees from seed produced in a milder climate with longer growing seasons are more apt to make rank growth late in the season than trees from farther north or higher elevations.

Hackberry, honey locust and black walnut, planted hundreds of miles north of their seed source have suffered far more than the same species from seed produced in the locality or farther north. Species such as the Russian olive or Chinese elm that have been developed in a dry semiarid cli-



An unsatisfactory foundation planting. Filled in with Red Salvia, the effect was attractive. Without flowers, the shrubs need to be arranged.



Yard fence made attractive by shrubs and flowers. The lone shrub is out of place.

mate or a climate which is of a more uniform character may be still more susceptible to damage from extreme climatic variations which South Dakota has experienced within recent years.

#### Adaptability of Deciduous Trees.

HACKBERRY is the most generally satisfactory shade tree throughout the state because of its shapeliness and its resistance to drouth and boring insects. The few pests which it harbors are of such minor nature that they do not usually damage the tree seriously. This species is quite unique in that respect.

The hackberry is approximately as fast growing as the American elm in many localities but stands drouths better. The principal deformities are galls on the leaves and the "witch's broom" which are caused by minute insects and do not seriously damage the tree. If the hackberry is interspersed with other varieties these deformities are much less frequent.

The tree is much less common than it should be because it is somewhat difficult to transplant due to a long taproot. In transplanting the hackberry it is usually safer to cut back the crown too heavily rather than not enough because of the severe mutilation of the roots which usually occurs when

the tree is taken up. Hackberries transplant most successfully when they are 18 to 24 inches in height.

AMERICAN ELM is superior as a street and shade tree from the standpoint of beauty and size. It is frequently spaced too closely together. Best results in street planting occur when the trees are spaced from 25 to 50 feet apart depending on the general moisture conditions in the locality.

CHINESE ELM has been very unsatisfactory in localities where the native elms grow rapidly. Its growth is so rapid in youth that it is particularly susceptible to weather injury and to breakage. Some Chinese elm stocks, better called "Siberian Elm," have proven superior in their ability to withstand diverse weather changes. The greatest usefulness of the species apparently is found in those drier spots where others have a difficult time. The autumn rainfall recently so prevalent throughout South Dakota is proving a severe test of the adaptability of the species. Some hybrids of this and the native red elm at the end of seven years show a marked superiority.

HONEY LOCUST is a rapid growing species of beautiful and finely divided foliage which retains its green color u

late in the season. It is resistant to many of the defoliating insects which damage other trees. The wood is very hard and strong and suitable for fuel and many other uses on the farm. Mature individual specimens are found thriving throughout the state. As this is the northern limit of its range, however, many newly-planted trees kill back. An attempt is underway at the Experiment Station to determine strains of this species which can be depended upon to meet the weather conditions in the northern part of the state.

GREEN ASH has made a better showing in the farm plantings of the past generation than any other species. It is drouth-resistant and free from winter injury. Drouth increases its susceptibility to borer damage, but it should not be discarded altogether on that account. As a rule the insect infestation will die down as the weather conditions become more favorable. It is one of the few species which can generally be depended upon to withstand the variety of soil and climatic conditions found throughout the state.

BOXELDER has a valuable place in South Dakota plantings. Although shallow-rooted and, therefore, apt to kill back during drouths, it has withstood all other tests of weather variation with no injury. It produces very dense shade and performs a valuable function in background plantings, as an occasional shade tree, and particularly when interspersed between other fast-growing trees in the windbreak. Its shade is so heavy that neither grass nor weeds will thrive beneath. It, therefore, aids greatly in bringing about weed control and the development of a desirable forest floor in the windbreak or woodlot planting.

BLACK WALNUT will grow over much of the state provided the northern strain is used and sites adapted to its growth are available. It wants rich loam soil deep, well-drained, and moist. This condition is not common but occurs on some river bottoms with high water table. The black walnut needs to be widely spaced with trees 30 feet apart to permit development of large dominant crowns. It should

not be too closely crowded by other trees equally fast or more rapid in growth.

COTTONWOOD and a North Dakota form known as "Northwest Poplar" are very fast-growing trees and serve a useful purpose in windbreaks and shelterbelts on soils to which they are adapted. The best site is a sandy or sandy-loam soil with a high water table from 6 to 10 feet below the surface. Heavy losses of cottonwood in shelterbelts within the last few years are attributed largely to excessive late fall growth followed by sudden freezing. Contributory factors possibly are the cottonwood rust which has defoliated the species for several successive years, and lack of adaptability to the locality. If cottonwoods are spaced not less than 25 feet apart and such species as boxelder, hackberry, elm and ash used between the cottonwoods, the effect of losing the cottonwoods is less severely felt. On the other hand if the cottonwoods survive they will make a substantial overstory above the other varieties as maturity approaches.

### Evergreens or Conifers

These add much beauty to the winter landscape with their winter foliage. They are desirable about the lawn if planted sparingly in informal arrangement.

Evergreens adapted to South Dakota are more resistant to drouth and insects than most deciduous trees. They are long-lived, beautify the surroundings, make the best windbreaks, and in the windbreaks are especially valuable on the leeward side of deciduous plantings. They stand weed and grass competition better than hardwoods.

Our most drouth resistant trees are the first three:

1. **Ponderosa Pine:** The native timber tree of the Black Hills and western South Dakota; will grow in most of the state.

2. **Red Cedar:**\* Native of Badlands and along the Missouri river.

3. **Silver Cedar or Rocky Mt. Juniper:**\* Native of dry slopes along the Cheyenne river and thence north and west through and beyond the Rocky Mountains.

*\*Cedars are hosts of the cedar-apple rust and should not be planted where one expects to raise apples. Around orchards, the other evergreens are good.*



4. **Douglasfir trees** up to 40 years old of beautiful color and large size are doing well in eastern and Black Hills counties. The species is native of Rocky Mt. slopes too dry for spruce but less dry than those occupied by Ponderosa pine. The soft needles and exposed buds of Douglasfir necessitate protection from hot winds, rabbits and poultry while trees are small.

5. **Black Hills spruce** is a native of the moister sites of northern Black Hills. Both spruces have endured considerable drouth in the eastern counties, but killed out where it became excessive. Their natural beauty makes them ideal for lawn beautification. Their density and wind resistance makes them ideal for windbreaks and orchard protection where adapted.

6. **Blue or Colorado spruce** is native of the moist alpine regions of Colorado, Wyoming and Utah. It came through recent drouths somewhat better than the Black Hills spruce in eastern counties. Although named Blue spruce the color varies to different shades of green.

**Care in Handling Evergreens.** Even small three or four year old evergreens can be transplanted and grown successfully if roots are kept moist for two years after transplanting, or until well-established and developed. Roots must be kept moist in wet moss, burlap, soil or mud while being moved, until planted in moist soil and well-packed. Exposure of roots to direct sun or wind for even a minute or two results in losses. Protection of tops from dry hot and dry cold winds for a year or so after planting is needed to prevent winter and summer "burning." This may be provided by rows of sunflowers or sorghum or other tall crop, or even by weeds and grass nearby in cases where the soil will not be dried out too much. A mulch of straw or rocks may be better.

#### Four Special Methods to Insure Survival of Pine, Douglasfir and Spruce Seedlings

1. **Grow in a nursery row** 1 to 2 feet apart in garden or elsewhere protected from hot winds and where water can be applied every week or two during drouth spells until 10 to 12 inches tall; then transplant with spadeful of earth to final site. Slight shade may be beneficial.

2. **Plant in a plow furrow** from which weeds and grass are excluded, and which can be watered if necessary.

3. **If necessary to plant** in exposed site, cover individual plants for first summer and winter with apple or other boxes with bottom removed to provide one-half shade.

4. **Plant in a punctured,** burned-out topless five quart oil can, set full depth into ground, in a protected spot convenient for watering. After growing

one year, tear out rusted can bottom and plant can and all in permanent location, with slight depression.

**A Safe Transplanting Method.** Evergreens up to 2 feet high may be transplanted from nursery rows to final site by the following **OPEN-BOTTOM BUCKET METHOD**:

1. **Cut bottom** from 5-gal. paint bucket, making cut edge smooth.

2. **Dig hole for tree** the depth of bucket and 8 inches larger.

3. **Draw top of tree together** and tie with cord.

4. **Placing bucket over tree,** push into ground full length, spading dirt away on outside as bucket is pushed down.

5. **Tip bucket,** cutting underneath with sharp pointed shovel at same time, until all roots are cut and dirt in bucket is separated from soil beneath. Slip burlap sack underneath.

6. **Place bucket containing tree** and soil with burlap sack in prepared hole. The soil should be moist or wet.

7. **Pull out sack,** pull bucket up a few inches, fill in loose dirt and pack solid. Continue a little at a time until hole is full. Remove bucket using water to loosen soil around edges if necessary. Water tree well.

Transplant evergreens while dormant, in April or early May, when there is plenty of moisture in the soil.

### Shrub Plantings

Shrubs—the lower bushy tree forms—are of special value in all South Dakota plantings—forest, windbreak, wild life, as well as beautification. Nature adorns and protects all her native woodlands with shrubs or bushy growth. This is necessary to keep out the wind, hold the leaves for a mulch to protect and enrich the soil, retain snow, and conserve moisture. Man destroys this protective covering by pasturing with livestock—the first step in ruining the woodlands.

All plantings need shrubs; shelterbelts and woodlands for a protective fringe and an understory, to establish and maintain proper forest conditions. For home grounds as well as for parks and public forest plantings, shrub borders do a very necessary job in protection, and also in increasing the beauty and finish of the landscape picture.

The choice of shrub varieties is perplexing because there are so many hands



Here are four hardy evergreens suitable for protecting apple orchards. From left to right, they are Ponderosa pine, Colorado spruce, Black Hills spruce and Douglasfir.

ones which seem most desirable. These listed in this publication have been tested in South Dakota. The proper choice is somewhat easier when they are classified into sizes. A number are described to give a better idea of their value for different purposes.

Three sizes of shrubs are usually recognized:

1. **Tall shrubs** that at maturity are above 8 feet in height, some of which may reach a height of 15 to 25 feet on favorable sites.

2. **Medium shrubs** that range from 5 to 8 and sometimes even 10 feet in height according to the locality, the moisture conditions and the ages of the shrubs.

3. **Low shrubs** that do not grow over 5 feet in height.

### Tall Shrubs

The taller shrubs are especially useful in the center or background of large shrub groups and for the exterior border of shelterbelt and windbreak plantings. Late in life they may develop more or less a tree form with naked stems. For clothing and dress-

ing up such naked stems the planting of medium and lower shrubs in front of the taller is desirable. In the windbreak taller shrubs are planted between the medium shrubs and the trees to improve the streamline effect and develop the more efficient shelter needed to protect the still taller trees.

**LILAC.** Among the large shrubs the lilacs are the most common and the most useful. For screens and backgrounds of shrubbery masses they produce a most attractive effect. There are many improved varieties much superior to the old common type. One species that should be generally used because of its superior hardiness and its general desirability in the landscape is the Chinese lilac, a hybrid of the Persian and the common. This is more graceful in its growth, with smaller leaves and large open drooping panicles of reddish-purple flowers.

**HONEYSUCKLE.** The bush honeysuckles are also very desirable shrubs for border and background plantings with

their pink or white spring flowers and their coral red berries. The largest form is the Tatarian. It is drouth resistant, shade enduring and of rapid growth. It is one of the best shrubs of its size for the shady side and interior of the shelterbelt along with chokecherry and the dogwoods. Because of bare lower stems in later life it looks much better when placed behind shrubs of the medium or lower classes. The abundance of juicy, red fruit though acrid and bitter, causes it to be a favorite for wildlife plantings. This species is grown readily from either seed or cuttings. The Morrow honeysuckle, a lower form, is preferred for clipped hedges.

MOCK ORANGE is an attractive white flowering shrub of many varieties adapted to the more favorable localities. It ranges in size from the tall rather coarse fragrant mock orange to the finer-textured Lemoine hybrids, some as low as three feet in height.

RUSSIAN OLIVE is the tallest of the shrubby trees, reaching heights of 25 or even 30 feet in the southeastern portion of the state. It is very fragrant when the tiny yellow flowers open in early June and its silvery foliage makes a striking and beautiful contrast in background or border. It has suffered severe weather killing during recent seasons, and seed must be selected only from sound thrifty northern trees.

BUFFALOBERRY is a closely related native shrub whose leaves also are somewhat silvery in color. It has shown less weather damage in many recent plantings than the Russian olive, and appears to be particularly adapted to shelterbelt and wildlife plantings. It produces an edible fruit for jelly.

CARAGANA, or the SIBERIAN PEATREE, is outstanding in resistance to drouth and cold. Particularly vigorous in the north, the species is less satisfactory in the southern part of the state, due to severe defoliation caused by grasshoppers, blister beetles and other insects which enjoy its leguminous foliage.

AMUR or GINNALA MAPLE, an attractive tall shrub or small tree attaining a height of 15 feet, is growing successfully in

North and South Dakota. Its brilliant fall foliage makes it a desirable addition to the landscape planting.

TAMARISK is a very striking, graceful shrub with finely-divided twigs, cedar-like foliage, and with small spikes of pink blossoms appearing in July on the new growth. It is planted on the fringe of shelterbelts in Nebraska. In South Dakota it sometimes freezes back, but sends up a strong new growth each year from the old wood, and if properly trimmed continues to look attractive. It is easily propagated from cuttings, and needs cutting back each year to produce the most decorative effects.

CHOCKECHERRY, a native throughout the state, is one of the most useful of shrubs for fringing the native and planted forests, and also as an understory (underbrush) beneath or among the trees, for holding leaves and snow. The native stock is drouth-resistant. The bitter leaves are also resistant to attack from grasshoppers and blister beetles. The ability of the chokecherry to send out a thick growth of sprouts makes it extremely useful for sheltering birds and wild life as well as for protecting forest plantings, conserving moisture and building up the soil.

SERVICEBERRY and JUNE BERRY, SASKATOON or SHADBUSH include two native fruit bearing species usually growing in slightly acid soil and having many of the desirable qualities of the chokecherry. The form native in eastern counties quickly loses its fruit to birds. The western type in the Black Hills has larger fruit clusters which often dry on the bushes.

WILD PLUM also has some of the characteristics of the chokecherry, but is less satisfactory for landscape or shelterbelt planting. It makes faster growth but is somewhat less drouth-resistant and suffers severely from snowbreakage and rodent damage. Since it is susceptible to disease and insects, its use in shelterbelts and windbreaks appears to have caused increased damage to fruit orchards.

NANNYBERRY or BLACK HAW (*Viburnum lentago*) is a native of S



A corner planting of Mock Orange and Spirea Vanhouttei.

Dakota woodlands, with shiny leaves, flat masses of tiny white blossoms, and black, edible fruit. An attractive hardy shrub desirable for landscapes, woodlands and wild life plantings.

HAWTHORN or THORNAPPLE, sometimes called the red haw is another native easily recognized from its many long slender thorns and red fruit. Its rounded impenetrable mass of stiff branches makes an ideal shelter for song birds.

### Medium Shrubs

This class is more popular for landscaping because of slower growth. With an ultimate height of 5 to 10 feet, they are exceedingly useful behind or to the flank of the low shrubs, and in front of tall shrubs which eventually develop naked trunks, for facing. The medium shrubs have finer stems and more attractive foliage generally than the tall shrubs, and are more useful in many foundation and border plantings. Shrubs of this size make very attractive informal

hedges which do not need much trimming. A few of the best are mentioned here.

AMERICAN or HIBUSH CRANBERRY is practically the same as the snowball, except that its attractive white flowers are in flat masses rather than a round ball. The red fruit hanging on until late in the fall or winter is used for jelly. It is an excellent shrub for moist shady sites.

COTONEASTER, PEKING, the hardiest of the cotoneasters, is one of the most attractive and popular of shrubs for lawn hedges and borders, because of its symmetrical form, attractive leaves and black berries which hang on into the winter. The seeds often take two years to germinate and it is a host of the oyster shell scale which has to be eradicated by spraying. Yet its heavy crops of fruit and its resistance to extremes of drouth, heat and cold, make it useful in park and wild life plantings.

GOLDEN or FLOWERING CURRANT, an attractive shrub with fragrant, bright yellow flowers, is found in the native brush and woodlands over most of the state. It is an extremely hardy, drouth-resistant shrub of great merit for landscaping and windbreaks. Its tolerance of sun and heat, as well as of shade and abundant moisture make it particularly useful under nearly all conditions. It has an ability to sprout from the roots, which enables it to survive fire and drouth, and establish the conditions essential to its survival.

DOGWOODS are represented in South Dakota landscaping chiefly by the Red Osier, which is excellent for shady, moist places.

INDIGO BUSH, (*Amorpha fruticosa*) or False-Indigo, is a native shrub, 5 to 13 feet high, with feathery foliage. The leaves are pinnate with 15 to 33 leaflets, making the foliage highly ornamental. The flowers, one-third inch long, are blue with purple anthers, densely packed in slender racemes. The naked trunks make it better adapted to the background in shrub groups. In contrast to its near relative, the peatree, this shrub is left entirely alone by most insects, apparently due to some objectionable prop-

erty, as is the case with the rotenone bearing plants.

MANCHU or NANKING CHERRY, or ORIENTAL BIRD CHEERY (*Prunus tomentosa*), has proven hardy and drouth resistant. The shrub is of neat habit, thickly set with pubescent leaves, presenting an attractive appearance in the landscape group. The flowers are white, fading to rose, succeeded by small, acid but edible cherries of bright currant red. It is probably the best edible cherry for many parts of South Dakota and is proving successful in shelterbelt plantings.

ROSES of two types have been developed which are sufficiently rugged for use in landscaping without winter cover under South Dakota conditions.

**Rugosa Hybrids** are developed from Siberian stock. They have strong thorny stems and attractive heavy foliage. They include such desirable forms as the red Amelie Graveraux and the Hansa. The F. J. Grootendorst is a very unique hybrid of the polyantha rose with small red carnation-like blooms in clusters.

**N. E. Hansen Hybrids** of the wild prairie rose include several hardy and attractive new roses which tend to be more or less thornless. These include the double dark velvety red Zitkala, the light coral pink Yawa, and the rose pink Lillian Gibson, all on plants of strong upright sturdy growth.

SAGEBRUSH with its densely branched, long plume-like spires of silvery gray is very effective against a background of dark green shrubs. This characteristic plant of the more or less alkaline "sagebrush plains" should prove very useful in much of South Dakota, either as a wind-break hedge, or in the landscape group.

SILVERBERRY from the North Dakota prairies has delightfully fragrant yellow flowers like the Russian Olive, but has broad leaves, silvery on both sides.

SPIREA VANHOUTEE, a great favorite for lawn, garden and foundation planting, is so easily grown, so attractive, and so tolerant of shade that it may well fill

an important niche in all landscape plantings. It should be used only on the protected, moister sides of tree and shrub groups, and not on the hot, dry southwest exposures.

WAHOO or BURNING BUSH is wild in some South Dakota woodlands. Its four-angled branches, pendant dark purple flowers and crimson fruits when opened make it quite unusual.

### Low Shrubs

Low shrubs are very useful for foundation plantings, facing taller species, and low barriers. A smaller selection of hardy low shrubs is available than of the medium and tall varieties. Some of the more attractive, commonly planted low shrubs, such as Japanese barberry, are hardy in South Dakota only in the moister, warmer locations. For variety, a more extensive use of native shrubs is needed.

JAPANESE BARBERRY and the improved upright growing form, the TRUE-HEDGE COLUMNBERRY, are satisfactory in the cities, where protection and some irrigation can be provided. They may be used under similar site conditions elsewhere.

PYGMY CARAGANA, the dwarf pea-tree, is one of the hardiest of the low shrubs, suitable for very low trimmed hedges or dwarf effects. Its prickly foliage may tend to increase its efficiency as a barrier.

CORALBERRY or INDIAN CURRANT with its red berries, and SNOWBERRY with its white berries are the two common species of "Buckbrush" found in all parts of South Dakota, hardy and drouth resistant, suitable for sunny or shady sites. These shrubs are useful for protective fringes and undergrowth in tree plantations, and for shelter and food plants for birds and wild life. Their habit of spreading from the roots make them less adapted to more formal landscape effects.

CURRANT. The Wax Currant of the Black Hills pine forests, with its sm

round scalloped leaves, rosy white flowers and bright red fruits, and the wild Black Currant are two hardy native species three to six feet in height, of value in beautifying South Dakota landscapes.

FALSESPIREA, (*Sorbaria sorbifolia*) is also called Ash-leaved Spirea, the leaves resembling those of the American Mountain Ash. Three to five feet tall, it thrives in partial shade and in midseason produces showy upright plumes of creamy-white flowers.

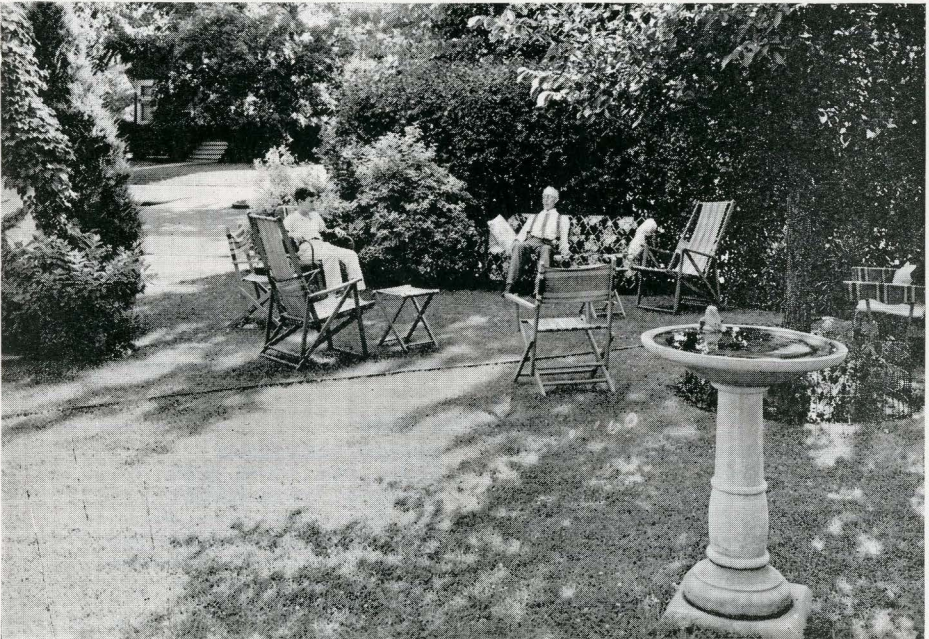
LEADPLANT is the dwarf Indigo Bush, a native of northern prairies. This low downy plant one to three feet tall has feathery leaves, flowers purplish-blue with yellow stamens, and blooms in June and July.

NINEBARK. This name is applied to the entire genus of *Physocarpus*, including some species native to the Black Hills and Rocky Mountain region, which range from two to five feet tall. An attractive shrub with white flower clusters and spreading

form, the dwarf type makes a beautiful clipped hedge on State College campus.

RUBBER RABBITBRUSH, a native of the western semi-arid mountains and alkali plains growing two to four feet high is useful for untrimmed hedges and dry alkaline conditions. This plant contains an average of 2.8 percent rubber. It has aromatic gray foliage, and produces great clusters of golden flowers in heavy dome-shaped trusses during July and September.

SANDCHERRY, as frequently sold by South Dakota nurserymen, is usually Dr. Hansen's Improved Bush Cherry, selected for its heavy production of mild, tasty fruit on second year branches. It is resistant to heat and drouth, and grows both on sandy and heavy soils. The glossy, attractive foliage and rapid symmetrical growth enables it to make a quick showing for landscape planting. It tends to become prostrate with age and the older wood should be cut off every two or three years. Rabbits and mice eat it voraciously and must be controlled.



V. A. Simmons, secretary of the South Dakota Horticultural Society, enjoys the outdoor living room.

SPIREAS of several types supply low shrubs useful in landscape beautification. The Snowgarland (*Spirea multiflora*) and the Garland (*Spirea arguta*) spireas burst into white masses before leafing out in spring. Two red summer flowering types are Froebels' and the Anthony Waterer, which produce flowers on the new growth, usually dying back each winter. The Froebel spirea is the larger and most useful, two to three feet in height.

THREE-LOBED SUMAC (*Rhus trilobata*) is also called Lemonade Sumac and "Skunk Bush." This, perhaps the most drouth-resistant shrub we have, is native from the Missouri west to the Rocky Mountains and very much resembles a taller, ranker-growing species growing further east and south called "Fragrant or Aromatic Sumac." Care must be taken to plant only the native species in South Dakota. The bush has much larger, stickier, brighter red berries than the common sumac, which are

eaten by birds or fall off in July or August. The attractive foliage turning red in autumn, and the upright shape of the bush recommends it for planting on the hot, dry side of taller shrubs and trees, or of buildings. Found on the heavy clay and shale soils of the Missouri River bluffs, as well as along the lower edge of the Ponderosa Pine forests, it probably will grow in any sunny, dry place, when properly planted, with little care.

DWARF EVERGREENS. Among the conifers so much the fad for landscape planting nowadays are the Mugho pines and several low spreading junipers hardy enough for South Dakota. These include the Common Juniper of the Black Hills, three to four feet tall, and the Prostrate Juniper, which forms a carpet from 10 to 30 feet in diameter over the tops of many gravelly or rocky buttes in the west. The Savin and Pfitzer are introduced junipers which do well under city protection.

## Trees, Vines and Shrubs Suitable for South Dakota Planting

Listed here are trees, shrubs, and vines which have proven most suitable for general planting in South Dakota. Those listed for "Dry or Exposed Sites" will thrive generally throughout the state. In the very dry localities they may be confined to the better sites, which are the more moist and protected of that area. The species herewith listed in the column "Protected or Moist Sites," on the other hand, can be expected to succeed only in such favorable locations as the larger towns where they are protected and can be watered during extremely dry periods, or in the eastern or Black Hills counties.

### LARGE TREES, 25 ft. or taller

For Shade, Background, Framing, Windbreaks, Woodlots

#### EVERGREENS

##### Dry or Exposed Sites

- \*Cedar, Red, *Juniperus virginiana*
- \*Cedar, Silver, Rocky Mt. Juniper, *Juniperus scopu.*
- Pine, Ponderosa, *Pinus ponderosa*

\*Alternate hosts for cedar-apple rust.

##### Protected or Moist Sites

- Douglasfir, *Pseudotsuga taxifolia*
- Fir, Concolor (Shortleaf White Fir) *Abies concolor*
- Spruce, Black Hills, *Picea glauca densata*
- Spruce, Colorado Blue, *Picea pungens*

#### DECIDUOUS TREES

- Ash, Green, *Fraxinus pennsylvanica lanceolata*
- Boxelder, *Acer negundo*
- Bur Oak, *Quercus macrocarpa*
- +Coffeetree, Kentucky, *Gymnocladus dioicus*
- Elm, American, *Ulmus americana*
- Elm, Siberian, and Hybrids, *Ulmus pumila*
- Hackberry, *Celtis occidentalis*
- Honey Locust *Gleditsia triacanthos inermis*

- Basswood, *Tilia americana*
- Buckeye, Ohio, *Aesculus glabra*
- Cottonwood, *Populus deltoides*
- Elm, Slippery (Red) *Ulmus fulva*
- Maple, Silver or Soft *Acer saccharinum*
- \*Poplar, Boleana, *Populus alba boleana*
- Poplar, Northwest, *Populus sp.*
- Walnut, Black, *Juglans nigra*
- Willow, Black, White, Golden, *Salix nigra & alba*

\*Generally good for framing and background; not suitable for shade, windbreaks or woodlots  
†In Southeast corner of state.

**LARGE SHRUBS OR SMALL TREES, above 8 ft. tall**

For Borders, Background, Framing, Foundation Plantings of Larger Buildings, Informal Hedges, Exteriors, and \*Understory of Windbreaks and Woodlots.

\*†Buckthorn, Dahurian, *Rhamnus davurica*  
 Buffaloberry, *Shepherdia argentea*  
 \*Chokecherry, *Prunus virginiana*  
 Hawthorn, *Crataegus sp.*  
 \*Honeysuckle, Tatarian, *Lonicera tatarica*  
 Lilac, Chinese, *Syringa chinensis (rothomagensis)*  
 Lilac, Common, *Syringa vulgaris*  
 \*Maple, Amur, *Acer ginnala*  
 Peatree, Siberian, *Caragana arborescens*  
 Plum, Wild, *Prunus americana*  
 Russian Olive, *Elaeagnus angustifolia*  
 \*Serviceberry, Juneberry, *Amelanchier canadensis*

Apricot, Manchurian, *Prunus mandshurica*  
 Crabs, Wild and Ornamental, *Malus sp.*  
 Cranberrybush, European, *Viburnum opulis*  
 Lilac, Japanese Tree, *Syringa japonica*  
 Mock Orange, Sweet, *Philadelphus coronarius*  
 Mountain Ash, European, *Sorbus aucuparia*  
 \*Nannyberry (or Black Haw) *Viburnum lentago*  
 Snowball, *Viburnum opulis sterilis*  
 Sumac, Staghorn, *Rhus cotinus*  
 Tamarisk, Amur, *Tamarix pentandra*  
 Willow, Diamond, *Salix missouriensis*  
 Willow, Laurel Leaf, *Salix pentandra*

†More resistant to crown rust of oaks than the common Buckthorn.

**MEDIUM SHRUBS, 5-10 ft. tall**

For Borders, Foundation Plantings, Hedges, Woodland Ground Cover.\*

Cherry, Manchu (or Nanking) *Prunus tomentosa*  
 \*Cotoneaster, Peking, *Cotoneaster acutifolia*  
 \*Currant, Golden Flowering, *Ribes aureum*  
 \*Honeysuckle, Morrow, *Lonicera morrowi*  
 Indigobush (or False Indigo) *Amorpha fruticosa*  
 \*Juneberry or Saskatoon, Dwarf, *Amelanchier*  
 Rose, *Rugosa*, and N. E. Hansen Hybrids  
 Sagebrush, *Artemisia tridentata*  
 \*Silverberry, *Elaeagnus commutata (argentea)*  
 Sumac, Smooth, *Rhus glabra*  
 Wahoo or Burningbush, *Euonymus atropurpureus*

\*Cranberrybush, American, Highbush, *Vibur. trilob.*  
 \*Dogwood, Redosier, *Cornus stolonifera*  
 \*Elder, American, Golden and Cut-leaf  
 Hydrangea, Peegee, *Hydrangea paniculata*  
 Ninebark, Common, *Physocarpus opulifolius*  
 Peashrub, Russian, *Caragana frutex*  
 Plum, Flowering, *Prunus triloba*  
 Spirea, Vanhouttee, *Spiraea vanhouttei*  
 Wayfaringtree, *Viburnum lantana*  
 Winged Euonymus, *Euonymus alatus*

**LOW SHRUBS, 3-5 ft. tall**

For Foundation Plantings and Facings

Almond, Siberian, *Prunus tenella (nana)*  
 Caragana, Pygmy, or Dwarf Peashrub  
 Coralberry, *Symphoricarpos orbiculatus*  
 Currant, Wax, *Ribes cereum*  
 Currant, Wild Black, *Ribes americana*  
 Meadow Rose, *Rosa blanda*  
 Rubber Rabbitbrush, *Chrysothamnus nauseosus*  
 Sandcherry (Hansen Bush Cherry) *Prunus besseyi*  
 Sandcherry, Purple Leaf, *Prunus cistena*  
 Snowberry, *Symphoricarpos albus*  
 Sumac, Three-lobed, *Rhus trilobata*

Almond, Double Flowering, *P. glandulosa (cherry)*  
 Beauty Bush, *Kolkwitzia amabilis*  
 Cherry, Chinese Bush, *Prunus japonica*  
 Cherry, Ural Mt. (or Ground) *Prunus fruticosa*  
 Falsespirea (Ash-leaved spirea) *Sorbaria sorbifolia*  
 Hydrangea, Snowhill, *H. arborescens*  
 Mock Orange, Lemoine, and other dwarf sorts  
 Ninebark, Dwarf, *Physocarpus opulifolium nanus*  
 Spirea, Frobel's, *Spiraea bumalda*  
 Spirea, Snowgarland and Garland  
 Barberry, Japanese, *Berberis thunbergi*

**SHRUBS FOR LOW TRIMMED HEDGES**

Cotoneaster, Peking  
 Dwarf Peashrub, *Caragana pygmaei*  
 Wild Gooseberry

Barberry, Japanese  
 Columberry, Truhege  
 Ninebark, Dwarf

**VINES**

Grape, Fox (Native)  
 Grape, Beta  
 Virginia Creeper  
 Engelmann Virginia Creeper

Bittersweet, American, *Celastrus scandens*  
 Honeysuckle, Trumpet, *Lonicera sempervirens*  
 Clematis, Purpl, *Clematis jackmani*  
 Virgins Bower, *Clematis virginiana*  
 Dutchmanspipe, *Aristolochia sp.*





At left: The martin house is an excellent garden accessory.

Below: A border of trees and flowers transforms a bare lot into a bower of beauty.

