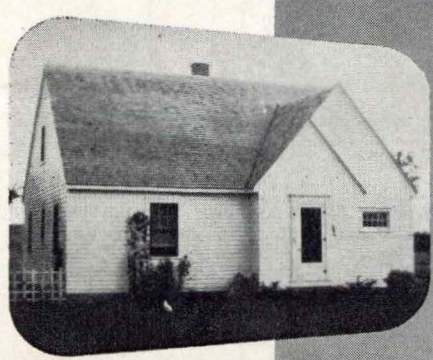
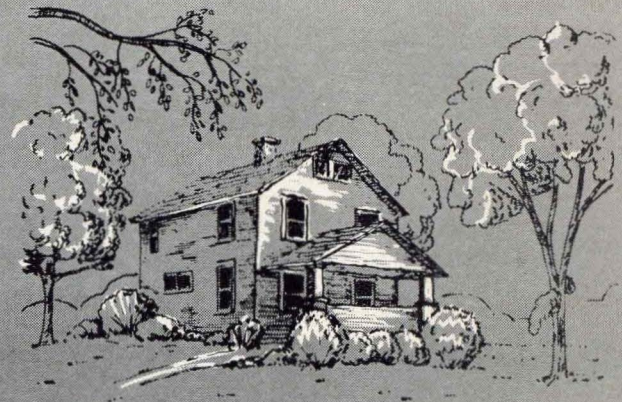
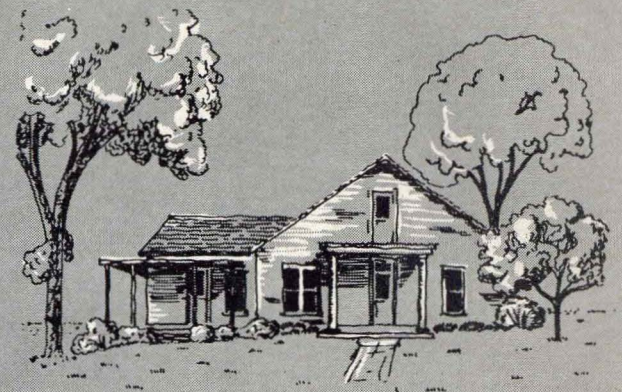


Pamphlet
207

PLANS • PLANT MATERIALS • CARE • CONSTRUCTION

your FARM HOME GROUNDS



Iowa
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Ames, Iowa — September, 1953
Pamphlet 207

CONTENTS

	<i>Page</i>		<i>Page</i>
Introduction	5	Have beautiful lawns	15
How to Plan	5	Grading	15
Make a list	5	Seeding	16
Make a map	5	Taking care of the lawn	16
Take over-all measurements	5	Cutting the grass	16
Show and label everything	6	Fertilizing	16
Make a general plan	6	Controlling weeds	16
Sketch ideas	6	Have beautiful plantings	16
Home grounds divisions	7	Buying healthy plants	16
Public lawns	7	Planting trees and shrubs	16
Front lawn	7	Taking care of trees and shrubs	18
Public side lawn	7	Weeding, watering and cultivating	18
Car parking	8	Pruning	18
Front walk	8	Planting flowers	18
Public lawn fences	8	Taking care of flowers	18
Private lawns	8	Insects and Diseases	20
Service lawn	8	General controls	20
Garage	9	Specific controls	20
Walks	9	Aphids and red spider	20
Clotheslines	9	Chewing insects and caterpillars	20
Play area	9	Scale	20
Poles	9	Mildew	20
Living lawn	9	Galls	20
Recreation area	10	Tree borers	20
Make a final plan	10	Termites	21
Make a Planting Plan	11	Earthworms	21
How to make a planting plan	11	Moles	21
How to select plants	11	Rabbits and mice	21
Trees	11	Good Construction Counts	21
Shade trees	11	Walks and terraces	21
Ornamental trees	12	Steps	21
Shrubs	12	Retaining wall	21
Around the house	12	Fences and arches	22
Screen plantings	12	Pergolas	23
Hardy shrubs	13	Trellises	23
Evergreens	13	Window boxes	23
In the yard	14	Dinner bell	23
Close to house	14	Outdoor fireplaces	23
Vines	14	Benches and garden seats	23
Flowers	14	Pools	23
For continuous bloom	15	Sun dial	23
No reds together	15	Bird baths and shelters	23
Some for foliage	15	Things you don't want	23
How to Carry Out the Plan	15	List of Reference Bulletins	24
Clean up the grounds	15		

7/1/58 et. al. 113

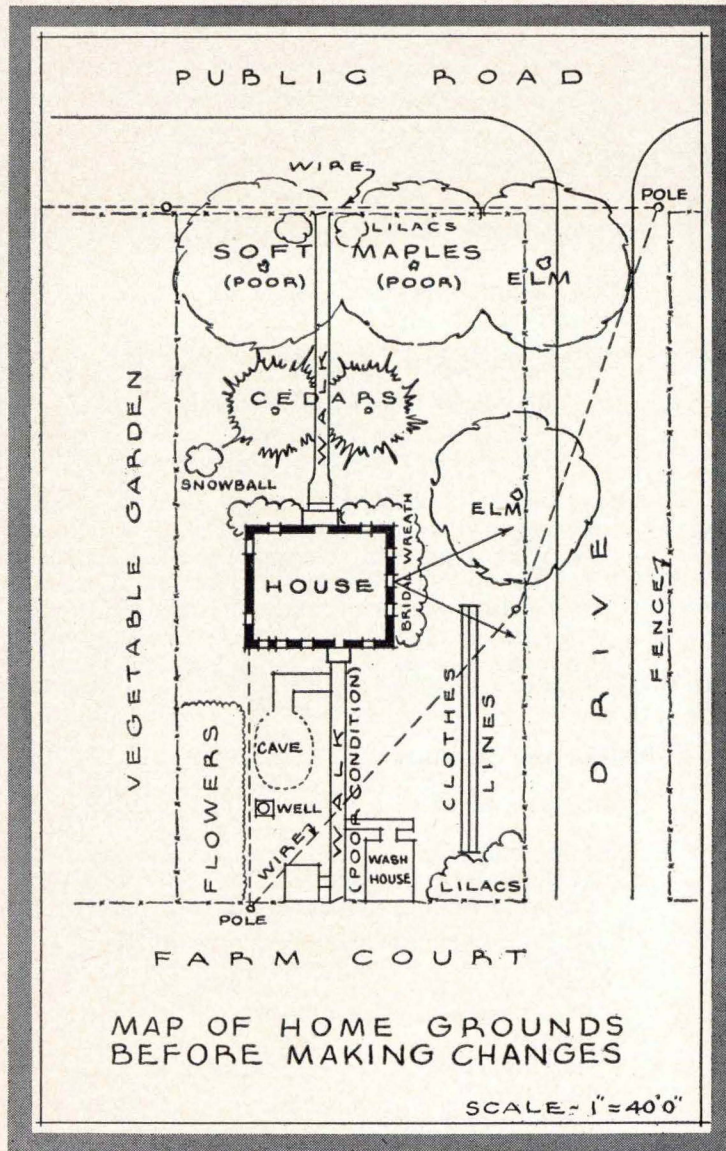


Fig. 1. Map, drawn to scale, from carefully taken measurements of the existing conditions on an Iowa farm home grounds.

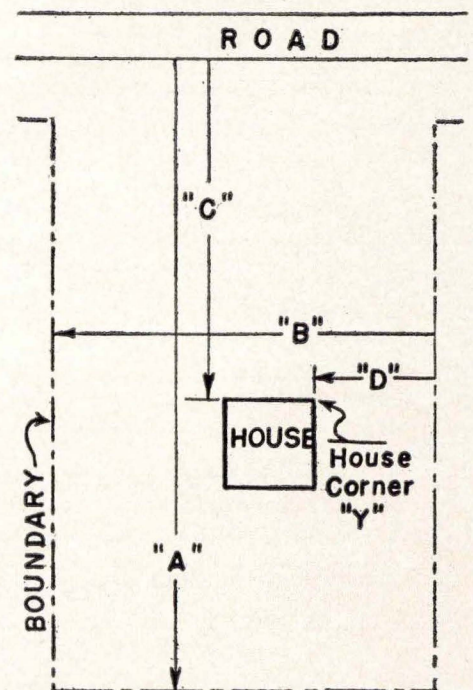


Fig. 2. Sketch showing first measurements to be taken when starting to make a map: "A" and "B", to learn full size of area to be mapped; and "C" and "D", to locate one corner of a building in relation to the whole area.

Your Farm Home Grounds

The grounds surrounding our houses are a useful and important part of our homes, winter, summer, spring and fall. Most of us wish that they were more useful and better to look at.

They can be if we plan well. The first step is to make a plan on paper. This will show all the changes to be made now and in the years to come. The next step is to put the plan to work. This includes cleaning up the grounds, making changes shown on the plan and taking care of the grounds. This is landscape architecture.

Most of the changes will be easy to make and they won't cost much. A few can be made each year. If you follow your plan each change will be one more step toward your ideal arrangement for all the grounds around your house. Hit-and-miss changes won't give you what you want.

The home grounds is a family affair; so let every member in on the planning, work and fun.

HOW TO PLAN . . .

MAKE A LIST

First list your yard's good points. They are the things you will not want to change. Then list the changes you want to make and the new things you'll want in your home grounds. When you make these lists, keep baby, junior and grandmother in mind, as well as yourself.

MAKE A MAP

Next, make a map of the existing conditions in your yard (fig. 1). Your plan will be based on this map so it must be accurate.

Make the map on a clear, warm day when it's a joy to be outdoors. It will take only a few hours. Two people can make it easily. One holds one end of the tape, while the other holds the other end and makes the record of the locations on the map. A sheet of cross-section paper mounted on a clip board or on a piece of heavy cardboard will make it easier to prepare the map. Usually, you can get cross-section paper from a store that sells school supplies.

Prepared by Margherita Tarr, extension landscape architect.

Take Over-All Measurements

Make the map outdoors as you take the measurements. First measure the over-all width and length of the area to be changed (fig. 2). At the same time, locate two sides of the house which are at right angles to each other, in relation to these over-all measurements. For example, measure from the public road to the house "C" and then on back to the far end of the back yard "A". Then measure from one side of the yard to the house "D" and then on to the other side of the yard "B".

Measurements "C" and "D" give the location of house corner "Y" in relation to the whole area to be mapped.

After you know the over-all measurements, "A" and "B", decide at what scale you can make your map to get the whole thing on the paper. By scale we mean the number of feet on the ground that each inch or large square on the paper will equal. For example: If the sheet of paper is 10 squares long by 7 squares wide and on the ground we find "A" to be 100 feet and "B" to be 70 feet, then the scale will be one square equals

10 feet. If "A" is 260 feet and "B" is 160 feet, then the scale will be one square equals 30 feet. In other words, divide the longest dimension on the ground by the longest dimension on the paper ($260 \div 10 = 26$) and the shortest dimension on the ground by the shortest dimension on the paper ($160 \div 7 = 22 \frac{6}{7}$). Select a scale which will be easy to work with: One square equals 5, 10, 15, 20 feet, etc., if the squares on the paper are divided into 5 or 10 smaller squares. If the large squares are divided into 4 or 8 smaller squares, or if a common ruler is used, then one large square or inch will equal 4, 8, 16, 32 feet, etc.

When you know the scale, put in the road and boundary lines on the paper at that scale (in this case, at $1" = 30'0"$). After the boundaries are in, you are ready to locate house corner "Y" on the paper. You know its location in relation to the over-all measurements so this will be easy.

Next, measuring from corner "Y" on the ground, locate all the basement and first-floor windows, doors and porches along one side of the house. Then locate all the walks, drives and trees on that side of the house, too.

To locate a tree or any point on the ground exactly, take two measurements (fig. 3). For example, one measurement taken at right angles to base line 2, an extension of the west side of the house, will tell how far west of the house the tree is located "B". The second measurement will tell how far south of the south side of the house the tree is "A". One measurement "C" from the southwest corner of the house "Y" to the tree won't tell us just where the tree is located. It could be anyplace along arc "D".

After locating everything along one side of the house, do the same on the other three sides.

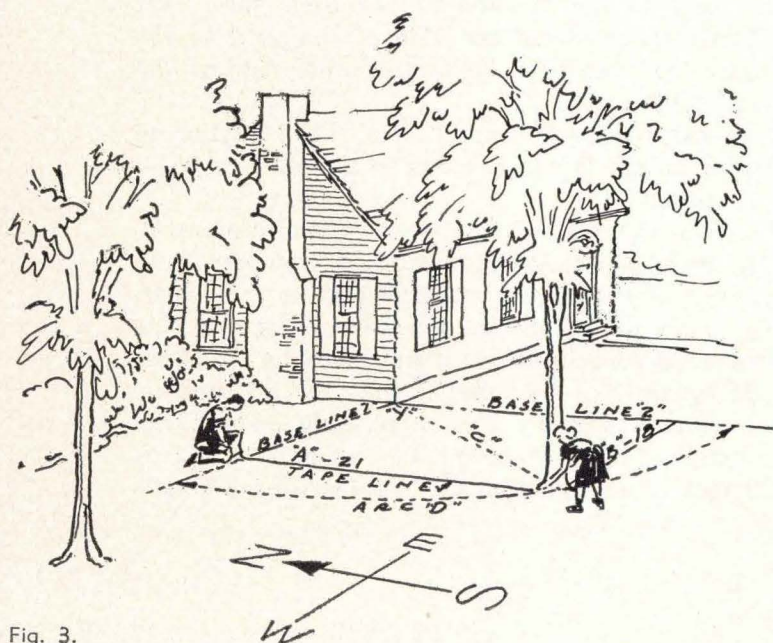


Fig. 3.

Show and Label Everything

The map, when finished, should show where everything's located: all the buildings, walks, fences, gates, steps, utility poles, overhead wires, wells, underground pipes and tiles, tree, shrub and flower plantings, banks and ditches. There should be arrows to show the location of good and poor views and prevailing wind directions. All these should be labeled. The map should have a title telling the name of the owner of the property, its location and the scale of the map. An arrow labeled "North" should show the direction north is on the map. After the map is completed you are ready to start planning.

MAKE A GENERAL PLAN

It's hard to move a sidewalk or a garage after it has been built. It's easy to try out different locations for them on paper with the help of an eraser. So try out all the possible arrangements for your home grounds on paper before you make any changes on the grounds.

First make a general plan. This will show the new locations for such things as walks, fences, drives, steps, slopes, light poles, plant beds and trees.

Make it on sheets of transparent paper (white gift wrapping paper or tracing paper) placed over the scaled map you have just finished. Sketch in at scale on the transparent paper the family's ideas for the changes to be made.

Sketch Ideas

Every member of the family may make a sketch or two. You might call this a "trial and error" method on paper. It's a good thing to use a fresh sheet of paper for each new idea rather than use an eraser. Then you'll have a record of every idea. The final general plan may include ideas worked out by every member of the family (fig. 8).

Check and double-check to be sure that the plan will work on the ground. To do this, set stakes on the ground to show the new location for the garage, walk or trees. In fact, set stakes for every change shown on the general plan. You might even stretch a string around the garage corner-stakes or along the stakes that outline a walk, drive or shrub bed. If you find that something shown on the plan won't work out well on the ground, change it on the plan. Also, make the necessary adjustments in the location of other things affected by this change.

Home Grounds Divisions

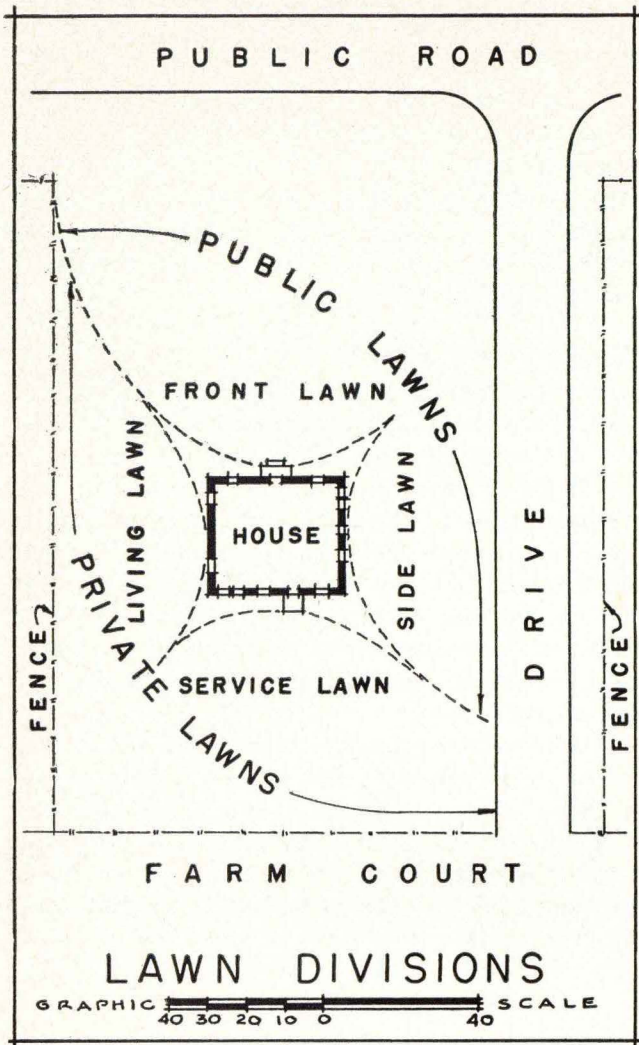


Fig. 4. Sketch showing lawn area uses.

PUBLIC LAWNS

The public lawns are in front of the house between the house and the public road, and between the house and the entrance drive. These lawns serve as a setting for the house. You'll want everything in them to make the house look better.

FRONT LAWN

The house should be about 100 feet back from the road. This makes a nice front yard. There are three things you want in it:

A grassed area — An open foreground of well-kept green lawn will serve as a setting for the house.

Shade trees — A few well-placed shade trees to frame views looking toward and out from the house will enhance its appearance.

A few shrubs — A few carefully chosen locations for shrubs for use about the house foundation and the selection of the right shrub for each location should improve its appearance. They will serve as a transition between the vertical lines of the house and the horizontal lines of the ground. You will want to select shrubs that will "go" with your house.

The lawn, trees, shrubs and vines will make the house seem to belong in its location (fig. 5).

PUBLIC SIDE LAWN

In the public side lawn you will have the same three things as in the front lawn. In addition you will need a walk leading from a convenient parking space for visitors' cars to the "front door." This is because if you want your guests to come in this way, you will need to make it very convenient for them. If you have recently built or remodeled, the "front door" will probably be on the side of the house facing the drive and will open into the living room.

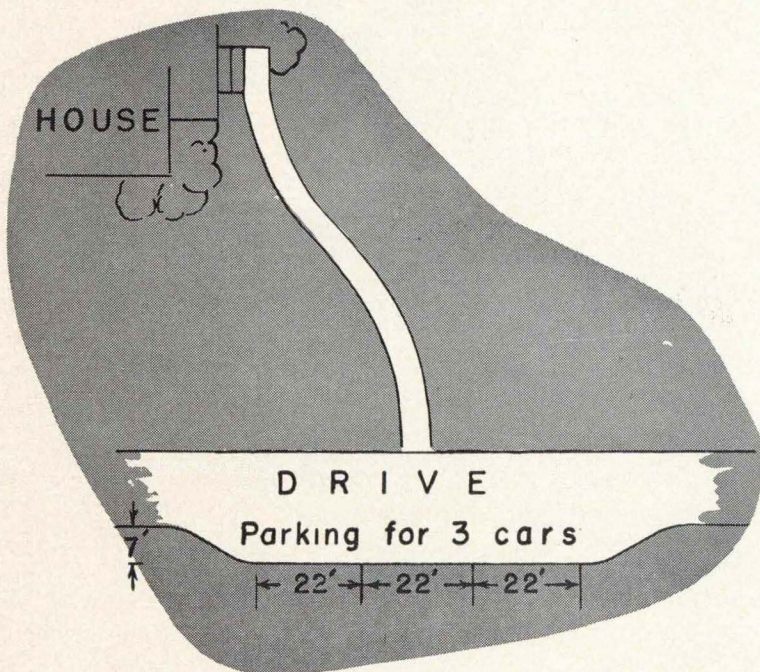
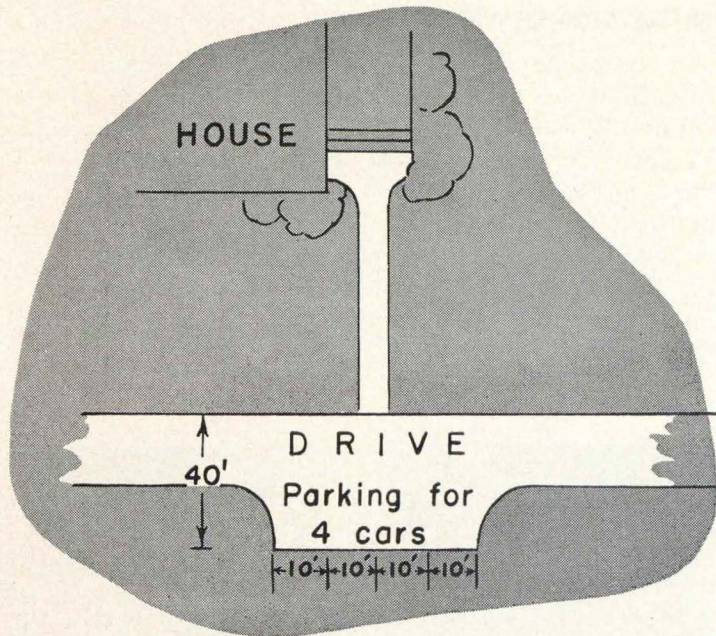
Fig. 5.



CAR PARKING

The parking space will be a widening of the entrance drive where two or three cars can be parked either parallel or at right angles to it.

The type of parking space, right-angle or parallel, will be determined by the amount of space available for it. If possible you will want to provide right-angle parking. This is so cars can be driven in and out without extra maneuvering.



There should be at least 40 feet between the parking space or drive and the house.

FRONT WALK

If the "front door" is on the road side of the house, the front walk may be as shown in the sketches at left.

If the door is on the drive side of the house, the walk usually should be straight, going directly at right-angles from the front door or steps to the drive and parking space.

PUBLIC LAWN FENCES

Usually, for best appearance and easiest upkeep, there should be no fence between the house and the road, or the house and the drive. A "front fence" often cuts off the view of the foreground setting of the lawn and the lower part of the house. A hedge does the same. The only times this is not true is when the house sits 150 feet to 200 feet or more back from the road or drive, or on ground lower than the road. Under these conditions you might have a picket or post and board fence.

If a fence is necessary to keep out stock when the house is only 100 feet or less from the road or drive, choose one that won't show up much. It should be an open wire one with unpainted metal posts and with no vines or other plants growing along it. And never put an archway over the front gate. It won't look well.

PRIVATE LAWNS

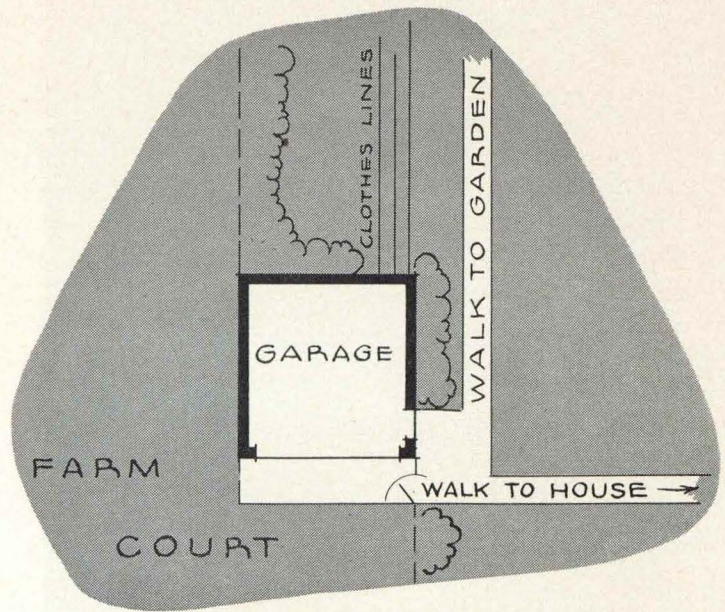
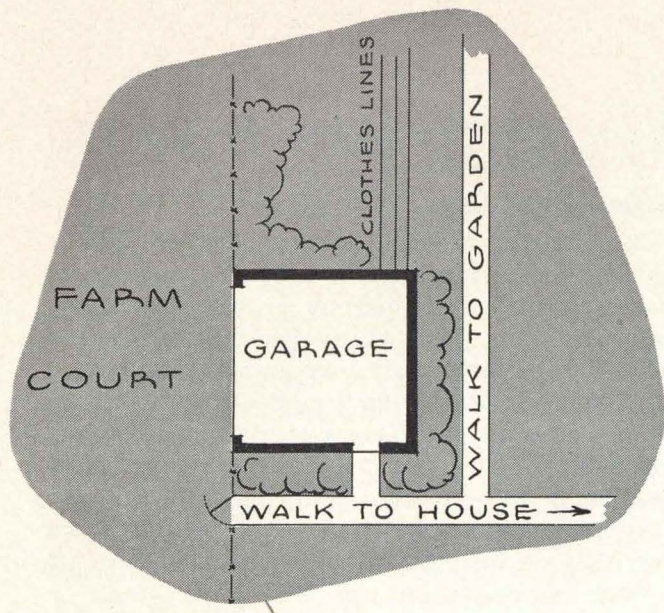
Private lawns are the service or back yard and the living or play yard.

Service Lawn

The service or back yard is back of the house on the side of the house opposite the road side. This lawn should be very convenient. These are the things that might be in it: service buildings, walks, clotheslines, a play lawn for small children, fences and gates and some plantings.

Whenever possible, plan the house and grounds so that from the kitchen windows you can see the entrance drive and the farm court. When the men are away or in the fields, the women are in charge. They want to be able to see what's going on without stopping their work. Keep this in mind when planning locations for buildings, clotheslines and plantings on this side of the house.

There may be some existing structures such as a cob house, wash house or cave, which are no



longer useful or necessary. They might be torn down or moved some place on the farm where they will be more useful.

GARAGE

When a new garage is needed, locate it so the doors will open into the farm court. Locate it where it can easily be reached from the back door and where it will not block views from the kitchen windows. A garage is a service building which is used in connection with the farm operations as well as the house. It may sit in the house yard or in the farm court. In either case one side of it should be in the back fence line. See illustration above.

WALKS

It is best to have as few walks as possible. Do not have a connecting walk between the back walk and the front walk unless one is absolutely necessary. If a walk is parallel to a building or fence, set it out about 5 feet from the building.

CLOTHESLINES

Clothes hung on east-west lines usually will not wrap around the lines. When possible have the clotheslines run east and west if they won't "break up" the lawn too much. Locate them where they will be convenient, where there is some sun and good air circulation, where they will be out of sight from the drive and road, and where almost no one will have to walk or play under them. The best location is usually parallel and close to a fence line.

If you can find no such convenient sunny lo-

cation for them and your washings are small, you might have a clothes reel. If you do, put it where you can hang up the clothes from the back walk. You can set it in a metal sleeve in the ground. When you aren't using it, keep it in the garage or in some other convenient location. If you have a drier, you'll need lines only occasionally for airing. These might be rope lines, put up when needed and then taken down.

PLAY AREA

The little tots will need a play area. Fence in a space which can be seen from the kitchen windows. A temporary fence will do because the children will grow up soon and you won't want the area fenced off then.

POLES

Locate the light and telephone poles along boundary line fences or close to buildings. There they'll not break into lawn areas. Also, locate them so they won't block views looking toward the house or out from it. At the same time, try to plan their locations so the shortest lengths of wire will be needed.

Living Lawn

The living lawn will be on the side of the house opposite the entrance drive. In some situations it might be back of the house. Plan it so you can go into it from the front or back yard, from the dining room porch, or from steps off the end of the front porch. Flowering shrubs, put in to separate this lawn from the public lawn, will give it almost as much privacy as there is in the house. Five-foot-wide flower borders along the living lawn

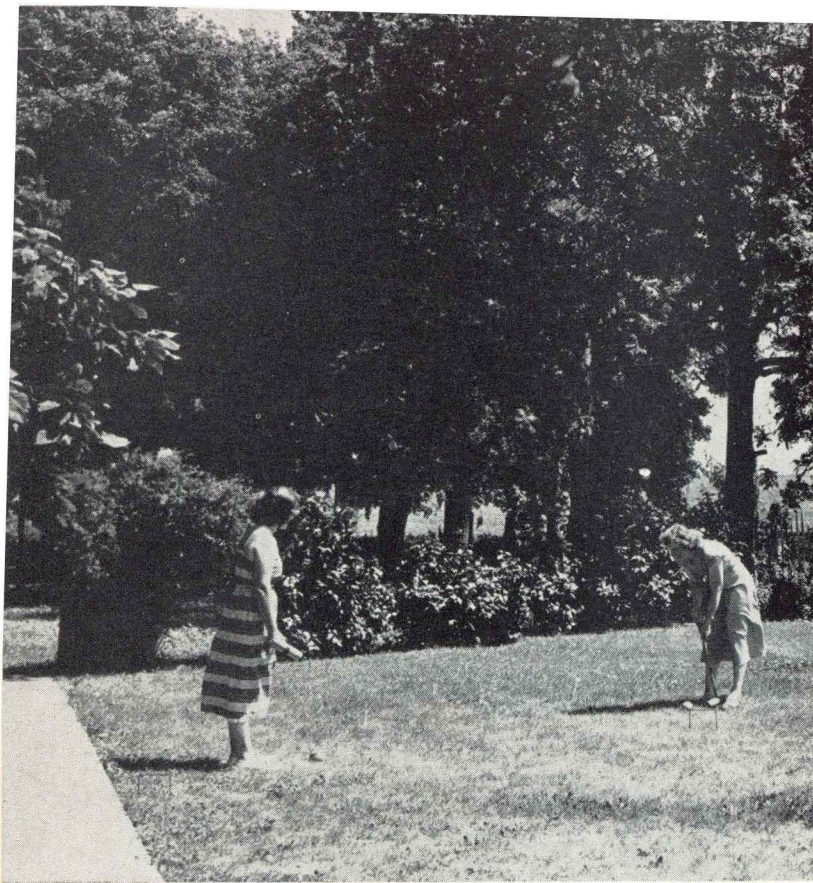


Fig. 6. At play.

One farm mother and daughter enjoy their well-kept, open, shaded lawn away from the dust and noise of the road, court and drive.



Fig. 7. At work.

fence and this side of the house will add color and interest to the lawn.

RECREATION AREA

The living lawn should be about 50 feet wide by 80 feet long or larger. There should be an open grass area at least 30 feet by 60 feet without any plantings in it. This will be where you can play croquet, badminton and other games (fig. 6).

At one end you may have a shaded sitting lawn, where you can work, have a picnic supper or just rest a bit. There you can enjoy a moment's relaxation in the outdoors admiring the yard, the flowers and the distant view. And because there is privacy on this side of the house, it will be fun to work and play there (fig. 7).

MAKE A FINAL PLAN

After you've made your many studies for the general layout of the home grounds, make the final plan (fig. 8). After you've checked it on the ground and found it will all work out, you are ready to start the planting plan.

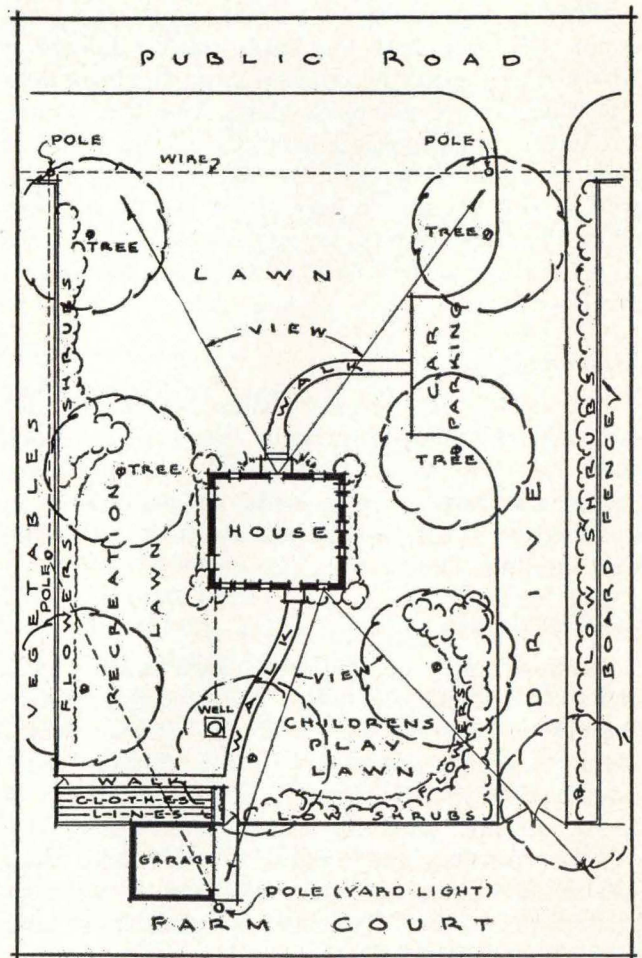


Fig. 8. Plan for the future development of the Iowa farm home grounds shown in fig. 1.

MAKE A PLANTING PLAN . . .

HOW TO MAKE A PLANTING PLAN

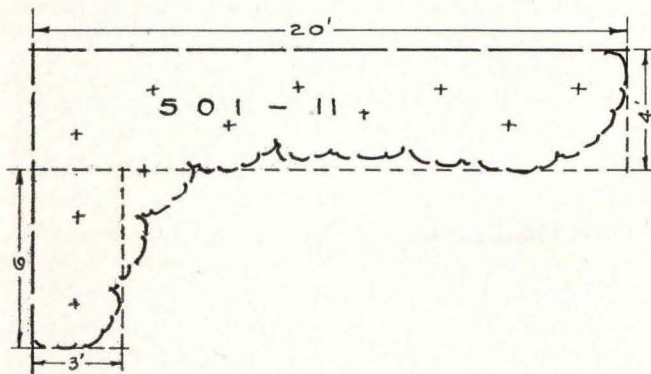
Make the planting plan by placing a sheet of tracing paper over the general plan. On it indicate your plant selections.

Use "Landscape Plants for Iowa" as a guide in selecting plants. It's a bulletin put out by the Agricultural Extension Service, Iowa State College, Ames.

On the plan use the "key number" given for each plant in "Landscape Plants for Iowa" instead of the name of the plant. After each key number put a dash followed by the number of plants you'll need of that kind.

To learn how many plants you need, figure the number of square feet in each division where a different kind of plant is to be used.

For example:



To estimate the size of the bed on the map above, add the areas of the two rectangles:

$$20 \text{ ft.} \times 4 \text{ ft.} = 80 \text{ sq. ft.}$$

$$6 \text{ ft.} \times 3 \text{ ft.} = 18 \text{ sq. ft.}$$

$$98 \text{ sq. ft.} = \text{total area of bed}$$

Then estimate the number of plants needed for that area. Take three-fourths the spread of the plant as given in "Landscape Plants for Iowa," because that is the space you should allow for each plant when planting. For example: $\frac{3}{4} \times 4 \text{ ft.}$ (spread of No. 501, Japanese barberry) = 3 ft. distance apart to plant No. 501. And $3 \text{ ft.} \times 3 \text{ ft.} = 9 \text{ sq. ft.}$ —or the space each barberry will need. So 98 sq. ft. (total area of bed) $\div 9 \text{ sq. ft.}$ (space each plant will need) = 11 (number of barberries needed).

When planting set each plant a little less than one-half its spread as given in "Landscape Plants for Iowa," out from a building or fence, and a little more than one-half its spread out from a walk or drive.

HOW TO SELECT PLANTS

Select the plants carefully. Choosing plants for your house and grounds is much like choosing accessories to go with a suit. The right trees, shrubs and flowers in the right places will make your house and grounds look better, just as the right shirt and tie will make a man look better dressed.

First choose a plant because it's the right height for the location and second, because it will do well there. The latter we call "hardiness" (sun or shade, wet or dry needs of the plant and its resistance to insect pests and diseases). Then consider its shape (round, as the barberry; oblong, as the mockorange); its density (branches and leaves close together as on the sugar maple; open and farther apart as on the American elm); its texture (fine twigs and foliage as the bridal wreath; coarse as the hydrangea). Finally, consider bloom (showy as the lilacs; small and not showy as the currants). Also consider, in selecting trees and shrubs, the color of the foliage during the growing season, and during the fall, the color of the fruit and of the twigs. These are all seasonally important. But like bloom they'll be considered last in making selections because they are not of year-round importance.

Trees

Fine, large trees are the most important plants in the home grounds. They are needed for shade, to frame views looking both toward the house and out from it, to hide ugly or unrelated views, and to serve as a background for buildings. One tree may be a shade tree, a framing tree, a screening tree and a background tree, all at one time. Select each tree so it will meet all the uses to be made of it.

Trees should be arranged informally. Almost never put them in rows, or in line with each other, or out in the center of lawn areas. Usually they should be at least 40 feet apart, on sweeping curved lines from 20 to 30 feet out from the corners of the house, or close to fences, border plantings, walks or drives.

SHADE TREES

Longer-lived trees are best, such as: No. 311, American elm, No. 301, sugar maple (dense shade), No. 324, hackberry, No. 302, white ash, and No. 335, American linden or basswood. (Num-

bers are those by which the trees are listed in the Iowa State College pamphlet "Landscape Plants for Iowa." The oaks are not included because of the prevalence of oak wilt in Iowa, for which there is now no known control or cure.

Probably you will not want to plant the fast-growing trees because they are brittle and break up badly in wind and sleet storms and are comparatively short-lived. Some of these are: No. 300, soft maple; Nos. 306, 307, 308, poplars in variety, also the Lombardy and bolleana poplars; No. 334, white willow and other willows; No. 338, Chinese elm; No. 361, paradisetree or treeof-heaven; and No. 368, mulberry. Nor will you want to plant box elders or the white-barked birches, No. 347 or No. 363. The latter two are subject to severe injury by the bronze birch-borer, for which there is no sure control. Instead, plant No. 346, river birch, which has salmon-colored bark and is not subject to borers.

ORNAMENTAL TREES

An ornamental tree or two will add interest and be a plant high-light in the living lawn. You may plant one so it will overhang and frame a garden feature (such as: a gate, seat or bird bath) or the view out from a window. Another might be planted for height and interest in the back of the shrub border. The ornamentals may serve a dual purpose, providing edible fruit as well as shade, bloom and fall color. Make your selections from the hardiest ones: No. 364, downy hawthorn (our native red haw); No. 371, harbinger birdcherry (Mayday tree); No. 700, *Acer ginnala* (amur maple); No. 722a, *Hopa* (red flowering) crab.

Shrubs

You may want to put in some plantings close to the house if they'll make it look better, and in borders to separate and outline the lawns. Plant-

ings close to the house and the border plantings will give the lawn areas shape. Plant beds may either be straight or have long sweeping curves. Low-growing evergreens and small flowering trees may be used to supplement and accent the shrub plantings.

AROUND THE HOUSE

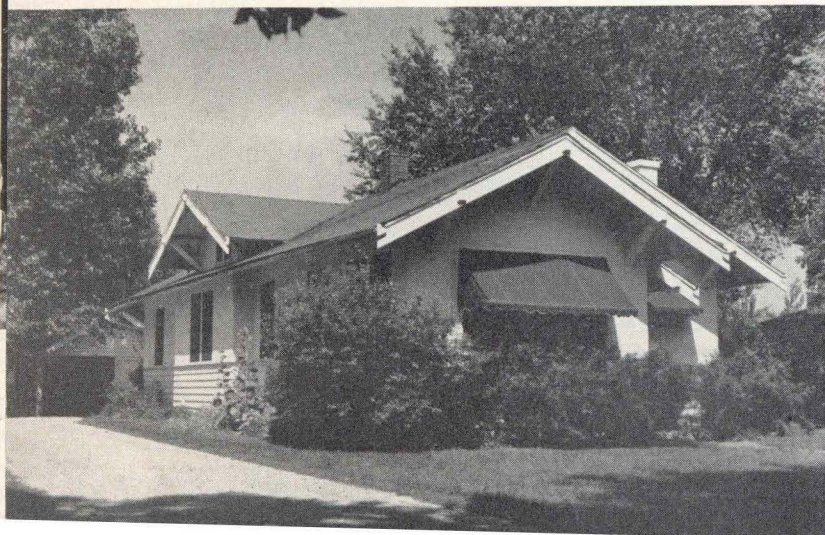
This is the way to decide what plants to use around the house. Sketch in the plantings with a soft lead pencil on dull or mat-finished snapshots of the house, or on tracing paper placed over a picture of the house. If you don't like the first studies, make others. When you've made some which you think are just right, go outside and measure up on the house to learn the height of each plant shown on the sketch. Then select each plant because it will grow to the height shown on the sketch, because it will do well on that side of the house, and also because its other characteristics will suit it for the location (figs. 9, 12, 13 and 14). You will find this information in "Landscape Plants for Iowa."

You will not want plantings all around the house, nor will you want the same kind of plants all around. Usually you'll want the greatest height at the corners with low-growing minor accent plants on either side of the entrances. You may not want any plants under the windows. If yours is a one-story house with a low foundation, it will need very little planting around it. If yours is a high two-story house sitting up on a high foundation, you may need to put in some plantings almost entirely around it (fig. 12).

SCREEN PLANTINGS

Select the plants for a screen planting carefully. They should be just the right height when full grown. One screen planting may block the foreground view of the chicken yard. Chickens or other livestock are interesting in the distance, but not right along a fence. The plants should be low enough so you can look over them to the wide countryside view beyond. Before you decide what plants you want, measure up on the fence to decide how much lower or higher than the fence the plants can be without blocking the view.

If the screen planting is to be a mixed shrub border, it will take several different kinds of shrubs. However, plant them in groups of several of one kind, not one of this and one of that. Make use of contrasts in plant heights, textures and blooms in borders. (See illustration in "Landscape Plants for Iowa.")



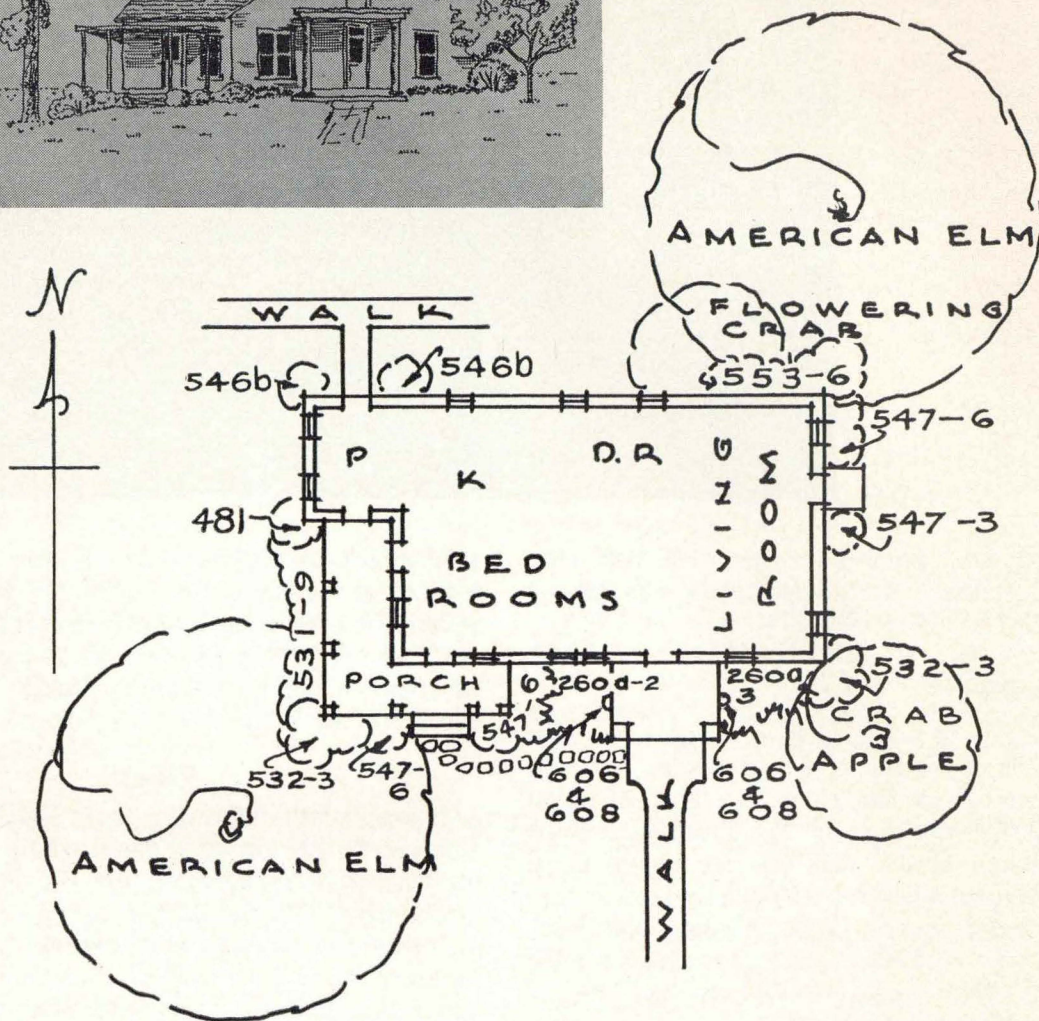
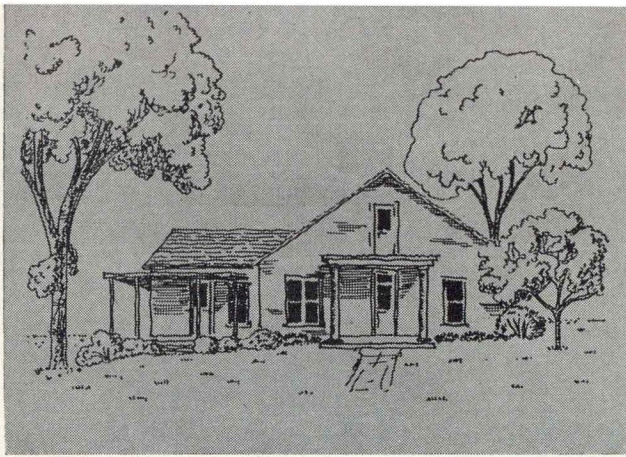


Fig. 9. Proposed plantings to improve the appearance of a house built about 1880.

HARDY SHRUBS

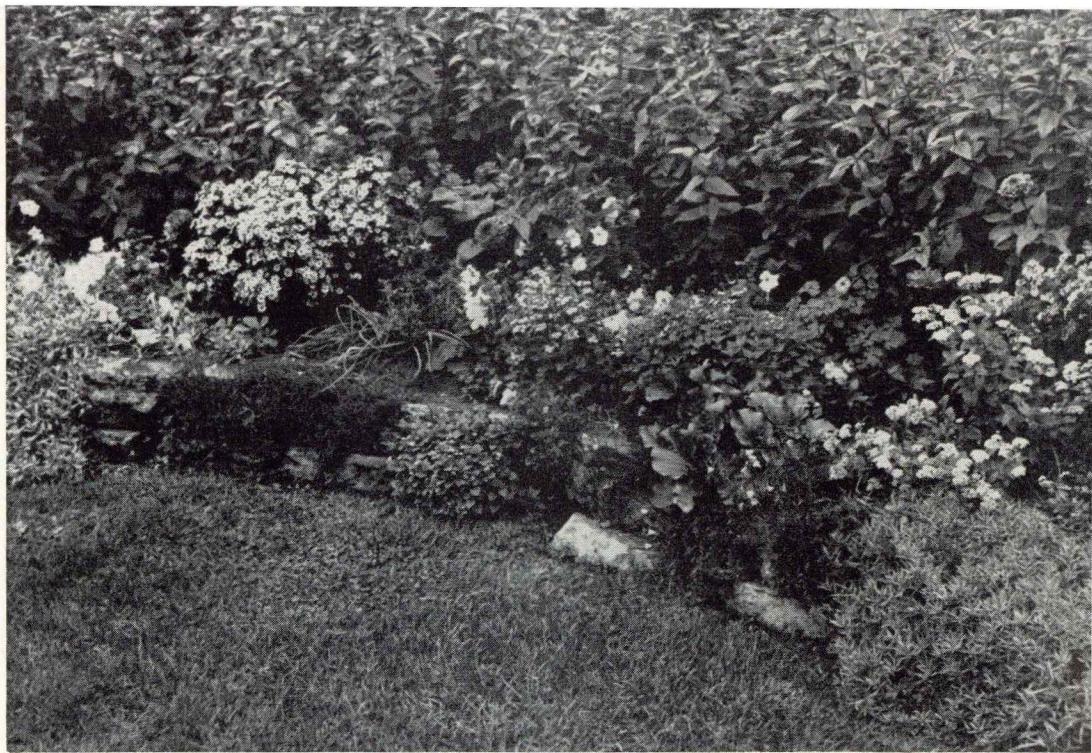
The shrubs to use are those that are hardy, that are as free as any from diseases and insects and that will be fairly easy to get. The list from which to make your selection might include: No. 550, common snowberry; No. 552, Indian currant coralberry (buckbrush); No. 546b, Froebel spirea; No. 540, mountain ninebark; No. 522, garland spirea; No. 516, alpine currant (good in shade and best low-growing shrub for a low clipped hedge); Nos. 510 and 511a, two low-growing mockoranges; No. 501, Japanese barberry; No. 488, arrowwood viburnum; No. 453, European cranberrybush (high-bush cranberry); Nos. 487 and 452, French lilacs;

No. 449, Persian lilac (best shrub of this height for a hot, dry location); No. 447, Chinese lilac; No. 446, Vanhoutte spirea (commonly known as bridal wreath); No. 436, Tatarian honeysuckle; No. 427, winged euonymus; Nos. 410, 411 and 412, viburnums; No. 404, white belle honeysuckle (a good all-round shrub and best large shrub for a high clipped hedge) and No. 403, eastern wahoo (tall native shrub).

Evergreens

Because their foliage is green the year round, you may want to include some evergreens in your plantings if any of them will grow to the right

Fig. 10. A flower border.



size and shape. Combine them with flowering trees and shrubs. An all-evergreen planting is depressing.

IN THE YARD

If you decide to use a large-growing evergreen instead of a deciduous tree for shade, you will probably use one of the pines, No. 205, Austrian pine, No. 207, white pine, or No. 208, Scotch pine.

Even though spruce and firs are beautiful in parks and large public grounds, usually they should not be included in the home grounds plantings. They take up too much room. They have a wide spread and they look best when their lower branches haven't been cut off.

CLOSE TO HOUSE

Do not use any of the tall evergreens (pines, spruce or firs) close to the house because they should never be planted close to any building. There are no satisfactory dwarf forms. It is as impossible to keep them low as it is to keep an elm low.

Upright-growing cedars usually should not be planted close to houses, either. They will grow too tall and won't make most houses look better. They are accent plants and attract attention to themselves rather than to the house. (Note in "Landscape Plants for Iowa," the evergreens in the group, "Medium, 15-40 feet," which are alternate hosts to cedar-apple rust.)

A few of the low-growing evergreens may look well where minor accents are needed. A matching

pair might be planted on each side of the steps leading to the porch. Two good low-growing evergreens are: No. 265a, andorra creeping juniper and No. 267, japgarden juniper. If you plant a group of them in the shrub border, space them three-fourths of their spread in feet apart.

Vines

If some of the flowering vines are desired, plant them on the living lawn fence where they will be an attractive background for the flower border. Or, vines might be planted on an arch over the entrance to the vegetable garden. It would be better if vines such as roses were not planted on an arched gateway or on a fence close to a walk. This is because of their thorns.

Japanese creeper, No. 618, is the best vine to grow on masonry. It is not hardy, however, in northwest Iowa nor in full sun on the south side of a building. Instead, in those locations, use No. 617a, Engelmann Virginia creeper. It's hardier than No. 618, Japanese creeper.

Flowers

Because it takes so much time to keep up a flower garden, plant flowers in borders, about 5 feet wide, probably along the living and service lawn fences. Take out the old round flower beds and peonies in the front lawn. They only clutter it up.

If you have a background of shrubs for the flower border (fig. 10), locate the border so the flowers in it will always have enough light, air and moisture. This means you may have a grass

walk between the flower border and the shrubs. For best results, there should be no shrub roots in the flower bed competing with the flowers for plant food and moisture. If a wire fence is the background, plant some vines on it, possibly climbing roses.

FOR CONTINUOUS BLOOM

The flower border should have something in bloom from early spring until frost. You'll want masses of flowers that go together during the entire growing season. To have mass effects, plant several of one kind in a group, except for plants like peonies, Oriental poppies and baby's breath. They give a mass effect even when planted singly.

The tallest-growing flowers belong toward the back of the border, the lower-growing ones toward the front. Repeat throughout the border one or two plants that bloom in each season. This will help to unify the border just as a repeated color in clothing makes you look better dressed. In flower borders predominantly pink repeat white-blooming flowers; in borders predominantly rust and orange, repeat yellow flowers. Yellow and white flowers give a border sparkle. They reflect sunlight and moonlight.

HOW TO CARRY OUT THE PLAN . . .

CLEAN UP THE GROUNDS

One of the first things to do in carrying out the plan is to clean up the farm grounds. Even though the chickens and other stock may have had the run of the place, with the whole family pitching in and with careful planning, in one season you can have beautiful surroundings for your house (fig. 11).

First, fence all the livestock into their own lots—the chickens too. Have a general spring or fall clean-up day when the whole family helps. It's fun! Rake the yard, clean the leaves and paper out of the shrubbery, prune all the dead wood out of shrubs and trees and make the place look spic-and-span.

HAVE BEAUTIFUL LAWNS

If the yard is uneven and contains little grass and many weeds, it should be remade.

GRADING

The first step in making a new lawn or remaking an old lawn is to plow it up and disk. Second,

NO REDS TOGETHER

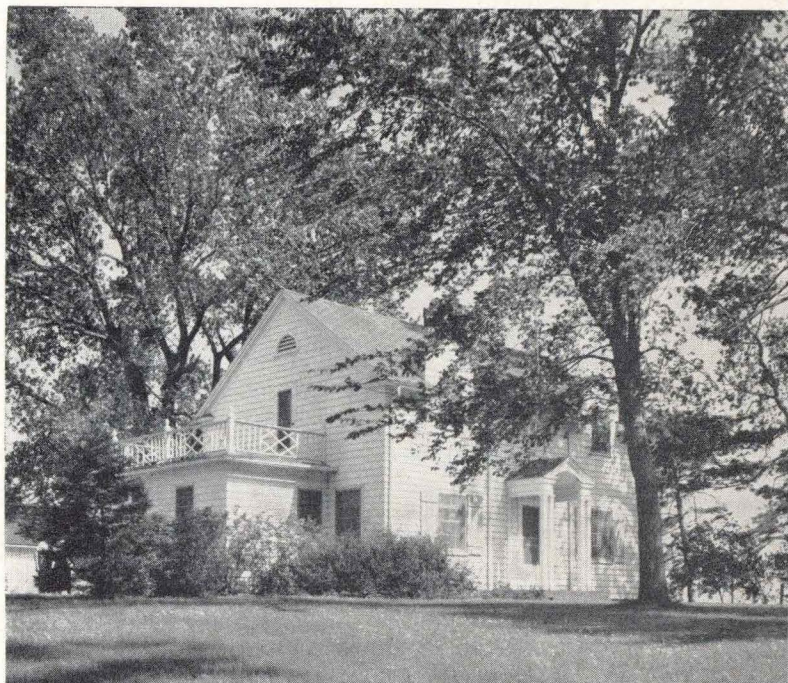
Flowers with yellow-red blooms should not have to share the same border with blue-red flowers. They do not look well together. Plant peonies, pink petunias, phlox and hollyhocks with white and blue flowers in one border. In another border, plant Oriental poppies, tiger lilies and lychnis with yellow and blue flowers. If, however, you want both and you have only one border, plant the blue-red flowers at one end and the yellow-reds at the other with lots of white, yellow, blue and purple flowers in between.

SOME FOR FOLIAGE

Some perennials are attractive because they have such good foliage. Some of them you may plant close to the house in the public lawns. But generally you won't want flowers in the public lawns because they are not neat enough. The flowers with good foliage are: No. 20, common periwinkle (needs shade); No. 44, gasplant; No. 51, hemerocallis (a plant requiring full sun or semi-shade); No. 62, sedum in variety; and No. 85, plantainlily (a perennial requiring shade).

smooth and pulverize it by raking. The lawn should be graded so that all surface drainage will be away from the house and other buildings. No slope should be steeper than 3:1 (3 feet horizontal to every foot of rise). The slopes should be gently rounded at top and bottom. There should be at

Fig. 11. An Iowa farmhouse with beautiful surroundings.



least 8 inches of good fertile topsoil over the whole lawn.

SEEDING

After the grading is completed the lawn is ready for seeding. Seed in late August, very early September, or in early spring as soon as the ground can be worked. The idea is to seed before the fall or early spring rains.

Use a good grade of grass seed in about the following proportions:

- Kentucky bluegrass — 5 parts by weight
- Creeping red fescue — 2 parts by weight
- Red top — 1 part by weight
- Annual rye (nurse crop) — 2 parts by weight

(Note: Clover is not desirable because it causes so-called "grass stain" on clothing and is slippery when bruised.) On a new lawn the seed should be applied at 2 pounds per 1,000 square feet if distributed evenly by using a lawn seeder, or 3 pounds per 1,000 square feet if sowed by hand.

Seed on a still day and seed as evenly as possible. After seeding, rake the lawn lightly and then pack the earth by rolling or tamping.

If you are reseeding an old lawn, first get rid of the weeds early in the summer. Then the last of August, seed 1 to 1½ pounds of Kentucky bluegrass seed per 1,000 square feet.

Taking Care of the Lawn

CUTTING THE GRASS

When you mow the lawn do not cut it shorter than 1½ inches. Set the mower high, mow once a week or oftener, and leave the clippings on the ground. The only time it will be necessary to remove the clippings is when you've been lax in mowing and they're extra heavy and moist and form a mat.

Cut the grass out along the walks so it won't grow over them. Do not dig the grass out along the walks, leaving wedge-shaped trenches. They are dangerous if stepped into, a catching place for leaves and weed seeds, and they're unattractive.

FERTILIZING

If possible, fertilize the lawn every year. Well rotted, finely pulverized barnyard manure applied in the fall will do. If commercial fertilizers are used, follow the manufacturer's directions to the letter and make applications spring and fall. For best results, follow the recommendations in the current Iowa State College Extension bulletin on the home lawn.

CONTROLLING WEEDS

You can always expect some weeds in your lawn even though you have followed the best recommended lawn practices. To control the broad-leaved weeds treat the lawn with 2,4-D, preferably the "sodium salt" or "amine" type. Give the ugly fencerow weeds around your home grounds the same treatment. Before you use 2,4-D, get the Iowa State College publications on lawn making and on chemical weed control. Read and follow their directions to the letter. This is so you'll not injure or kill anything other than the weeds. Spray with low pressure, on a still day and when the breeze, if any, is blowing away from the trees, shrubs, vines, flowers and vegetables. This is so you won't injure or kill any of them with "spray drift." Use a sprinkling can or a garden sprayer to apply the 2,4-D when the weeds you want to kill are fairly close to other plants. This sprinkling can or sprayer should not be used for any other purpose.

To control the grassy weeds such as crabgrass, spray with care with such chemicals as phenyl mercuric acetate (P.M.A.) or potassium cyanate (P.C.). Follow directions carefully and repeat the application until you've really gotten rid of the crabgrass.

Rake leaves up in the fall and compost them so that they can be used for fertilizer later on. Burning leaves is wasteful.

HAVE BEAUTIFUL PLANTINGS

Buying Healthy Plants

Buy good, strong, healthy plants which have been carefully dug. Get them from nurseries known to be reliable.

Planting Trees and Shrubs

Put all plants in where you have shown them on your plan. Those that are in groups or masses, set three-fourths of their spread apart, as given in "Landscape Plants for Iowa." Those that are close to fences or buildings, plant a little less than one-half their spread out from the building or fence. Those that are close to walks or drives, set a little more than one-half their spread out from the walk or drive.

Before and while planting keep the plant roots covered and moist. Do not expose the roots to the air unnecessarily or permit them to dry.

Prune out all badly injured or broken roots.

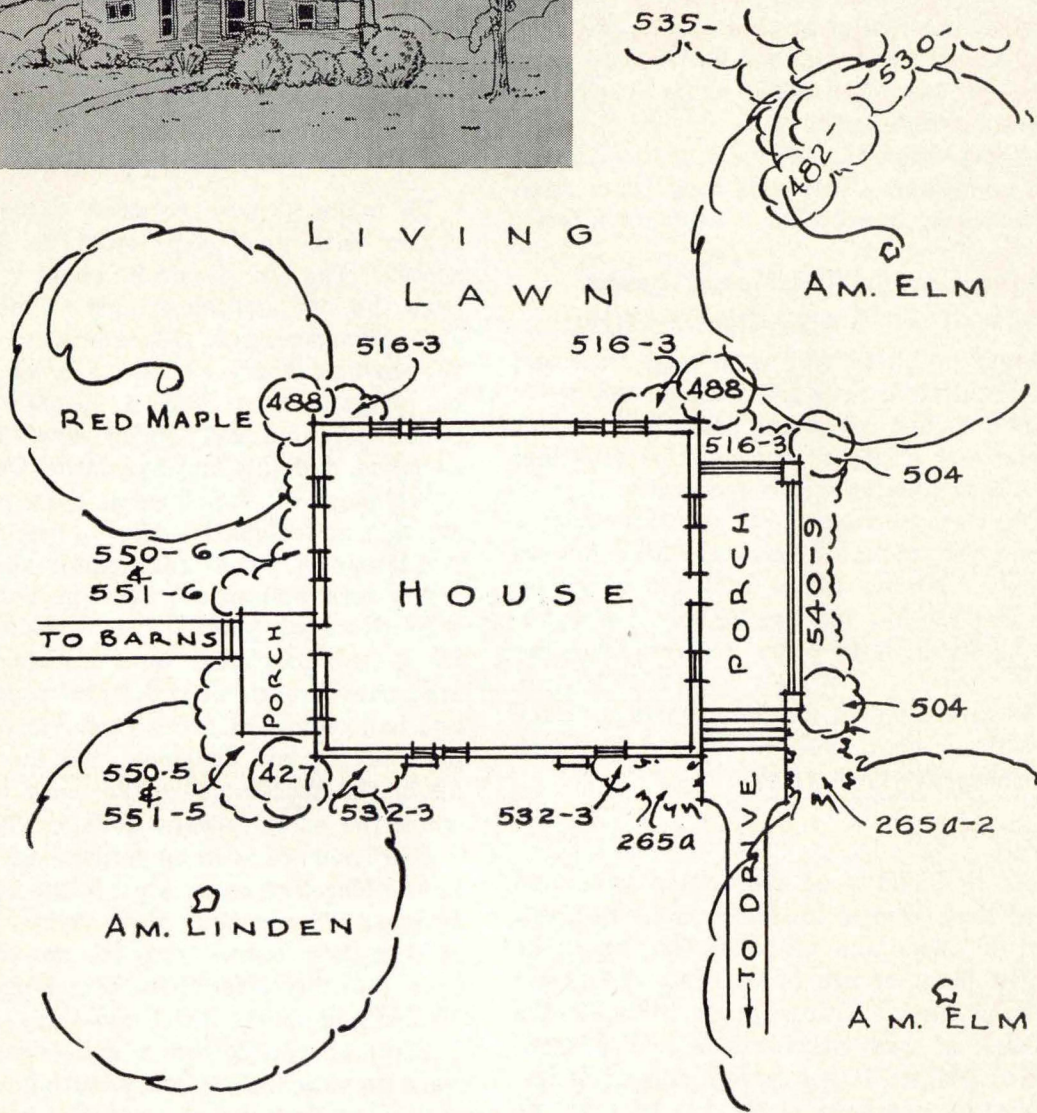
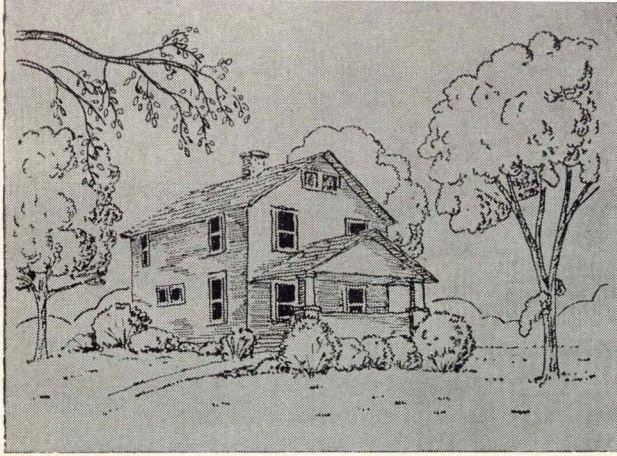


Fig. 12. Proposed plantings to improve the appearance of a house built about 1910.

Prune the tops to reduce them one-third to one-half, depending on the number of roots lost in digging. In pruning the tops, prune just above a bud or close to a twig, branch or trunk. Do not leave stubs. Prune to keep the normal shape of each plant, unless the plants are to be used in a clipped hedge. Never cut out the central leader of a tree. If there are two leaders, leave the one that is strongest and straightest, pruning out the other one.

To plant, dig each hole at least 6 inches wider

and a little deeper than the root spread of the plant. Each hole should be as wide or wider at the bottom than it is at the top. Put a mound of loose rich soil, to which you may add some fertilizer, in the bottom of each hole. Set each plant over a mound, spreading out the roots to their natural positions, and check to be sure each plant is set to the same depth it was set before. Then fill the hole with soil.

To force out all the air pockets, either work the soil about the roots by hand or foot as the hole

is being filled with dirt or settle the soil with water. If water is used, when the water has seeped away refill the hole with soil, gently tap all around the plant with the foot and gently rock the plant. Make a rim of earth around each plant to form a basin to catch water. Water each plant thoroughly the day of planting. (See illustration in "Landscape Plants for Iowa.")

Stake or guy all newly planted trees that are 8 feet high or higher. This will keep them from being loosened or uprooted in a windstorm.

Taking Care of Trees and Shrubs

WEEDING, WATERING AND CULTIVATING

One of your problems will be to keep grass and weeds out of the plant beds and from around newly set trees and shrubs. A young plant just doesn't have a chance if it has to compete for food and water with fast-growing weeds and grass.

Water the new tree and shrub plantings once a week during dry spells. When you water, always water deeply. If you use a hose for watering, turn on a slow stream and lay the hose beside the plant. It's impossible to water deeply by holding a hose.

Cultivate around plantings each spring. Edge the beds with an even, neat line where cultivation ends and the grass lawn begins.

PRUNING

Prune out the dead wood and broken twigs and branches as they occur in the shrub and tree plantings. Unruly twigs and branches that spoil the shape of the plant or are in the way should get the same treatment. Always prune to retain the natural shape of each plant unless you're pruning a clipped hedge. If you have a clipped hedge, prune it slightly narrower at the top than at the bottom so sunlight can reach the lower branches. As a young tree grows, remove the lower branches one by one before they are 1½ inches in diameter so that finally the first fork will be at least 10 feet above the ground.

To take a large limb off a tree, make three cuts. The first cut will be on the under side of the limb. It should be about 6 inches above where the final cut is to be. It should go about a third of the way into the limb. Second, saw into the top side of the limb, a little farther out on the limb than the undercut, to remove it. When the limb breaks off it will break back to the first cut, the undercut. This prevents ripping a chunk out of the trunk or branch. Third, remove the stub by making a

clean, smooth cut flush and parallel with the trunk or branch from which the limb has been cut. Finally, treat the wound with a material (tree paint) which will waterproof and disinfect it and serve as an antiseptic, but not injure the plant cells. (See illustration in "Landscape Plants for Iowa.")

Planting Flowers

To make a place to grow flowers, prepare a border with good rich topsoil to a depth of 12 inches. The bed should be about 2 inches higher than the surrounding ground. This is for drainage and appearance. Plant most of the flowers in the spring. The exceptions are iris, which should be planted about Aug. 1; peonies, the last of September; and early spring flowering bulbs, such as tulips, daffodils and hyacinths, Oct. 1.

Set most of the flowers, both perennials and annuals, a foot apart. Allow 3 feet for each peony plant and 18 inches for delphiniums, hollyhocks, fall asters and other taller-growing perennials. Some flowers if planted close to other flowers may mark their locations. Two of these combinations are: babysbreath with oriental poppies; bluebells and balloonflowers. The early bloomers mark the place of the late bloomers, and the late bloomers fill in the spaces where the early bloomers were when the early flowers' foliage has disappeared.

Start annuals such as petunias and snapdragons in late March or early April in the house or in cold frames. Transplant them once inside before setting them outdoors in the flower border. Set them outdoors after there is no longer any danger of a killing frost, about mid-May.

Plant all the flowers a little deeper than they were growing before transplanting. After setting each plant, firm the soil around it with your hands, and give it plenty of water. For the first few days shade the plants with old shingles or whatever is at hand to protect them from the hot sun. If possible, set out the plants in late afternoon or on a dull or misty day.

Taking Care of Flowers

Keep the flower border as free of weeds as you can by pulling the weeds by hand or by hoeing. If you water, water deeply in the evening or early morning. Edge the border in the spring and probably once again in the summer with an even, neat line where cultivation ends and the grass lawn begins.

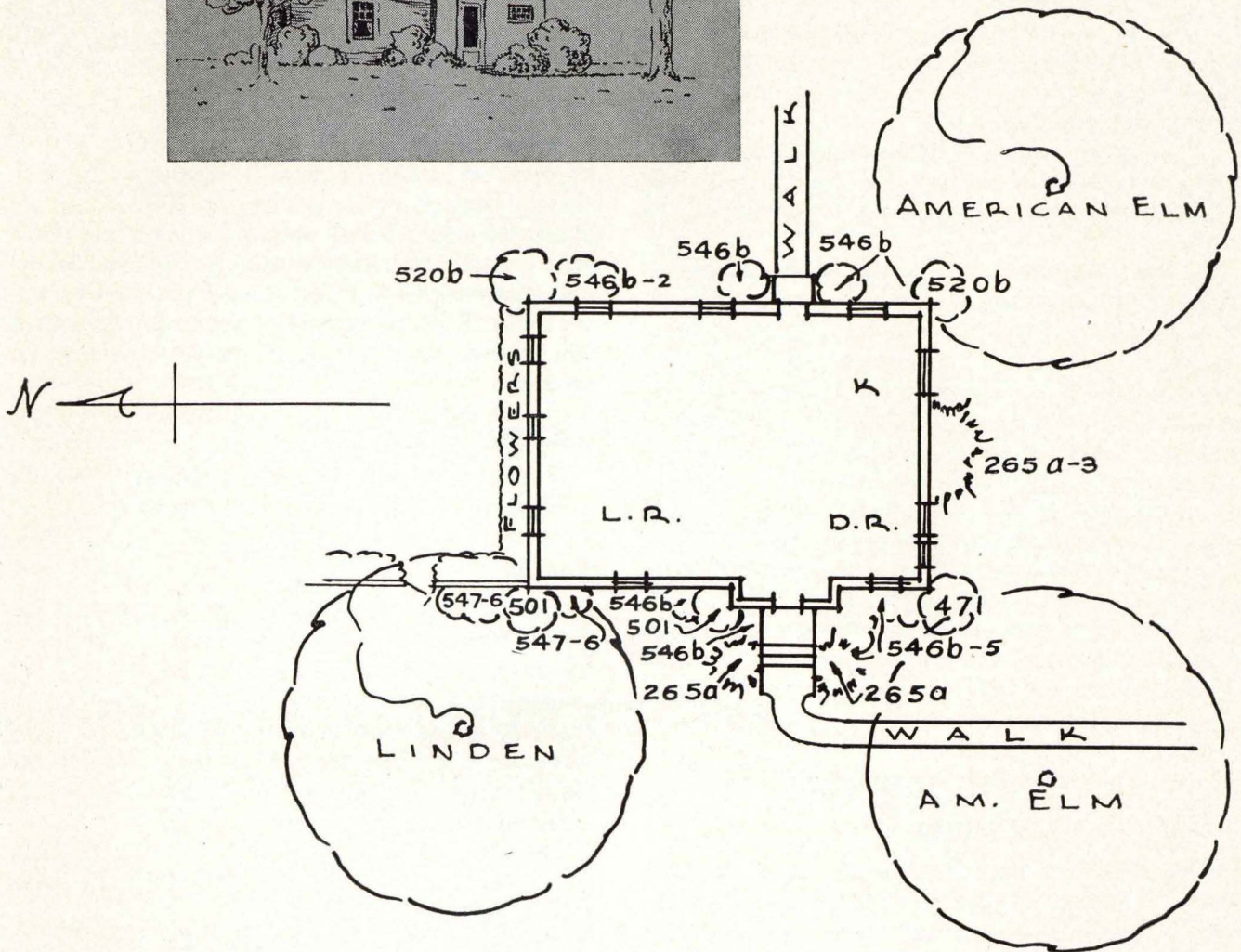
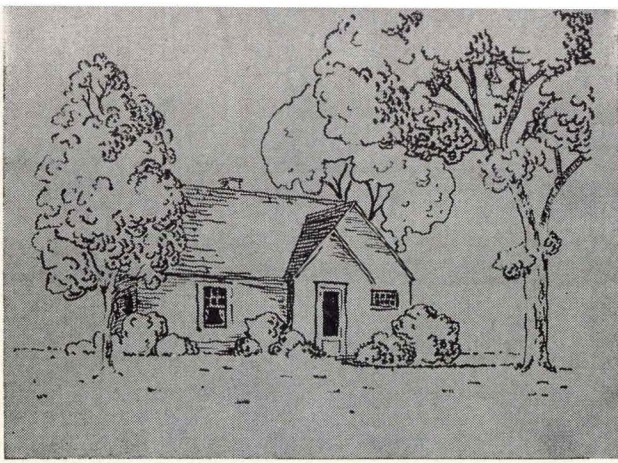


Fig. 13. Proposed plantings to improve the appearance of a house built about 1940.

Perennials and annuals that need staking should be staked early before they've had a chance to fall over. Use tall stakes for the tall growing flowers like delphiniums. As they grow taller keep tying them higher up to the stakes. For tying use green raffia or strips of material dyed green.

Try to keep the faded and dead flower heads cut promptly to keep the border looking well and to encourage the flowers to bloom again. Cut off and burn any foliage that browns and dries up to help prevent spread of diseases if any are present.

After the first killing frost, probably in mid-

October, clean up the flower border, pull up all the annuals and cut off all the perennials to the ground. Burn the removed foliage. It's not wise to use flower foliage to cover plants during the winter because insect pests and disease organisms may winter over in them. After the ground freezes for the first time, cover the border lightly with clean straw free of seeds. Use soybean straw if you can get it. A few boards or branches on top will keep the straw in place. About April 1, after danger of a heavy freeze and before growth starts, take off the winter protection of straw.

INSECTS AND DISEASES . . .

GENERAL CONTROLS

In order to have healthy, vigorous plants as free as possible from insects and diseases, the entomology and botany departments at Iowa State College suggest that you:

1. Practice sanitation by cleaning up old foliage and plant parts in the fall, by pruning out dead and infected parts of plants and by burning all the refuse.

2. Dust or spray plants with the proper chemicals to prevent diseases and to control insects. Plant diseases cannot be cured, only prevented. To be most effective, chemicals should be applied in early spring on new growth. Repeat the treatment every 14 days until August. Apply sprays and dusts when there is no wind and when there is little possibility of rain for 2 days.

All-purpose sprays and dusts can be used if there is doubt as to the cause of the trouble. They are usually more expensive, but they are more simple and easy to use. Caterpillars, other chewing insects and some plant diseases can all be controlled by dusting with 9 parts dusting sulfur and 1 part 50 percent DDT powder. This will control some aphids, too.

SPECIFIC CONTROLS

APHIDS AND RED SPIDER

For aphids or plant lice (small green, black or brown sucking insects) and red spider mites (so small they can be seen only with a magnifying glass) control by spraying with 1½ teaspoons nicotine sulfate and ¼ bar laundry soap dissolved in 1 gallon of water. This is a contact spray. It must be applied so that the insects are covered with the spray. Aphids and red spider mites are found on young shoots and on the underside of the leaves. So spray thoroughly on the underside of the leaves before they begin to curl. Repeat in 7 to 10 days.

For red spider only, on evergreens and shrubs, use aramite, ovotran or similar chemical. These materials are safe, and very effective against red spider mites.

CHEWING INSECTS AND CATERPILLARS

Ants, chiggers, sod webworms and white grubs in the lawn may be controlled by the use of sprays containing 40 percent chlordane diluted as much

as you wish. Apply it at the rate of ½ pound actual chlordane per 1,000 square feet. One application, soaked in, will usually last the season.

SCALE

Scale (clusters of small scales which may be scuffed off with fingernail) appears on thin, smooth bark of woody plants and on pine needles. It may be controlled by spraying with a 2 to 3 percent miscible oil solution in early spring just before leaf growth begins. Scale may also be controlled with a 5 percent DDT spray applied in late June when the small scale nymphs are crawling around.

MILDEW

Mildew (whitening of leaves) may be controlled by dusting plants frequently with sulfur.

GALLS

Galls or abnormal growths on leaves, buds and young twigs may be caused by insects or mites. Irritation from the feeding of the immature forms causes the plant to produce the gall. The shape of the gall is always the same for each species of insect or mite. The worm is hidden inside the gall, and is protected against any insecticide now in common use.

Actually, we have no evidence that galls cause any injury to the tree. Heavily infested leaves fall off and are replaced.

At present, we would suggest that gall-infested trees be fertilized, watered if necessary, and kept growing vigorously.

TREE BORERS

Tree borers attack plants that are weak or that have been injured. Borer infestation can be determined by the presence of moist, sawdust-like droppings protruding from holes, by wilting of leaves on part of the tree and by increased woodpecker activity.

Borers may be killed by injecting carbon tetrachloride into the active tunnels with an oil can. Plug the tunnels with mud or putty. Clean out bark wounds, paint with tree wound compound, and fertilize the tree to make it grow vigorously. This treatment is not effective on bronze birch borer which attacks white-barked birches. There is no control for borers in birches.

TERMITES

Termites (small, white ant-like insects) can be avoided by removing old tree stumps, by setting plantings 2 feet out from a building and by a 50 percent DDT powder worked into the soil around shrubs and trees. Apply 1 pound of actual DDT (2 pounds 50 percent DDT) to 5 cubic feet of soil uniformly and deeply.

EARTHWORMS

Earthworms in a lawn can be controlled by scattering 1 pound lead arsenate mixed with sand or fertilizer over each 100 square feet of lawn. Soak into the soil with water. A week later the lawn should be aerated with a spiked tamper. If fertilizer was not applied with the lead arsenate, apply a complete fertilizer at this time. Lead arsenate should not be used where flowers are to be grown the next year.

MOLES

Pocket gophers, burrowing animals which may cut off the roots of young trees, may be controlled by a poison bait. Mix $\frac{1}{8}$ ounce powdered strychnine

sulfate with 1 quart cut-up vegetables, potatoes or carrots, $\frac{3}{8}$ inch square by 1 to 2 inches long. Place bait in burrows.

RABBITS AND MICE

Rabbits and mice cause serious damage to young trees and shrubs by girdling and clipping off small branches. The best control measure is to keep the ground clear of all refuse around plants. Brush piles, tall grass and weeds should be removed so that there will be no inviting nesting places.

Start mouse control early in the fall by exposing dry warfarin cereal bait in bait stations in fence rows, along the edges of vacant lots and next to buildings. Service bait stations every few days to keep them full of dry bait.

Young trees, which are very attractive to rabbits in the winter, may be covered from the ground up about 3 feet with chicken wire fence placed loosely around the trunk. Or they may be sprayed or painted with a rabbit repellent on their trunks and lower branches. An effective repellent is 2 pounds of rosin to 1 quart of denatured alcohol.

GOOD CONSTRUCTION COUNTS . . .

Insist on good construction whether for walls, steps, walks or fences. Well-made things will add character and interest to your home grounds. They'll last longer and be easier to keep up. Everything should be sturdy, not elaborate or ornate, and in keeping with the house and grounds. Single sheets giving suggestions for the construction of such items as walks and steps, retaining walls, fences, outdoor fireplaces, picnic tables and benches and garden chairs can be obtained by writing for the ones you want to the Extension Bulletin Office, Iowa State College, Ames, Iowa.

WALKS AND TERRACES

The walks should be laid flush with the clipped grass (about 2 inches above the soil grade). They should be from 3 to 4 feet wide. Those in the service yard should be concrete. The entrance walk to the front door may be concrete, brick or stone. If it's brick or stone, it'll probably be laid in concrete, but it may be laid on a sand base with grass growing in the joints.

If you decide to have a terrace or paved sitting area, probably it will be close to the house. It

should be of brick or stone and made like the walk. Where a walk or paved terrace laid in concrete adjoins the house, put in an expansion joint. If the walk is concrete, have other expansion joints at 20-foot intervals. Expansion joints are constructed breaks in a pavement which are filled with an elastic material such as tar or felt.

STEPS

All steps in one flight should have the same height risers (height of steps) and the same width treads (width of steps). A good outdoor step is one with 14-inch treads and 5-inch risers. If the steps are set into a slope, have them parallel it and have them show only a couple of inches above it. If possible, do not have any steps in service walks. Avoid steps in unexpected places. They can be dangerous.

RETAINING WALL

If you need a low retaining wall to hold an earth bank, build it solidly on a good foundation so it will stand for years. It should have a batter

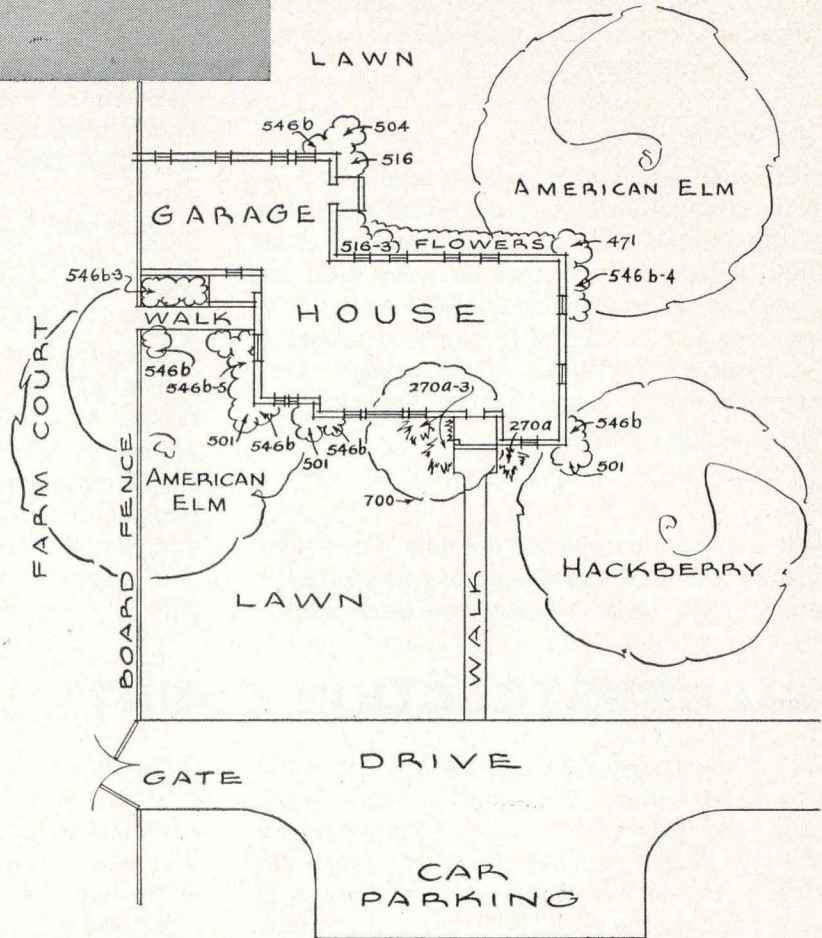
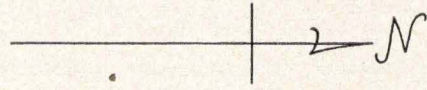
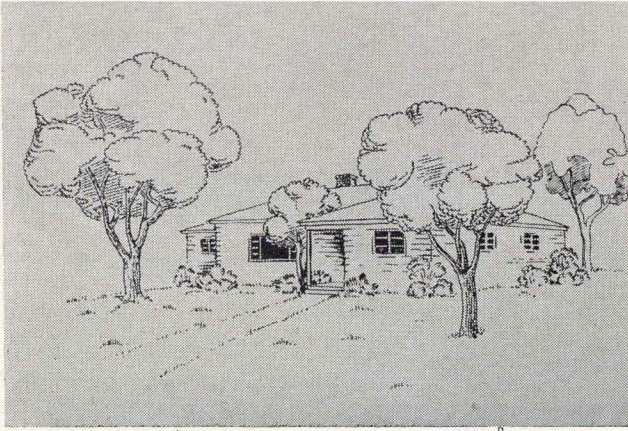


Fig. 14. Proposed plantings to improve the appearance of a house built about 1950.

approximately 1:1 (face of wall sloping back 1 inch for every foot of height). Whether the wall is made of brick or stone, the mortar joints should be small and inconspicuous. If you lay the retaining wall up dry, without mortar, you can put small plants such as violets and sedums in the soil-filled joints.

FENCES AND ARCHES

If you want a wood fence, make it simple in design, sturdy and permanent in appearance. It

might be a picket, lattice or board one. Make it of the same material and color as the house, house trim or other buildings to which it's connected.

An archway over an entrance may be desirable but not over an entrance that's on center line with the house. It should be a simple metal one if the fence is metal. If the fence is wood, the archway should be wood and painted the same color as the fence. It may be quite elaborate, forming a vine-covered shelter for two seats.

PERGOLAS

Some folks like a vine-covered pergola or arbor over the service walk leading to the vegetable garden. In summer it's a welcome relief from the hot sun. A pergola might be put in along one side of the drying yard (clotheslines), screening that yard from the living lawn and making an attractive terminal feature for the living lawn.

TRELLISES

Trellises on which to grow vines on buildings should be designed especially for each house and for the specific space they are to occupy. In order for them to look well they should be in harmony in design with the house and be painted the same color as the house or as its trim.

WINDOW BOXES

Have window boxes only if and where they'll improve the appearance of the house. Make them the same length as the windows and paint them the same color as the house or house trim. Make them about 8 inches deep and support them by strong wooden brackets. Two combinations of plantings that look well in window boxes are: purple and white petunias, and pink lantanas with dwarf ageratums. Space the plants about 9 inches apart in the box.

DINNER BELL

If you have an old-fashioned dinner bell, you might hang it from a heavy wooden bracket just outside the back door or mount it on a tall, sturdy gate post at the back gate.

OUTDOOR FIREPLACES

If you decide to have an outdoor fireplace, put it in a sheltered part of the lawn or better still, outside the house yard, possibly in the orchard. It may be simple, low and well built or it may be only a circle of stones outlining the place where the fire will be built. You may prefer a portable metal grate which can be used in the yard on a wheelbarrow filled with sand, or down in the meadow, out in the orchard or at your favorite picnic spot along the river.

BENCHES AND GARDEN SEATS

You'll probably want some garden furniture for your yard. Whatever you get must be comfortable, sturdy and durable in all kinds of weather.

It should be of a material and color that's in harmony with the house and the rest of the grounds.

POOLS

Someday you may want a small pool for water lilies and goldfish. It should be put in the living lawn area. If the lawn is naturalistic (similar to a native woods) in character, have a pool that is irregular or oval in shape with a native flowering tree and shrub background. If your living lawn is geometric in shape, then have a round, oblong or rectangular pool. Be sure it is the right size for your lawn.

SUN DIAL

If you get a sun dial, select a location for it in the living lawn where it will be in full sun. You might set it at the edge in a sunny section of the flower border.

BIRD BATHS AND SHELTERS

Songbirds are a pleasant attraction in any yard. If you plan a bird bath, consider a well-designed pedestal type about 2½ feet off the ground out of the reach of cats. Put it in the flower border where it will be surrounded by low foliage and where it can be seen from the breakfast table and kitchen windows, or from the living room windows and terrace.

Have some bird houses and a bird feeder, too. They should be in keeping with the rest of your grounds, simple, neat and sturdy. The bird houses and feeders which are in trees should be painted brown or gray so they'll blend in with the trees.

THINGS YOU DON'T WANT

There are, of course, some things you won't want in your home grounds. You won't want brightly colored wooden or plaster figures. They wouldn't make your grounds more attractive. And you probably won't want a gazing globe. Gazing globes are too artificial looking and they break easily. They belong in formal gardens.

Nor will you probably want a rock collection or a rock garden. A rock garden is too hard to make and to keep up, and it's difficult to develop a proper setting for one. You won't want miscellaneous-shaped or whitewashed rocks edging a drive, walk or plant bed, either. It's too hard to cut the grass around them, and they're not natural. Walks, drives and plant beds usually should blend in with the lawns and be as inconspicuous as possible.

And you'll usually want to avoid clipped hedges. It takes too much time to keep them pruned.

In fact, you won't want any of the other things either, such as pools, fireplaces and lawn furniture, unless they really belong in your home grounds, go with all the other things you have and will really be useful to you as a family.

This is the keynote for the whole home grounds

development. You'll want everything to look as though it belonged to you and your house and grounds. This "belongingness" is the thing that will give your home grounds character, individuality and charm as outlined in this bulletin. It and the application of the principles of landscape architecture will help make your home grounds beautiful.

LIST OF REFERENCE BULLETINS

Published by Iowa State College, Ames, Iowa

Landscape Plants for Iowa

Farmstead Layout Types — Pamphlet 149

The Home Lawn — Bulletin P-80

Birds-Eye View of Chemical Weed Control — Pamphlet 140

Single sheets on the construction of: Walks and Steps; Retaining Walls; Fences; Garden Seat; Picnic Table and Benches; Outdoor Fireplaces.

Published by the United States Department of Agriculture

Common Diseases of Important Shade Trees — Farmer's Bulletin No. 1987

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