

Farm Kitchen Planning

THIS BULLETIN IS INTENDED TO SUGGEST IDEAS FOR PLANNING AND REMODELING OREGON FARM KITCHENS. SUGGESTIONS ARE GIVEN FOR STANDARD CABINET UNITS, TOGETHER WITH STANDARDS FOR COLOR, LIGHTING, AND HEIGHT OF WORKING SURFACES. THE LIGHTING ARRANGEMENT IS PLANNED FOR THE KITCHEN THAT IS EQUIPPED WITH ELECTRICITY. WALL AND FLOOR FINISHES ARE SUITABLE FOR USE IN THE AVERAGE FARM KITCHEN.

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**Utensil Storage Cabinet
in an Oregon Farm Home**

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Farm Kitchen Planning

SAVING of time and energy is one of the most satisfactory results obtained from a well-planned and convenient kitchen. The homemaker in the average farm home spends about 70 per cent of her working time in the kitchen, according to a study made by the Federal Bureau of Home Economics. From the standpoint of efficient home management, the kitchen is thus the most important room in the farm home. Careful planning and a step-saving arrangement of work centers and equipment, therefore, save needless expenditure of energy.

STANDARDS FOR KITCHEN PLANNING

Centers

The farm kitchen should have four centers: sink, stove, food preparation, and the meal table or utility table.

The sink center includes the sink itself, and cabinets for dishes and for equipment and supplies used at the sink.

The stove center includes the stove and storage space for wood, skillets, and other articles used there.

The food-preparation center includes a table for mixing; bins for flour, sugar, and other bulk supplies; and shelving for utensils and packaged supplies. The surface of the mixing table needs to be lower than that of the sink rim.

The kitchen meal table has many between-meal uses, such as child's play, writing, preparing vegetables, and folding ironed clothes.

The utility table is a small table needed in a kitchen where no meals are served, as a planning desk, as a child's play center, as a place beside which to sit while at work, and as a serving table. If it is easily moved, the utility table is useful for supplementing the work space of the built-ins. It should have a heat-resistant top in order that it may be used for hot kettles.

Arrangement

The chief object in arranging a kitchen is a "step-saving" plan; i.e., one that will require the worker to travel the fewest possible miles in doing kitchen work in a year's time. A "low-mileage" kitchen plan* may be developed by the following procedure:

1. Plan a sink unit with work counters on both sides, one of these to be used as a serving table and the other as a food-preparation table. In dishwashing, both would be used.
2. Utilize the space above and below the sink work counters for the storage of dishes frequently used, the kettles and pans used at the sink, and silver, linen, and small utensils.
3. In connection with the mixing table, plan space for the storage of equipment and supplies.

* See last page for low-mileage kitchen plans.

4. Observe the following order in locating the various items of equipment:
 - a. Sink unit near the meal table; the dish cabinet and the silver and linen drawers next to the meal table.
 - b. Stove near both meal table and sink.
 - c. Wood box near stove and on same side as fire box.
 - d. Mixing unit near sink.
 - e. Draft cooler near stove and mixing table.
 - f. Refrigerator near serving end of sink unit.
5. Avoid separation of the main pieces of equipment (sink, stove, mixing table) by main passages.

Ways of equipping and using storage space efficiently

Classify all articles used in the kitchen as frequently, occasionally, or seldom used. Limit storage space in the kitchen by planning to store articles seldom used (such as large roaster) elsewhere.

Provide: drawer space for kitchen textiles, small utensils, and table silver; hanging space for utensils that can be hung; shelves for packaged groceries, dishes, and cooking vessels that can not be hung; bins for supplies bought in lots of 8 pounds or more; draft cooler for perishable foods, unless there is a cool room, cellar, or cave. Partition drawers into sections for silver and small utensils. Removable insets are best.

Do not make shelves more than 15 inches wide. If a cabinet is deeper than 15 inches, the space may be used for articles hung on the door.

Nest plates, bowls, and kettles, only if they are duplicates in size, or are used together.

Ways of increasing kitchen convenience and comfort

Provide enough space for the meal table to permit it to be used without moving, also to permit the use of chairs rather than benches.

Locate the meal table near a window that affords a pleasing view of garden, orchard, fields, or hills.

Place wood stove where it is accessible from one side, but where the worker stands in a current of air.

DESCRIPTION OF DEMONSTRATION KITCHEN*

The demonstration kitchen is planned to meet the needs of the average farm family in Oregon. The aims in planning it were to show what equipment is desirable in the farm kitchen, how built-ins can be made convenient and economical of space, how large the built-ins should be in order to provide adequate storage and work space for the average home, and how the various pieces of equipment should be placed to save steps. The kitchen plan was designed for the house that has another room or a basement where work clothes can be kept and laundry work done.

The sink unit consists of a flat-rimmed sink with wall and base cabinets on each side of it. Studies of the travel required in doing kitchen work indicate that the most important detail of planning the modern

* Working drawings of the built-ins may be obtained at cost from the Federal Cooperative Extension Service, Oregon State College.

kitchen is to provide a good-sized work surface on either side of the sink and immediately adjacent to it. A length of 36 inches has been found sufficient for these work counters, particularly in the kitchen where there is a meal table that can be used to provide extra work space when needed.

The sink is set so that the inside of the bottom is $32\frac{1}{2}$ inches from the floor. This is the average of measures preferred by more than 500 farm homemakers.*

The plan assumes that there will be a window above the sink. Most farm homemakers seem to prefer this arrangement rather than to have the sink on an inside wall. Ideally, a window above the sink should provide the homemaker with a view of the farm drive and farm buildings. If the light is too strong, it may be softened by an awning or plantings outside, or by a venetian blind inside.

The cabinets above the work counters immediately adjacent to the sink are intended for dishes. The shelves in these cabinets can be easily taken out and moved closer together or farther apart. If one is careful to place low things, such as piles of plates, on the lower shelves, the third shelf can be placed low enough to be within easy reach of the average woman. The top shelf is useful for tall articles and for those with handles, such as pitchers.

The base-cabinet at the left end of the sink may act as a serving table. The large drawer at the bottom of the cabinet is intended for lunch cloths, napkins, etc., as well as for hand towels. One of the upper drawers is intended for storage of table silver. The compartment behind the perforated door is intended for a metal bread-and-cake container, which can be easily taken out for cleaning. Other drawers in this case are intended for dish towels, kitchen-aprons, clean rags, and for utensils such as large spoons and cutting knives. The fittings in the drawers for silver and utensils have been planned to meet the requirements of the average household for this type of storage.

The lower cabinet at the right is intended for kettles and other containers needed at the sink. It is so designed as to require the least possible stooping to get at its contents.

Two pull-out boards are included in the sink unit, for use in slicing vegetables and meat. In addition below the food-preparation table, there is a larger board that is intended for use as a pastry board.

At the right of the sink proper and immediately adjoining it is the food-preparation table. Its surface is considerably lower than that of the sink rim. Homemakers find it less fatiguing in the operation of mixing and beating to work on this lower surface. Below the work table are the bins intended for flour, sugar, and other bulk supplies. Drawers are used rather than bins because they are more economical of space. Drawers are satisfactory even for as much as 100 pounds if they are equipped with hardwood gliders or other means of preventing wear and undue friction.

The upper drawers have been equipped with movable metal insets. It is possible to store in these two drawers four types of supplies, such as salt, meal, and whole-wheat flour, which are usually bought in eight to ten-pound sacks.

* Oregon Agricultural Experiment Station, Bulletin 348, *Standards for Working-Surface Heights and Other Space Units of the Dwelling.*

At the right of the food-preparation table is a floor-to-ceiling cabinet for the storage of packaged groceries, baking pans, mixing bowls and other articles used in getting food ready to cook. A movable inset has been made to place between two shelves; this provides convenient storage for flat articles such as lids and muffin tins. Small articles that hang, such as egg beaters, may be placed on the door of this cabinet.

Storage for perishable foods is provided for in a draft cooler, also in a refrigerator. This arrangement has been made with the expectation that the average family will not use the refrigerator during cool weather, as in this climate the draft cooler is adequate for cool-weather storage. The draft cooler is useful mainly for the storage of fruits and vegetables, unopened cans, and other foods for which moderately cold storage suffices.

The wood box is long enough for two piles of wood placed parallel to the front edge. It is large enough to hold a day's supply for the average family. The box is made shallow, to permit the homemaker to reach wood in the bottom. The drawers below the wood compartment are useful for the storage of house slippers, gloves used in handling wood, tools, etc. If well ventilated, they may be used for wet gloves or rubbers.

The hinged board in the bottom of the wood compartment is the clean-out. When the wood compartment is empty this board can be raised and the bottom of the compartment thoroughly cleaned out by means of a broom or brush.

The trough above the wood compartment is intended for kindling and papers. It is large enough to hold a day's supply.

The cabinet above the wood box is intended for articles that will hang, such as skillets, sauce pans, etc. The base of the cabinet is long enough to hold coffee and coffee pot, tea and tea pot. The sides and the back of this cabinet must be constructed to permit the placing of hooks or nails at convenient places. As some of the articles, such as skillets, are quite heavy, it is essential that the hook or nail should be strong and that the wood should hold it firmly.

In planning the stove center, it has been assumed that there would be a wood stove, either with or without an electric or gas stove. Some homemakers prefer to have a wood stove in the laundry room with the expectation that it will be used for long processes such as canning, and to have an electric stove in the kitchen. With such an arrangement the wood box in the kitchen is obviously not necessary and in this case the storage of skillets and other equipment used at the stove can be supplied by a floor-to-ceiling cabinet measuring at least 18 inches by 18 inches.

MATERIALS AND CONSTRUCTION METHODS

Cabinets

Base and wall cabinets are made of standard $\frac{3}{4}$ -inch fir with mortise-and-tenon glued joints. Fronts are made of $\frac{3}{4}$ -inch squared moulding to serve as facings around openings. The fronts are glued and nailed to the $\frac{3}{4}$ -inch reject plywood (5 ply) partitions, sides, and fixed shelves. Narrow boards are used in order to avoid blind corners and waste space between doors and drawers. Cabinet backs are made of $\frac{1}{2}$ -inch reject plywood. Backs may be omitted if the construction is built against a smooth wall. The

shelves in all cabinets are adjustable and removable, thus making cleaning and painting easier.

Where ceiling heights are more than eight feet a ceiling unit may be added above the wall cabinet. This utilizes otherwise waste space and eliminates a dust-catching ledge above the wall cabinets. Ceiling units may be combined with wall cabinets but should have separate doors.

A top moulding strip is used to conceal the joint between the cabinet and the ceiling.

A continuous base forming the toe space under the base cabinets is constructed of 2" x 4" set on edge. This gives a clearance of 3½ inches.

Doors should be tight, durable, easy to keep clean, and pleasing in appearance. The flush-panel lip door fulfills these requirements. The lip is necessary to close the large opening between the door frame and door. This makes a tight-fitting door regardless of the shrinking and swelling of the wood. It also insures a neat job in the case of home carpentry as the doors can be hung square and will cover the cracks even if the cabinet openings are not quite true. The flush panel is the better type of door as it has a smooth unbroken surface which is easy to clean, and it blends in well with modern kitchen furnishings. The doors must be made of a slab full one-inch thick, and should be made of seven-ply stock, otherwise they will warp and twist out of shape. They can be hung on chromium-plated semi-concealed hinges, or on offset surface hinges.

Built-in wood louvers are used to ventilate the cupboards. These louvers slope out at the bottom in order to facilitate cleaning and to conceal the view into the base cabinets. Whenever it is possible, the width of the door should be reduced so that when it is opened it will not project beyond the edge of the work surface beneath. Two doors can be "rabbeted" (a recess in the edge of one door to receive the lip of the other), thus eliminating a center post, making it possible to have a single opening with two doors, and giving unobstructed access to the entire cabinet. In this case the doors can be reduced in width. This unit is called a double wall unit cabinet.

The cabinet above the food-preparation table is closed by means of a roller shade. A roller shade is useful for closing a cabinet of this sort because it is out of the way while the cabinet is in use; but it is essential that the guards at the side be carefully constructed so as to hold the edges of the shade firmly in place.

Drawers are stock units made of ¾-inch lip fronts and ⅝-inch sides and backs. The fronts conform to the cabinet doors and make a pleasing, uniform surface. Utensil and silver drawers are constructed with dividers spaced to receive individual equipment.

Bins for sugar and flour are of drawer type lined with removable metal inserts, designed with lids to slide out of the way when the bins are opened.

The flat work surface over the base cabinet is covered with heavy in-laid linoleum. The edge is raised on a beveled wood strip and is faced with linoleum. This demonstrates the possibility of an inexpensive application without the use of metal edging. The burlap backing must be kept dry or it will rot off in a few years. For this purpose there are a number of so-called waterproof cements on the market. Experience has shown, however, that if water gets behind the linoleum it will come loose. The drainboard

edging and metal flashing around the sink are a special linoleum hardware. This edging protects the burlap back and edge of the linoleum.

A standard swinging mixing faucet is located above the sink.

Floors

The kitchen floor should be smooth and level regardless of its finish or covering. Linoleum on a wood floor is one of the best and most popular types. If the floor is uneven or badly worn it should be resurfaced, as broken or rough boards will wear through linoleum in a short time. Inlaid linoleum should be well waxed when first laid and occasionally thereafter. Printed linoleum should be finished with linoleum lacquer or clear spar varnish.

Walls

Kitchen walls should be of a hard, smooth material and of a finish easily cleaned, painted, or enameled. Smooth plaster is very desirable. These smooth finishes are easy to wash and keep clean. Flat-toned paints should not be used in a kitchen because grease and smoke are more difficult to remove from them. Calsimine and cold-water paint are cheap substitutes for oil paint and can be easily applied once or twice a year, but they cannot be washed. There are a number of waterproof wallpapers that are appropriate to use in the modern kitchen. Varnish-finished wallpaper is easy to keep clean.

If chairs are to be placed against the wall a chair rail should be provided to protect the plaster. All mouldings and trim should be plain "bull nose" type, eliminating dust catchers wherever possible.

WORKING-SURFACE HEIGHTS AND OTHER DIMENSION STANDARDS*

Preferred heights of working surfaces, worker standing	<i>Inches</i>
Floor of sink	32½
Mixing table	32
Pull-out pastry board	33½
Bottom of sink 5 inches or more deep when drainboard is used as mixing table	31
Ironing board	32½
Preferred height of equipment, worker seated (two inches allowed for thickness of table top and clearance above thighs)	
Kitchen planning desk	25
Mixing table	24
Ironing board	24
Maximum distance from top of table (for seated worker) to lower edge of construction below table top	3½
Minimum width (side to side) of open space below table for worker seated	18
Minimum width (side to side) of top of table for worker seated	24
Minimum toe space	
Width (front to back)	4
Height	3
Maximum height of shelf for articles in frequent use	
a. No obstruction	
Shelves for light-weight articles	79
Shelves for articles requiring use of both hands in removing from shelf	74
b. Obstruction 12 inches wide (as in reaching over work counter)	
Shelves for light-weight articles	76
Shelves for articles requiring use of both hands	71

* Abstract from Bulletin 348, Oregon Agricultural Experiment Station, *Standards for Working-Surface Heights and Other Space Units of the Dwelling*. Standards are based on measurements of more than five hundred women.

Maximum height of shelf visible throughout entire width	61
Maximum height of drawer	59
Maximum height of knobs, latches, switches and controls, locks, hooks	
No obstruction	79
12-inch obstruction	76
24-inch obstruction (as in reaching over sink to window latch)	69
Maximum height of base of window pane permitting view of yard 12 feet from house	
Worker standing	47
Worker seated	35
Minimum passage	
Between equipment of less than elbow height	17
Between cabinets above elbow height	21
Maximum height of seat of work chair	16
Minimum width of seat of chair or stool	14
Optimum height of seat of stool for use at sink	
Sink 8 inches deep	31
Sink 7 inches deep	30
Sink 6 inches deep	29
Sink 5 inches deep	28

USE OF COLOR IN THE KITCHEN

“The whole atmosphere of the kitchen permeates the worker’s thoughts and affects her general outlook on life. Out of this room can come a cheery disposition or frayed nerves.”

This statement holds true in every aspect of kitchen arrangement—convenience of tables and equipment, floor covering, color schemes, and size of room. In the past few years color has been determined as having a very important influence on the moods and general happiness of the average person. This is the reason for more colorful kitchens.

A “cool” color scheme

When determining a color scheme for a kitchen, first of all notice how much light and sunlight it receives. If the room receives light from the south or west, it is advisable to select for the dominating color light, cool colors, such as green, blue, cream, white, or gray. For interest and variety, other bright or darker colors may be used in small areas. A color scheme for a kitchen with this exposure may be developed as follows: light-gray walls; slightly darker woodwork; blue, gray, and green floor linoleum; blue-and-orange print curtains made of voile, dimity, print, gingham, or many other materials; accessories and containers in blue and orange. The knobs and moldings on the cupboard doors may be painted blue or orange.

A “warm” color scheme.

If the room faces north, however, or has north or east light, the warmer colors should be used, such as cream, putty, ivory, light rust, yellow, or light peach. A color scheme for a room with north exposure is suggested as follows: cream ceiling; light-yellow walls, buff or putty colored woodwork; tile colors of red, red-orange, yellow, brown, and cream in linoleum; bright red-orange and blue-green containers and knobs; curtains of cream with red-orange and blue-green figures or stripes of one or both colors.

Walls and woodwork

If figured washable wallpaper is used, curtains and linoleum should tend toward plainness. The kitchen should be restful; too much figure on the walls and floor causes unrest. Strips of figured washable wallpaper, however, may be used to back the interior of the dish cupboards, adding pattern and color interest.

The walls should be of soft, light, neutral tones of warm or cool colors, with the woodwork slightly lighter or darker than the walls. A good semi-luster paint is highly recommended for both purposes. Smooth walls and ceilings, without wainscoting, and plain wood trim, without grooves or moldings, are preferable because they are more easily cleaned. If wainscoting is used, it should be painted like the walls or woodwork.

If there is doubt as to what color scheme to follow, select first the wallpaper or the linoleum and use the colors in it for suggestions, keeping in mind always that the brighter spots of color should be used in small areas, and large spaces should be soft in color. For example:

Linoleum: Marbelized pattern inlay. Colors: cream, tan, brown, dull rust, peach, and green.

Woodwork: Two tones of cream.

Inside of cupboards: Coral or washable wallpaper in cream, peach, green, and rust.

Walls: Pale green.

Curtains: Crossbar dimity with baby rickrack trimming in red-orange, orange, yellow, deep green, and brown.

Handles of kitchen tools: Red-orange.

Bowls: Red-orange and green.

LIGHTING THE KITCHEN

Better light for better sight applies to the kitchen, the workshop of the home, just as well as to other rooms of the house.

The requirements of good lighting are:

1. Enough light
2. Light in enough places
3. Freedom from glare
4. Minimum of contrast

Enough light

A meter for measuring light is obtainable at the office of almost any power company. A foot candle—a unit for measuring light—is the amount of light falling on a surface one foot distance from one lighted candle.

The Illuminating Engineering Society makes the following recommendations for adequate light for visual tasks in the home:

	<i>Foot candles</i>
Reading	10 to 20
Sewing	50 to 100
Studying	20 to 50
Kitchen Work	10 to 50
Laundry	10 to 20

Light in enough places

Good kitchen lighting must provide adequate light in all of the important work spots in addition to the general room illumination. The sink

is an important work spot in the kitchen that should be adequately lighted. Good light can be provided by a very inexpensive shaded wall fixture.

Freedom from glare

Glare is wasted light. According to science glare is hard on the eyes. A bare light bulb hanging from a cord and socket in the middle of a kitchen produces excessive glare and is an example of poor lighting. A proper shade on every lamp bulb will eliminate glare, both the direct glare from bare bulbs and the reflected glare when a too-bright light is reflected on a shiny surface.

Minimum of contrast

The eyes, in adjusting themselves from a bright light to a darker area, are subjected to strain. For this reason good lighting requires that there be at least one-tenth as much light everywhere in the room as that directly on one's work.

Good wiring helps good lighting

The first step toward good lighting is to make sure the proper size of wire is installed. For all branch circuits, use No. 12 wire. This costs very little more to buy and install than the next smaller size of wire, No. 14. No. 12 is large enough to feed light bulbs and appliances the current they require to work efficiently.

Have a sufficient number of outlets wired. There are three kinds of outlets—the convenience outlet, for any appliance or lamp, the fixture outlet, usually for a permanent lighting fixture, and the switch outlet. Plan the outlets so that a percolator, food mixer, and toaster can be conveniently used.

Lights and fixtures for the kitchen

A ceiling light is practically a necessity in the kitchen, and usually there is a wall switch to control it. For this light a glass diffusing globe is required. True to its name this type of globe softens the light so that there are no shadows to get in the way when at work. The globes come in various sizes—8, 10, and 12 inches in diameter, to cover bulbs of 75, 100 to 150, and 200 watts, respectively. At the sink, where so many of the household tasks are done, additional light is needed. Often an 8-inch diffusing globe with a 75-watt inside frost bulb (or 100-watt blue daylight bulb) mounted at the ceiling over the sink provides this light to best advantage. A pull chain turns the light on and off.



Ceiling light.

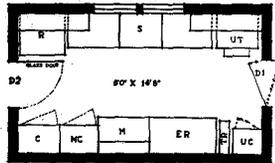
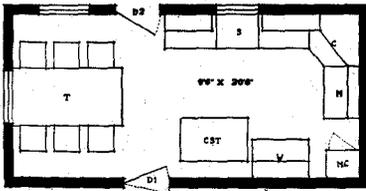
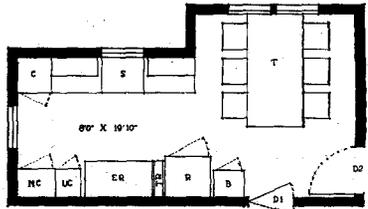
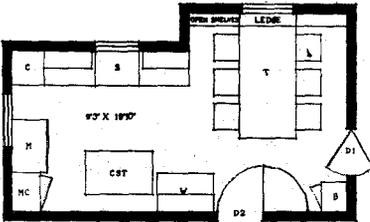
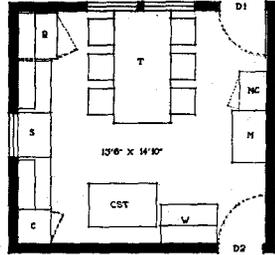
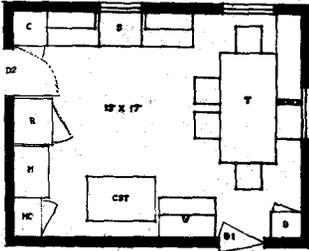
Again this additional light may be provided by a wall bracket, above or below the eye level, and equipped with a 60-watt inside frost bulb and a glass shade to direct light down on the work in hand. Such brackets often include an extra convenience outlet where any electrical appliance may be attached, thus increasing convenience without appreciably increasing wiring costs. These same fixtures will light the range to good advantage, and also the work table or cabinet.



Wall bracket.

Lighting fixtures that provide good lighting can be purchased at very reasonable prices. Ceiling glass diffusing globes are available at \$2.00 to \$3.50, and shaded side brackets are available at \$2.00.

Kitchen Plans for Oregon Farm Homes



Equipment included and minimum floor area allowed:

- B** Floor-to-ceiling storage cabinet for farm records, bulletins, business papers, etc., 18" x 21".
- C** Draft cooler. May be 18" x 30" or 24" x 24", if floor-to-ceiling cabinet. Corner cooler with counter space between upper and lower cabinets measures 36" on each wall.
- Cst** Combination wood and electric (or gas) stove, or wood stove and electric (or gas) plate on table beside it, 30" x 48".
- D1** Door to dining room or living room, 32".
- D2** Door to back hall, entry, or porch, 32".
- ER** Electric range, 25" x 48".
- M** Mixing table with bins below it for flour and other staples, 25" x 36".
- MC** Floor-to-ceiling cabinet for storage of supplies and equipment used at mixing table, 20" x 27".
- S** Sink unit 24" x 8'6". Consists of 30-inch flat rim sink flanked by 36-inch upper and lower cabinets.
- T** Meal table 40" x 76". Seats six persons comfortably. Chairs used unless bench indicated on plan.
- TR** Towel rack, 9" x 21".
- UC** Utensil cabinet 18" x 18", for equipment and supplies used at stove. Hooks on sides and back for utensils that can be hung.
- UT** Utility table, 24" x 30". Intended for work done while sitting, for use as a planning desk, and for use as a serving table.
- W** Wood box with utensil cabinet above it, 27" x 40".