A BASIC FARMHOUSE PLAN

CIRCULAR SERIES
INDEX NUMBER C7.2

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ISSUED BY THE SMALL HOMES COUNCIL

UNIVERSITY OF ILLINOIS BULLETIN

VOLUME 45, NUMBER 14, OCTOBER 19, 1947. Published every five days by the University of Illinois. Entered as second-class matter at the post office at Urbana, Illinois, under the Act of August 24, 1912. Office of Publication, 358 Administration Building, Urbana, Illinois. Acceptance for mailing at the special rate of postage provided for in Section 1103, Act of October 3, 1917, authorized July 31, 1918.

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This circular (C7.2) is one of a series on small homes. Requests for circulars should be addressed to Small Homes Council, Mumford House, University of Illinois, Urbana.

MATERIAL IN THIS CIRCULAR BY
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THE FARMHOUSE . . .

Design Considerations

Any farmhouse must take care of the activities of the farm family in a way that a house designed for urban living would not be expected to do.

Most of the planning for the farmhouse shown in this circular hinged around five things distinctive to the farm and farm life:

1. The farmstead. The farmhouse has to be properly related to other farm buildings, both in location and in room arrangement. This relationship is partially determined by the way the farmstead plan relates to the points of the compass and to the highway. The arrangement of the rooms in the house itself is also influenced by the direction of sunlight and prevailing winds.

2. Natural assets of the site. The farmhouse plan should take advantage of the farm's generous home site, views, and spacious outdoor living areas—assets which are seldom available to the urban house on its restricted site.

3. Need for a workroom in addition to the kitchen. The farmhouse should have a well-lighted, ventilated, planned workroom where such tasks as preparing produce and laundering can be conveniently done. These activities are too often relegated to the basement or woodshed for lack of proper space.

4. The farmer’s office needs. The business of farming requires desk and file space for records and business papers.

5. Need for clean-up facilities. To avoid “tracking through the house,” a place should be provided near the rear entrance for workers to clean up as they come in from buildings and fields.

The Problem

The farmhouse presented in this circular is a solution to a farmhouse design problem undertaken by the College of Agriculture and the Small Homes Council under a research grant made to the University of Illinois by the Farm Journal, Philadelphia.

The goal of the designers was a farmhouse which would be adaptable “to typical requirements and conditions for living on owner-operated farms in the North Central States.” To accomplish this, the designers had to:

1. Arrange the space to suit the living and working habits of farm families.
2. Make the plan adaptable to many sites.
3. Keep the structure simple.

Construction methods, and building and finishing materials were considered only so far as necessary in determining the general type of plan itself.

For information on how to obtain blueprints for the basic plan, write to the Department of Agricultural Engineering, College of Agriculture, University of Illinois, Urbana, Illinois.

Type of Plan

The question of the kind of plan — whether the house should be designed with or without a basement; whether it should be 1, 2 or 1½ stories — was determined on the basis of surveys and present-day trends.

The one-story plan with partial basement was selected because of today’s preference for one-story houses and because most farmers want a basement under all or part of the house. This type plan is particularly suited to the generous house sites available on farms.

A plan flexible in size was also desired for two reasons: 1) differences in family size, and 2) economy at initial building. (Many people want to start with a one-bedroom house which can easily be expanded to two, three, or four bedrooms if needed.)

BASIC ELEMENTS OF THE PLAN

This house plan consists of two rectangular units. One unit includes the living, dining and homemaking areas, together with storage facilities which belong with these rooms; the other includes the bedrooms and bathroom. Each unit is 16 feet wide, having been so designed for structural simplicity; the length of each depends upon the size and number of rooms which it contains.

The two rectangles can be put together in a variety of arrangements. This flexibility in placing the rectangles, plus the variability in rectangle length, makes it possible to adjust the plan to meet the needs of many families and numerous farmstead arrangements.
Plan Arrangement Meets Family Needs

This plan for a one-story house with partial basement works as a farmhouse should. It fulfills the major requirements set forth in Regional Publication No. 8 prepared by the North Central Farm Structures Coordinating Committee, When You Build or Remodel Your Farmhouse: A Guide to Planning. Room sizes are also according to recommendations in the regional publication. That the plan is not for a "minimum" house is evident.

LOCATION OF ENTRANCES: To overcome the housewife's complaint that visitors always come to the "back door," the entrance to the living area is placed convenient to the driveway. (The driveway widens near the house to provide a small parking space.) The entrance to the homemaking area can be reached easily from both the farmyard and the driveway.

HOMEMAKING AREA: Inasmuch as the homemaking area is the "control center of the farm," these rooms in all plan arrangements are placed so as to give a view of the highway, of the approach from the highway, and of the farmyard itself.

LIVING AND DINING AREA: By combining the living room and dining room into one large area, flexibility and economy of space are gained without sacrificing any of the functions of either room. The living and dining spaces are separated from the entryway by a storage cabinet.

OUTDOOR LIVING AREA: The living and dining area opens onto a terrace with southern exposure.

The plan permits much flexibility in the location of this outdoor living area. (See Pages 6 and 7.)

SLEEPING AREAS: The bedrooms and bathroom form a self-contained unit, making up one of the two rectangles. (See Page 2.) The bedroom wing can be entered directly from the outside.

The plan for this unit is very simple. Each room is separated from the adjoining one by closets. This layout permits a variable number of bedrooms — one, two, three, or four — without change in plan arrangement. The relation of the bedroom unit to the living unit can be altered in several ways. (See Pages 6 and 7.)

The bathroom has storage space for linens and space for a dressing table.

GARAGE: Placement of the garage is optional. It can be attached to the house, or connected by a breezeway, or placed away from the house.
THE HOMEMAKING AREA

The workroom and the kitchen form a homemaking area which is carefully related to all approaches to the house. The illustration shows the homemaking area equipped with all major conveniences; however, this space will operate efficiently also with fewer and simpler conveniences. For instance, open shelves or fewer cabinets can be installed when the house is built and the cabinetwork completed later; older type appliances can serve until replaced by new. Special features of the homemaking area include:

WORKROOM
1. A convenient wash-up space.
2. Office with space for desk and files.
4. Work space for such tasks as processing food and preparing produce for market.
5. Storage cabinets or closets, including closet in entryway for work clothes.

KITCHEN
1. U-shaped placement of refrigerator, sink, range, cabinets and work counters for efficiency.
2. A place to eat. This space can also double as a sewing area. A special cabinet, space for sewing machine, and full-length mirrors on doors of storage cabinets are provided.

ALTERNATE PLAN
Shower and toilet can be installed in the workroom if drainage conditions make it impossible to have them in the basement. (See Page 5.) In this case, the workroom should be extended 4 feet as shown in the alternate plan below.
THE BASEMENT

The basement plan and the location of the basement stairs were influenced by: 1) the problem of muddy feet, and 2) the type of fuel to be used in heating the house.

To enable farm workers to clean up before entering the living area, facilities for a complete clean-up and clothes-change are provided in the basement. Where the house elevation is not high enough to allow for proper drainage of wastes to the septic tank, these facilities should be located in the workroom. (See Page 4.)

Since most farmhouses are heated with a fuel which requires delivery (coal, oil, wood), the fuel storage area must be on the same side of the house as the driveway. In this plan, a coalbin is shown. The heating plant is adjacent to the coalbin and near the basement stairs leading to the entrance at grade level. This direct access to the outside is convenient in removing ashes. Heating systems recommended for this house are forced hot-water or forced warm-air.

The basement plan includes an all-purpose room which can serve as a clothes-drying room on rainy days.

THE EXTERIOR

The exterior design of this farmhouse is an architectural expression of the plan. No historical style or period governs the character of the design. The architecture is “modern” — or contemporary — simply in the sense that it is unstylized.

The house has more than just an attractive “front.” All views are pleasing. On the spacious sites available for farmhouses, this “all around” beauty is desirable.

MATERIALS: The house can be built of a wide range of materials. Its exterior should be equally as pleasing with any type of exterior finishing material (stone, brick, wood siding, shingles, plywood or asbestos sheets) and with any approved method of applying that material, such as wood siding applied horizontally or placed vertically with batten strips.

GRADE: The house is designed with the first floor level several steps above the finished ground line so that ample basement windows can be provided without area-ways. This reduces the depth of excavation, simplifies drainage, and provides a lighter, better ventilated basement. Since the house itself is long and low, the relatively high floor level is not objectionable. With proper landscaping, the house can be given the appearance of “hugging the ground” which is often desired.

The outdoor living area is graded up to a height only two steps below the level of the first floor to make it easily accessible to the living and dining area.

PORCH: If desired, a porch can be added off the living area simply by extending a gable structure out from the house.

ROOF PROJECTION: The eaves of the gabled roof form a fairly large overhang which is attractive and practical. It provides summer shade for the windows, and shelters windows and doors against rain and snow.

WINDOWS: The windows are larger than those commonly used, there being a trend today for homeowners to want more glass area in order to enjoy sunlight and views. For comfort and fuel savings, large windows should be double-glazed. The house design provides for fixed glass or picture windows combined with windows that open and close (double-hung, casement, horizontal sliding, or awning).
The two rectangular units, which make the farmhouse readily adaptable to variations in farmstead layouts and to orientation for sunlight and summer breeze, are presented here in a variety of arrangements.

The photographs show the most favorable combination of the two units for each of the four principal farmstead orientations. In all four, the bedrooms get southwest breezes in the summer; the living room has a southern exposure and ready access to an outdoor living area; the homemaking area is on the driveway side of the house. Note how the exterior appearance of the house changes when the two units are placed in different positions. The placement of the garage also influences the exterior appearance.

Sketched on the opposite page are other combinations of the two rectangles which might suit the requirements of some families better than the four shown in the photographs.

House Plan Adapts Itself to

FARMHOUSE FACES HIGHWAY ON NORTH

FARMHOUSE FACES HIGHWAY ON WEST
These designs are presented as additional examples of the flexibility of the basic plan. They are not oriented to any specific farmstead.

Various Farmstead Arrangements

FARMHOUSE FACES HIGHWAY ON SOUTH

FARMHOUSE FACES HIGHWAY ON EAST
**House Structure Achieves Simplicity**

The width of a house affects such things as the span of joists and rafters, and as a result, determines the relative simplicity or complexity of construction. The structure may be quite simple, as in this one-story house with unbroken roof lines, or it may be more complicated as in a 1 1/2 story "cape-cod" house with dormer windows.

The rectangular units of this farmhouse are only one room wide (16 feet) because such a house poses fewer structural problems than a house which is two rooms wide (probable minimum width, 24 feet). This 16-foot width requires only one span of 2 x 10 floor joists and no center beams or other supports in the basement. (See sketch.) The roof can be built with lightweight rafters and ceiling joists combined as trusses so that no interior partitions need to carry loads.

Because the structure is not complex, the farm operator himself may do many things in the construction of the house.

**MODULAR PLANNING AND THE FARMHOUSE**

The checkerboard of squares which is carried through the whole plan is an expression of a relatively new design principle known as "modular planning."

According to this principle, customary fractional dimensions are eliminated both in planning the house and in the manufacture of building materials. All nominal dimensions of the house are divisible by 4 inches, as are the nominal measurements of building materials.

Since the farmhouse is designed with dimensions of 4-inch units or multiples thereof (the checkerboard squares on the house plan are 16 inches square), it can be built with minimum cutting and waste when materials are also of modular measurements. Not all materials are yet available in modular sizes inasmuch as the modular principle is just beginning to be adopted by manufacturers.

Even without modular materials, the construction of this farmhouse is simplified because its dimensions are coordinated with the 16-inch spacing of framing members and the dimensions of sheet building materials in use now. Since partitions fall on the module lines (the lines made by the checkerboard squares), room dimensions are also coordinated with these materials.

The width of the windows in this house also coincides with the module lines. Window manufacturers are now making modular-sized windows, which can be framed into the wall with a minimum of waste and cutting of studs.

While this plan today is little more than an expression of the modular principle, widespread adoption of the principle will increase the plan's efficiency.

**NON-MODULAR PLANNING COMPLICATES CONSTRUCTION**

Dimensions of ordinary, non-modular houses and building materials are arbitrary. Practically all materials used in such houses require much on-the-job cutting and fitting. Studs are placed 16" apart whenever possible as in modular planning but window openings, doors and partitions are set without regard to studs.