WEYERHAEUSER 4-SQUARE

# FARM BUILDING SERVICE

Good Buildings Increase Farm Income

# Available at Weyerhaeuser 4-Square Dealers!



# An Encyclopedia of Modern Farm Building Designs....plus

The buildings shown on the following pages are a part of the

### New Weyerhaeuser 4-SQUARE Farm Building Service

They have been designed to help you Increase Your Farm Income. They are the result of dual planning. Agricultural experts determined what the ideal use requirements of each building should be. Then farm structure engineers designed the buildings to meet those requirements economically.

The 4-SQUARE Dealer's Encyclopedia of farm building information is made up of 5 sections, composing

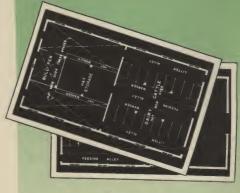
Poultry Buildings and Poultry Equipment
Barns and Barn Equipment
Hog Buildings and Hog Equipment
Crop Storage Buildings
Machinery Shelters, Garages, Shops, and
Milk Houses

For Complete Details Concerning the Buildings You Need, See your 4-SQUARE Dealer's Large Encyclopedia

Weyerhaeuser Sales Company Saint Paul, Minnesota BLUEPRINTS
for 120 buildings

# ACCURATE MATERIAL LISTS

for each building, which assure your getting the correct amount of materials—not too much nor too little





# THE WEYERHAEUSER 4-SQUARE FARM BUILDING SERVICE

FITS THE NEEDS OF YOUR FARM AND YOUR PRODUCTION PROGRAM

Out of the needs and experiences of hundreds of farmers in many different states, working with various crop and livestock programs, have come the designs and plans for the farm buildings and equipment of the Weyerhaeuser 4-SQUARE Farm Building Service.

These plans cover practically every farm need for shelter and for such equipment items

as feeders, nests, gates, etc. They are of various sizes and styles.

Farms vary in acreage. Farm programs differ. One man's program may be heavier in hogs or poultry. One may use portable buildings with range equipment, and the other a central house with central handling and feeding facilities. But whatever the farm program, or its size, there is a building plan to fit at a price you want to pay.

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<a href="https://www.lllinoisArchaeology.com">www.lllinoisArchaeology.com</a>

The Weyerhaeuser 4-SQUARE Farm Building Service is Complete with Working Drawings and Material Lists

#### IT IS PRACTICAL AND EASY TO USE

The buildings included in this service are practical, convenient, and economical to build and maintain. They meet all the requirements for the proper and profitable housing of poultry, hogs, dairy cows, sheep, and feeder cattle, for the storage of crops and machinery, and the sanitary requirements of a milk house.

After planning these buildings for practical use, the selection of materials and the method of putting them together were worked out by Weyerhaeuser engineers so that by following the plans and specifications, sound construction, long life and durability are assured.

Improved and Ready-to-use Lumber is the Basis of Good

Construction. Lumber produced in Weyerhaeuser Mills is carefully manufactured and is delivered in exact lengths and sizes with ends and edges already squared. Engineers in designing these buildings specified, wherever practicable, exact lengths and sizes of lumber. Therefore, the builder can put the lumber into place according to plan without needless sawing, fitting, and material waste. Each piece of lumber going into construction fits firmly into place. This makes for strong, tight, durable buildings.

There is this to remember about buildings made of lumber—they are not only better buildings, they not only provide a variety of uses, but they can be more easily repaired and remodeled to suit new uses.



# FROM BABY CHICK TO LAYING HEN



#### GOOD HOUSING AND EQUIPMENT ARE OF VITAL IMPORTANCE

HE raising of poultry on the average farm can be a very satisfactory source of cash income. The task is to reduce mortality, promote sound, vigorous growth, and secure high egg production. From several reliable poultry authorities, the following simple rules are detailed regarding the care of birds and the selection and use of the right type of housing and equipment.

# THE PROPER SIZE AND TYPE OF BROODER HOUSE

One square foot of floor space for 2 baby chicks—this is the accepted rule to avoid over-crowding, to prevent cannibalism and to give chicks room in which to feather properly and grow strong healthy bodies. Don't try to raise more chicks or keep more hens than your houses and equipment can comfortably accommodate.

There are two types of Brooder Houses—the portable house, mounted on skids for easy movement to clean range, and the stationary house, preferably insulated and on a good foundation.

Brooder houses should be tightly constructed to prevent draft, and if portable, be rigidly braced to withstand the strains of hauling to clean ground. The floors should be tight so that regular cleaning and disinfecting can be done readily.

The brooder stove should be started several days before the chicks arrive and tested for proper temperature. Ninety-five degrees at the edge of the hover is recommended. The brooder should be placed so that there are cool areas at points distant from the hover so as to promote normal feathering and discourage cannibalism. Allow 7 square inches of hover area for one chick. A 56" hover will care for 350 birds.

#### SELECTING A GOOD LAYING HOUSE

To get the most eggs from every hen, the laying quarters must be comfortable, well ventilated, and provide against extremes of heat and cold. The laying house must also be designed for complete working convenience of the flock owner.

Avoid over-crowding. For best results, allow 3 square feet of floor area for light breeds, and 4 square feet for heavier breeds.

A square house is the ideal shape. It is easier to work in. It is more economical to build, and tends to reduce drafts and loss of heat. The square house is easier to keep warm because the exposed wall area is less per foot of floor space.

Good insulation is essential in providing comfort for the laying flock. In winter it protects against the sudden shifts of temperature. In summer, insulation keeps the house cool, thus increasing egg production and improving egg quality.

Year-round confinement of hens is desirable. It simplifies disease control by raising the young stock without contact with old hens and contaminated yards.

Windows should be limited to provide just enough light for the hens to see their feed, and hung so that the floor is lighted evenly.

### WEYERHAEUSER 4-Square Poultry Buildings Are Designed to MEET ALL REQUIREMENTS

The building designs on the following pages meet all the requirements for the comfortable and sanitary housing of poultry. They also provide for your own convenience in caring for your flocks. As you examine their details you will see how carefully they are planned for economy and service. Your lumber dealer will be glad to go over these buildings with you.

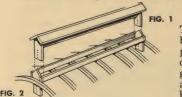
# Arched Roof Portable BROODER HOUSE

Offers Many Features of Superior Performance and Construction

THE GLUED laminated wood rafter arches offer unusual advantages in brooder house construction. These engineered, factory-built arches are continuous framing members running from foundation to roof ridge. Their great strength makes rigid, durable structures, so essential to a portable house that must withstand strains of frequent moving. Their pleasing design makes an unusually attractive building which is also more wind-resistant than others. Their rounded shape gives adequate head room, and assures economical heating and a more even distribution of heat.

The entire construction is weather-tight to prevent drafts. The floors are tight 1"x4" Douglas fir flooring so that regular cleaning and disinfecting can be done conveniently. Doors and windows are fitted tight. The factory-built arches are delivered ready for use. The frame goes up quickly. Siding and flooring provide for the use of exact standard lengths and sizes of lumber. Needless sawing, fitting and material waste are eliminated. The Weyerhaeuser 4-SQUARE Arched Roof portable brooder house will give many years of service at low cost.

Plan No. 1402-b-2 is the basic 4-SQUARE Arched Roof



#### The Ridge Ventilator

This simple, practical, easy-to-build, easy-to-operate ventilator provides air movement without draft. Figure I slides within two guide sleeves of Figure II. It is adjustable to desired opening and held in place with pins.

# Arched Roof Vertical Front BROODER HOUSE

THIS DESIGN appeals to those who prefer windows placed in the straight side wall. The number of windows is determined by the length of the building. They are placed sufficiently high to prevent cold areas at the floor line. Two windows are suggested for the smaller houses, while three windows are used for sizes 12x18, 12x20. Two chick doors are specified.

The glued laminated arch rafter is used in the construction of this portable brooder house. The arch assures a strong, rigid, wind-resistant structure of pleasing design. It is easy and economical to heat. The peak roof makes possible the use of wood shingles which give hail and windproof roofing.

Ventilation is provided by tip-in windows, a ridge ventilator or a simple built-in flue. Other methods of ventilation may also be used in this house.

Alternate Uses—As brooder houses increase in size they become suitable for serving other needs as well. This house can be used wherever tight, weather-proof shelter is wanted, either as a storage building or a laying house. Blueprints show how lumber-built self-



Brooder House. It is designed with a peak at the roof ridge to give sufficient pitch so that the roof may have the advantage of durable, hail and wind resistant wood shingles. It is available in two basic sizes: 10'x12' and 12'x14'. The 12'x14' house is extensible by lengths of two feet to give houses size 12'x16', 12'x18', and 12'x20'. Alternate window locations are also provided. Side windows can be used, in which case the 10'x12', 12'x14', and 12'x16' sizes have two side windows, and the 12'x18' and 12'x20' have three side windows.

Plan No. 1402-b-1 (12'x14' only), illustrates the barrel type roof, in the construction of which continuous single arches are used. Rolled roofing can be used on this type of house. Wood shingles are preferred, however, and the blueprints show directions for construction of a roof ridge which provides sufficient pitch.



cleaning nests can be attached to the end opposite the door, and sanitary roosts can be installed along the arched side.



No. 1403-a

Can be built in Sizes 10'x12', 10'x14', 10'x16'



No. 1409-a

SIZE: 10'x16' HEIGHT: 9' Can be built in 14'-16'-18' and 20' lengths

## Shed Roof Portable BROODER HOUSE

USING standard lengths and sizes of ready-to-use lumber, Weyerhaeuser engineers have designed a sturdy, durable, low-cost portable brooder which meets brooding requirements.

To obtain rigidity and strength, so essential in a portable house, the studs are fastened securely to the rafters, joists and skids to form a continuous framing unit. This house is weather-tight and draft-free.

Circulation of air without draft is provided by hinged ventilators, under the roof, at front and rear of the house. These ventilators are adjustable to desired openings. Tip-in windows are included as additional means of ventilation.

Windows are placed so they do not create cold area at floor. Heat loss is minimized by limited glass area. Chick doors, hinged to serve as ramps, are under each window. Replaceable skid shoes are indicated.

This house is an outstanding example of how farm building engineers obtain greater rigidity, durability, long life and economy through correct design and good construction.

## Gambrel Roof BROODER HOUSE

FARMERS who have gambrel roof barns and wish to have their other buildings of the same general appearance, will prefer this gambrel roof brooder house.

Its basic size is 10'x16' and can be built in other lengths. Its 9' height at the ridge gives plenty of head room. The windows are tip-in type with draft shields. There are two windows in the front of the house, one in the rear, and three along the south side. There are no windows on the north side. Chick doors are conveniently placed.

Screened and shielded openings are provided at each gable end for ventilation, although other systems can be used if desired. Skids have replaceable shoes. If used as laying quarters this house should be insulated.

Because the frame is built of short lengths of lumber which can be cut from standard sizes without waste, this house is easy and economical to build.

#### JUNIOR BROODER AND RANGE SHELTER F-1420

Size: 3'-43/4"x6' Capacity: 50 Chicks This building gives double service—as a brooder and a range shelter. Equipped with handles, it is easy to move.

WEYERHAEUSER 4-SQUARE POULTRY EQUIPMENT



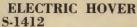
#### POULTRY ROOST FOR USE OVER BROODER

These useful roost sections can be used to temporarily house young birds. small brooder. They fit over a

#### CHICK FEEDER S-1411

4' Long; 4" Wide; 4" High

This feeder is high enough from the floor to prevent littering the feed by the chicks.



4' Long; 3' Wide; 14" High Capacity-150 Chicks

This hover is easy to build and will care for 150 chicks. All the materials needed are a few pieces of lumber and some canvas or heavy paper. To provide heat, six ordinary 100 watt light buils are installed at the top.

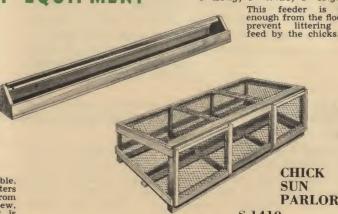


S-1414

ROOSTING FRAME FOR TURKEYS

Size: 16' Long; 10' Wide

This roost is portable, so that roosting quarters can be changed from time to time to new, clean pasturage. It is low so that small birds can get to roosts easily.



S-1410 4' Wide; 10' Long; 32" High

# Arched Roof Vertical Front LAYING HOUSE

THE square laying house has many advantages over a narrower one. It is more economical to build. It is easier to work in. Its shape tends to reduce drafts and loss of heat. The square house is easier to keep warm because it reduces the outside wall area per square foot of floor space.

While the basic design is a square house 20'x20', it can be lengthened by the addition of 20 foot units to obtain any desired size. In the larger sizes the interior can be divided into separate flock rooms with a feed room between.

The glued laminated wood arches are engineered for wind and snow loads. They are of a size and strength designed for this building. They are factory built and arrive at the job ready for erection. The lumber, detailed on the material lists, is standard lengths and sizes. For economy, standard size windows and doors are specified. Roof is designed for wood shingles which are the best protection against hail, wind, sun, sleet and snow.

THE GLUED laminated wood arch lends its pleasing form and well known structural strength to the construction of this popular half-arch laying house with straight front wall. This curved roof house provides ample head room with less space to heat.

It is designed for loft space overhead. Many farmers use this space as a straw loft because they prefer this method of ventilation and insulation. The straw loft requires very little attention. It absorbs moisture gradually and provides ventilation without drafts. When combined with ridge ventilator, as here illustrated, the straw loft is highly efficient. The windows are an important part of ventilation. They are double hung with draft shields.



SIZE: 20'x20' EXTENSIBLE IN 20' UNITS Height 13' Loft Height 6' Ceiling Height 6'-5"

Windows are placed in front side wall well above the floor level to prevent cool floor areas and reduce heat loss. Small windows are in back wall under roosts thus giving ample light over entire floor. Access doors for poultry are placed below the window line and are hinged to open down.

Insulation. The straw loft serves as ceiling insulation and the walls are insulated with standard thick Balsam-Wool and completely sealed with end-matched flooring. This construction assures the finest type of insulation and gives warmth and comfort so vital to high egg production.

Above — Air movement with ridge ventilator.

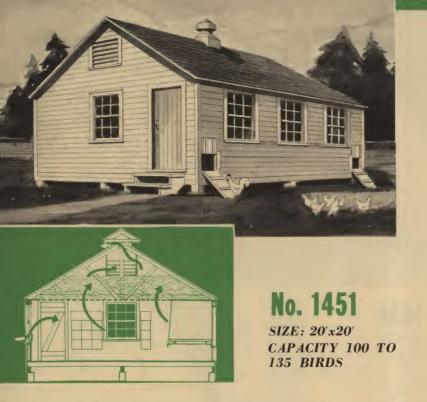
Below - Drainage Gutter.



Roosts fit in under the curve of the arch. Nests are arranged along the end walls. This house is complete in every detail of construction, sanitation and convenience. It will increase poultry income.

Ridge Ventilator. Running the entire length of the building and open to the south, the ridge ventilator assures ventilation to every foot of loft space. When the double-hung windows are open the movement of air through the building is increased, yet because of the draft shields and straw loft there is no draft at levels below the windows.

Gutter at Rear of House. At the base of the round roof a drainage device has been designed to carry away excessive rains and protect the foundation. The use of either a wood gutter or a gutter built into the concrete foundation is suggested in the blueprints. This construction can be used on any round roof building.



# Gable Roof LAYING HOUSE

**HERE** is a practical, economical laying house for the average farm flock. It is of standard construction engineered for low cost and long life. It is built on concrete piers so as to easily fit the building to uneven ground.

The straw loft makes this a warm house. If desired it can be further insulated with standard thick Balsam-Wool sealed with end-matched flooring. Wood shingles are recommended.

Ventilation. Any standard method of ventilation can be built into this house. The blueprints show a combination of several desirable, practical, inexpensive factors. There is the straw loft—screen louvres in gable ends—a lumber-built ridge ventilator—an adjustable hinged baffle board at the ceiling line—

and double hung windows with draft shields. These features permit any desired movement of air, free from draft, for every season, thus assuring warmth in winter, coolness in summer. Whenever additional quarters are needed similar 20'x20' units can be added. When two or more laying units are used they should be separated by a 10 foot storage and feed room.



Extensible in 20' units. Additional units to meet a variety of needs can be added at still lower cost—more poultry room, cow barn, garage, shop, machine storage. 20'x20' units are economical to build and convenient. Several different types of operation can be centrally located by extension of this building.

Ventilation. The straw loft is a practical means of ventilation. Tip-in windows are provided. Fresh air flows through the house, up through the straw loft, and out of the building through the louvres in the gable ends. The straw loft also serves as attic insulation against heat loss in winter and offers protection against summer sun.

# U.M.U. Pole Frame LAYING HOUSE

**POLE** construction provides both the foundation and framing for the Utility Multi-Use House. It gives shelter at the lowest dollar cost for labor and materials.

The development of butt-treated poles and well planned construction now assures many additional years of useful service for this type of building. Poles are set in the ground. No leveling or excavating is required. No foundation or concrete work is needed unless you choose to have other than a natural earth or clay-filled floor. This simple structure gives a low-cost shell which can be insulated or finished to suit personal needs.

As a laying house its 20'x20' square size is the accepted standard. This shape tends to reduce drafts and loss of heat. It is easier to work in. It provides for efficient placement of roosts and nests. Windows are adequate and properly positioned for correct lighting of entire floor area.

# Shed Roof LAYING HOUSE

DESIGNED for the flock owner who prefers a narrow house over the square type, this building includes features of sturdy, weathertight construction, sanitation, and convenience. The poultry room is  $16' \times 20'$ . Along the front of the house are three windows which together with windows under the roosts provide ample light for entire floor area. Two poultry doors are specified. The feed room is  $16' \times 10'$ . It has an outside door, and a large window gives plenty of light. An inside door connects the feed and poultry rooms. This feed room saves much labor in caring for the flock. It is large enough for storage of feed, litter, or equipment.

The blueprints show how the floor can be rat-proofed with a 12" galvanized rat guard between joists and floor over each girder. The floor is tight, easy to clean. Insulation is optional; however the blueprints show how to insulate roof, sides and floor with standard thick Balsam-Wool and complete sealing with endmatched flooring. Wood shingles are specified. They are more durable, and more weather resistant than other materials.

# Two Story LAYING HOUSE

FOR THE larger poultry flock, the two-story house has many advantages both in economy of construction, because one roof covers double the floor area, and in ease of handling and working convenience. It is compact. It saves steps and conserves time. Designed to take advantage of all the economies offered by standard lengths and sizes of lumber and other standard building items, this house meets all requirements for sanitary, comfortable and profitable shelter.

Each floor has two 20'x20' poultry rooms, separated by 20'x20' units used as feed storage and work rooms. Each flock can be isolated in its own quarters, giving close control over the condition and health of the birds. Plenty of light is provided over the entire floor area so that hens can scratch litter from all sides and keep it more evenly distributed. Each poultry room has on its south side three—two-light windows; on the north side two—three-light windows which are located under roosts. In colder climates these should have storm sash.

Ventilation is obtained by double hung windows with draft shields. Since an operation of this size requires close supervision by attendant, proper ventilation is easily maintained. Insulation is optional. The blueprints show standard thick Balsam-Wool sealed with end-matched flooring on the walls. Tight economical wood floors of end-matched flooring are specified.



No. 1450

16'x30' With 10 Foot Feed Room—Capacity 80-100 Birds

Extensible in 20 ft. units with the feed room between two 16'x20' laying rooms



Ventilation An effective system of ventilation is provided by the combination of air chamber and double hung windows with draft shields. The air chamber is built in the front part of the house. There are openings into the chamber from the poultry room. There are three ventilating louvres 21''x24''. Air moves up into the air chamber and out through the louvres, assuring ventilation without draft.



No. 1470

SIZE 20'x60' CAPACITY 400-550 BIRDS

EXTENSIBLE IN 20' UNITS



PORTABLE POULTRY RANGE SHELTERS

These shelters are light in weight for easy moving, yet strongly braced to resist strains. The studs are fastened to both skids and floor joists, and the rafters are fastened to sides of studs.



Canvas curtains or burlap sacks, placed over the shelter, provide warmth in early spring and

S-1404

WATER STAND

2' Square; 18" High The platform from which birds drink is placed so that they cannot foul the water.

## WEYERHAEUSER 4-SQUARE POULTRY EQUIPMENT -



#### S-1403 SANITARY POULTRY ROOST

Size: 4'-6"x10

This low cost roost is hinged to the wall. It permits tilting the dropping board for quick cleaning, disinfecting or painting. The board can be unhooked and taken outdoors for sunning.



#### **COMBINATION ROOST** AND NEST

6' Long; 5' Wide

This portable combination of roosts and nests can be used in any spare space or fitted into a permanent house. Droppings cannot reach nests. The roost is movable to make easy the cleaning of dropping board.



S-1415

#### GRIT AND SHELL FEEDER

Size: Length 2'; Height 15"; Inside Width 7½"

High egg production results from ready supplies of feed, minerals, and grit. These low cost self-feeders are simply designed and easy to build. Equipped with roofs, they are fine for outdoor use.



#### **COMBINATION BROODY** AND BROILER COOP

The purpose of cooping a broody hen is to lower the body temperature and shorten the broody period. This coop has open sides and bottom to admit plenty of air.



Size: 6' Long; 2' Wide; 18" High

This feeder keeps plenty of feed before the birds. Frequent refilling is avoided. The feeder is designed to prevent waste and provide ample headroom for the birds. The revolving stick at top prevents roosting over the trough.



#### S-1401 SELF CLEANING **NESTS**

These nests are hinged to wall at the top. To clean them, simply raise nests from bottom and nestings drop to floor.



S-1417 PELLET FEEDER

4' Long; 2' Wide; 3' High This feeder is simple to make using lumber or ordi-

nary flooring.



S-1409 SHELL FEEDER 3' High; 2' Wide

## BARNS

\*This illustrates the two 10-foot end-units and the 10-foot intermediate unit. With these three units a barn of any length can be obtained by simply including the required number of intermediate

### In Planning A Barn . . . There Are Two Things to Keep in Mind

IN discussing these barns, the floor plans have been separated from the pictures of the barns because frequently a good, sound barn-structure is quickly passed over simply because the one suggested floor arrangement shown does not meet personal needs or wants

needs or wants.

The popular designs shown on the following pages offer a wide style selection. Each style will fit many floor arrangements. The dairy barns are a good example. Plans and material lists have been prepared for gambrel roof and arch roof barns in widths of 32 feet, 34 feet, and 36 feet. You simply select the style you want and the width that best fits the floor arrangement you need. These barns can be made longer or shorter to fit individual requirements.\*

# TO MEET TODAY'S NEEDS AND TOMORROW'S REQUIREMENTS



Floor plans are usually determined by the use for which the barn is intended, personal needs and preferences. The number of animals, location of stalls, pens, mangers, alleys, driveways, feed storage, doors, equipment rooms and other facilities for labor savings and convenience should govern width, length, and whether the barn is to be one or two story.

- 1. Planning the floor or interior arrangement.
- 2. Selecting the Barn Style.

In selecting a barn, first decide on the interior arrangement. The nature of the operation will determine whether you need a wide feeder type barn or a narrower dairy type. The number of animals and the amount of feed and equipment to be housed will determine the length of the building.

Then select the barn structure to fit the plan arrangement. There is a wide choice of roof styles: arched roof, gambrel roof, or gable roof. The amount you wish to spend helps to decide the type of construction—glued laminated arch framing, stud and joist framing, or the less expensive pole construction.



The barn shell includes the foundation, floor, walls, roof, doors, windows. The shell encloses the floor plan. After it is erected, it can be divided inside and equipped according to the plan.

# A SIZE AND TYPE FOR EVERY FARM AND POCKETBOOK

BECAUSE barns have such an important influence on the quantity and quality of livestock products, animal health, operating costs, work hours, and cash farm income, their relation to the farm enterprise has been the subject of special study and research. Consequently, the design and construction of barns have changed. Along with the development of modern farm equipment and farming methods, have come important improvements in barn plans and in barn construction. On the following pages you will find many interesting barn improvements.

#### DESIGNING BARNS THAT PRODUCE PROFITS

- The barn has many jobs to do.
- It must provide the proper conditions for livestock—and particularly for the dairy herd, because comfortable, sanitary housing goes hand in hand with high milk production.
- It must store feed and protect it from rodents and spoilage.
- It must save time and make chores easier.
- It must fit into the farm program as to size and cost.
- It must be strongly built to withstand wind and weather.
- It should be planned to serve many uses and possible future changes in the farm program.

The Weyerhaeuser 4-SQUARE barn designs meet all these requirements and meet them economically. They provide proper conditions for the dairy herd or other livestock—warmth, sanitation, good light, ventilation. They are flexible and have high use value. They are engineered for durability and long, useful life. There is a size and type to meet every need and pocketbook.

#### FITTING THE BARN TO THE FARM . . . with an Eye to Future Needs

The selection of a successful, economical barn begins with your farm and your needs. You alone know the size of barn you need—the number of animals you must house, whether you want a special purpose dairy barn, a general purpose barn, or a combination of both. You know what you want in the arrangement of stalls, the capacity and placement of feed storage, a one-story barn, or a two-story barn with hay storage overhead.

Planning for the future is well illustrated in the matter of hay storage. New developments in machinery for the harvesting and handling of hay crops may have a bearing on your future needs. You may continue to store loose hay in the mow—or you may want to store it as chopped or baled hay.

You can provide for any method of hay storage by following the engineers' specifications for the framing as shown on the blueprints. The plans in this Service show the loads of loose, baled, and chopped hay that may be safely stored.

#### Weyerhaeuser 4-SQUARE Engineered Barn Structures

Much better barns are available today because of improvements in lumber, and methods of joining and bracing lumber. One example is modern structural glues which produce the strong, rigid laminated wood arches and rafters.

Engineers have designed the basic barn structure — the strong foundation with solid footings, proper anchorage of sill plate to foundation, the secure joining of frame to sill plate, and roof rafters to frame,

with wood shingles specified for durable wind and weather resistant roofs.

Modern engineering, combined with improved lumber, makes these buildings stronger and more wind-resistant. Snow loads, wind loads, and loads of stored hay or feed have been carefully calculated, and the proper construction and bracing have been provided.

#### Fitting the Barn to the Climate

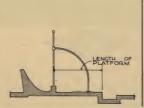
Tight construction is a feature of these barns. And for colder climates, approved methods of insulation are indicated. Several systems of ventilation can be used. With a correctly engineered barn structure—with a sound, economical building with which to start, you can then arrange the inside to suit your needs and wants.

## DAIRY BARNS...SUGGESTED FLOOR PLANS

And Interior Arrangements

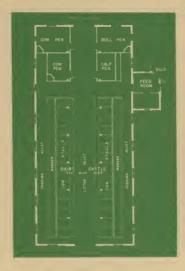
HERE are shown a few of the many floor plans that can be housed by either a one or two story barn-structure, with a choice of gable, gambrel, or arched roof, and in standard stud or joist construction, glued laminated wood arch, or pole construction.

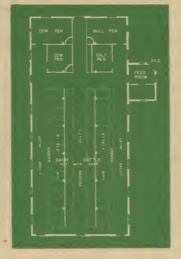
The popular dairy barn width is 34', however, widths of 32' and 36' can also be obtained. Barn lengths can be varied in 10' units to obtain any length desired.

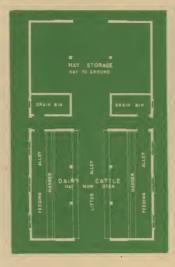


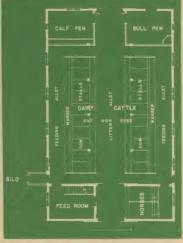
#### DIMENSIONS FOR STANDARD STALL DESIGN

BREED	Stall Length	Stall Width
Holstein, Large	5'8"	4'0"
Holstein, Small	4'10"	3'6"
Ayrshire, Large	5'6"	3'8"
Ayrshire, Small	4'6"	3'6"
Guernsey, Large	5'4"	3'6"
Guernsey, Small	4'6"	3'4"
Jersey, Large	5'0"	3'6"
Jersey, Small	4'4"	3'4"









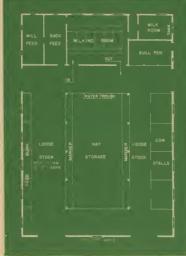
## GENERAL PURPOSE... FEEDING-LOAFING BARNS

And Interior Arrangements

THE general purpose barn can be arranged to serve in many ways. It serves many purposes at low dollar cost. It provides an interior that can be arranged to suit the general or special needs of the owner, not only for today's use but also for tomorrow's requirements.

For one example, its spacious interior can be partitioned to provide space for animal housing, for the storage of feed, for machinery, and for a workshop, or, it can be arranged to care for a number of steers, a few dairy cows, some sheep, horses, and in addition, provide room for machinery, a calf pen, a good size corn crib, many tons of loose hay, and a workshop.

Still another arrangement is to build a portion of it into a dairy barn. Boxing in the hay mow, providing stanchions, feed and litter alleys and mangers are the only changes necessary. The general purpose barn makes a fine loafing barn, and when used in combination with the 4-SQUARE





18'x32' milking barn, makes possible a time and labor saving arrangement in the care of the dairy

The general purpose barn is a structure that should never become out of date because, unlike a specialized building, its interior can be easily altered and economically rearranged to meet new needs. For regardless of the changes in farm programs, this type of barn is always ready to provide good housing to meet the requirements of that program.

The general purpose barn is often called the "individual's barn" because each individual farmer can work his own ideas into it without in any way af-fecting its main and essential features and its future usefulness.

Hay Storage is the drop-center type, reaching clear to the floor, down the center of the building. This central storage can be surrounded by a feeder fence which makes the barn ideal for feeding livestock. This saves labor, as the stock feeds itself.

The Side Aisles provide plenty of room for live-stock housing as well as for the construction of bins, cribs, equipment room, or workshop. A loft floor built above the side aisles provides additional storage space. Wide doors permit free movement of machinery and equip. machinery and equip-





The general purpose barn can serve many uses every day in the year. That means a building investment that returns maximum profits.

# Arched Roof DAIRY BARN

GLUED LAMINATED WOOD ARCH CONSTRUCTION

THE 34'x60' Arched-roof dairy barn is one of the popular sizes and designs in dairy sections. For 32' or 36' widths, blue prints and material lists have also been prepared. Lengths are variable in units of 10 feet.

The framing members are glued laminated wood arches. They run from foundation to roof ridge. There are no joints between the sidewalls and roof. The hay mow is practically brace free, giving large capacity. The arches are held securely at sill and ridge by metal anchors and ridge plates and bolts. The ends of the barn are strongly reenforced by jack braces to withstand heavy loads.

This barn is designed for storage of loose, chopped, or baled hay. Correct load carrying members are specified for each type of storage.

Stables are standard height of 8 feet. Insulation of sidewall is standard thickness Balsam-Wool. Windows tip in with draft shields. Windows and doors may be located to suit individual requirements.

# Gambrel Roof DAIRY BARN

STUD AND JOIST CONSTRUCTION

HERE the plan employs the gambrel roof. This basic design can be built in 32', 34', or 36' widths—and in any lengths when planned in 10' units.

Solid joining and strong bracing are construction features of this carefully planned dairy barn. Special precautions have been taken to make the roof strong and wind-resistant. Wherever possible, members have been lapped over one another and nailed, bolted, or glued, rather than butting and toe nailing. In certain places, metal straps have been used as reenforcing ties. The barn ends are reenforced by end-bracing, bolted to girders and studs.

The hay mow is large. The self-supporting trussed rafters give more vsable space. The mow will store loose, chopped, or baled hay. Correct load carrying members are specified for each type of storage.

Capacities: Loose hay—1 ton per linear foot; chopped or baled hay—1½ to 2 tons, depending on mow floor framing members.

Stables are the standard 8' height. Roof is of wood shingles. Windows are tip-in type with draft shield. Doors and windows may be located to suit individual requirements.



No. 1001-b

SIZE: 34'x60'

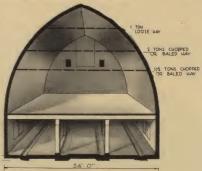
No. 1001-a

SIZE: 32'x60'

No. 1001-c

SIZE: 36'x60'

Length can be varied in 10' units



Hay capacities in tons per linear foot. See blueprints for joist and girder sizes.



No. 1002-b

SIZE: 34'x60'

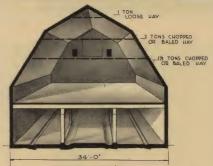
No. 1002-a

SIZE: 32'x60'

No. 1002-c

SIZE: 36'x60'

Length can be varied in 10' units



Hay capacities in tons per linear foot.

See blueprints for joist and girder sizes.





# DAIRY BARNS WITH MOW FLOOR DRIVE

## Arched Roof

GLUED LAMINATED WOOD ARCH CONSTRUCTION

No. 1011-b-2 Size: 34'x90'

# Gambrel Roof

STUD AND JOIST CONSTRUCTION

No. 1012-b-2 Size: 34'x90'

Length can be varied in 10' Units

(If horizontal siding is preferred, see blueprints for Plans No. 1011-b-1 and No. 1012-b-1.





THE mow floor drive-in barn is preferred by some dairymen. In most respects, the construction of both these arched roof and gambrel roof barns with mow floor drives is like that of Plans No. 1001-b and No. 1002-b shown elsewhere in this book.

The mow-door framing in these barns has been given much study. The door is braced to form a very strong, rigid structural element. All loads are carried on the header down the posts to triple joists and thus transmitted to the main girder and wall. A trussed buttress absorbs the outward thrust of arch or frame.

Storage Capacity of both types of barns: loose hay—1½ tons per linear foot; chopped or baled hay—2½ to 3½ tons per linear foot, depending on the selection of mow floor members. Details are clearly shown on the blueprints.

A study of the blueprints will prove interesting as to details of secure joining, strong bracing, and framing of the entire structure.

### MILKING BARN

THIS low-cost milking barn, with six stanchions, makes it possible to take care of milking requirements regardless of changes in the size of the herd.

The 18'x32' floor plan can handle 6 cows at once. The arrangement of feed alleys, stanchions, gutter and litter alleys works smoothly. At one end there is space for two feed storage rooms, with a scoop door opening from the bulk feed room direct to the sack feed room.

Cows come in one door to the stanchions and after milking, leave by a second door. A door at the end of the barn leads to the milk house. Feed room door is in direct line with the manger. Bulk feed can be delivered from wagon box through a smaller feed door opening. There are three windows on each side of the barn and two at the end of the milking section. Insulation is standard Balsam-Wool.

# 34 Foot One Story DAIRY BARN

THIS one-story dairy barn meets the needs of the dairy farmer who is located where cows are pastured the greater part of the year, or where feed is stored in a separate structure. With its standard 34' width, many floor arrangements are possible. Additional hay storage can be provided by an extension on one end of the barn.

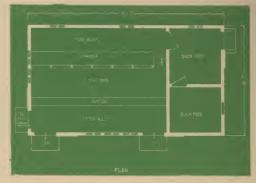
A ladder leads to the loft which has a  $24^{\prime\prime} \times 30^{\prime\prime}$  scuttle. Loft doors are in each gable end.

Windows are tip-in type equipped with draft shields. Ventilating ducts can be added. Ceiling can be insulated with Balsam-Wool. This one-story dairy barn is carefully engineered for sturdy, economical construction.



No. 1003

Size: 18'x32'





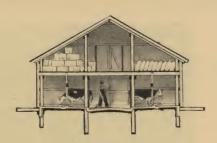
No. 1020-b

Size: 34'x30'

Length can be varied in 10' Units







No. 1021-b Size: 34'x60'

Length can be varied in 10' Units





No. 1130 Size: 20'x50'

Length can be varied in 10' Units

# One Story Pole Frame DAIRY BARN

**POLE** construction is used here to obtain a onestory dairy barn which provides at lowest building cost a very practical structure which can be converted to other uses, if desired.

With a standard 34' dairy barn width, and a variable length, any one of a number of floor plans can be used. The loft space over the dairy section furnishes considerable storage for baled hay or bedding.

Plans suggest how this building can be built in two sections—one for the dairy herd, with stanchions, concrete floor and necessary alleys, gutters, mangers, etc. The other section is used for hay storage. Because the heavy hay load is carried on the ground, the cost of heavy mow framing is saved. With pole framing, no bracing is required. Poles set five feet in the ground give strong anchorage to the structure.

# Open Front LIVESTOCK SHED

THIS sturdy, simply constructed shed with comparatively few posts, provides shelter at low dollar cost. It is designed for tight, weatherproof construction so as to give dry, protected quarters. The roof is pitched on the open side to reduce the drifting of snow.

Feed racks, bunks, and watering troughs can be installed, and calf or lambing pens built. There is plenty of head-room for working inside this shed. The open side is high enough so that bedding can be pitched in from a hayrack.

Other uses can be made of this structure, such as storage for farm machinery. The 10' width between posts makes it easy to move machinery in and out.

The sectional illustration at the left shows interior arrangement.

# Triple Arch FEEDER BARN

#### Glued Laminated Wood Arches

THIS modern wind resistant barn can be adapted to many uses. It is an ideal feeding and loafing barn, a good general purpose barn or a loafing barn for dairy cattle. The use of glued laminated wood arches saves considerable building time. Set two feet on center, the arches are firmly anchored to sill plates by angle irons and joined at the ridge by metal plates.

Of the "drop-center" type, hay is stored in the 26' center section from ground to roof. Capacity is about one ton per linear foot. Ground storage of hay saves money because it eliminates heavy loft construction. The feeder rack is made by fastening 2"x6" rails to the arches of the hay storage section, giving animals direct access to the hay in the center of the barn. This method of feeding saves labor and saves feed.

The side aisles are 16' wide with feed mangers built along the outside walls. Feed storage rooms can be constructed at one end of the barn.



With Hopper Feed

THINK of this barn as a giant self-feeder, holding 1½ tons of chopped or baled hay per linear foot, with loafing space for livestock, and additional room for feed storage and feed bunks—all this under one roof—all at a low original cost. The glued laminated wood arch frame forms a strong, wind resisting structure with the added advantage of a post free mow.

Chopped hay can be blown through the mow door into the storage section. A hopper arrangement holding several days' supply, running through the center of the building, permits the chopped hay to feed to the mangers. Hay is before the stock at all times, thus assuring continuous feeding. For feeding baled hay, a specially designed feed rack is shown on the plans.

The space between manger and outside walls is 17 feet, which provides room for stock to feed at both manger and side-wall feed bunks at the same time.



No. 1103

Size: 58'x60'

Height: 22'

Length can be varied in 10' Units





No. 1105

Size: 40'x60'

Height: 22'-3"

Length can be varied in 10' Units







No. 1104

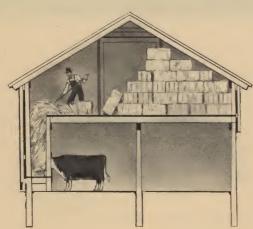
Size: 50'x60'

Height: 26'

reight. 20

Length can be varied in 10' Units





No. 1131

Size: 25'x60'

Length can be varied in 10' Units

# Arched Roof FEEDER BARN

... Half Mows

**THIS** barn combines the advantage of ground storage of hay with clear half mow storage. Storage capacity—over one ton per linear foot.

Loafing aisles are 16' wide with mow above. Posts support the loft. Rails fastened horizontally on the posts form a feeding rack. The design of the feed rack makes it a hay saver, since cattle do not drop the hay on the loafing aisles. Feed bunks are built along the outside walls. This barn structure will accommodate a variety of floor plans.

The glued laminated arches are anchored to the sill by metal angle irons and bolts, while at the ridge, the arches are joined by bolted ridge connectors.

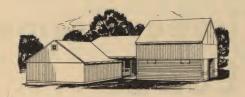
# Pole Frame Loft Storage LIVESTOCK ...SHED

THE loft storage space in this livestock shed saves a great deal of time and work. It eliminates the repeated haulage of feed and bedding to the feeding lot. It is low-cost storage. The only additional cost over a shed with no loft, is the 3'-8" sidewall and mow floor.

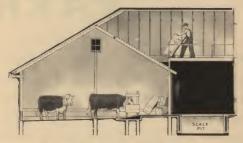
The storage space has hay doors at each end, and at the front and rear there are doors large enough to receive baled hay. Hay is dropped from the loft into self-feeder bunks along the

north wall. Storage capacity is 3/4 ton of baled hay per linear foot.

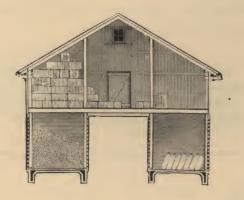
Pole construction is used to obtain rigidity at low cost. Poles are the frame and foundation. The building can be erected quickly and economically.



SIDE ELEVATION



LIVESTOCK SHED



CROSS SECTION THROUGH FEED STORAGE BUILDING



No. 1132

FEED STORAGE . . . . Size: 30'x30' LIVESTOCK SHED . . . . Size: 28'x70'

# T-Shape LIVESTOCK and STORAGE SHED ... Pole Frame

THIS compact, efficient structure consists of a onestory loafing shed connected by a covered runway to a two-story feed storage building.

The feed storage building is 30'x30', with an 11' driveway down the center. This arrangement permits the construction of cribs or storage rooms on both sides of the drive. If desired, the crib space can be sealed for small grain, or finished for office or work room. Feed is carted from the driveway, over the covered scale platform to the feed bunks in the livestock shed.

The loft of the storage building is designed to support baled hay. The hay is moved along an overhead covered runway and dropped through an opening to the concrete feed walk. All feeding is done from this walk, eliminating working in the pens. The hay is distributed to feed bunks. These bunks are designed to save feed.

The covered scale, with an 18'x8' platform, is located between the two buildings. It is handy for checking weights of stock, hay, feeds or produce.

#### POLE FRAME CONSTRUCTION

Both the feed storage and the livestock building are of pole construction in which the poles serve as foundation and frame. The remarkable rigidity of properly engineered pole construction makes possible economies in materials and labor costs. Cross bracing and side bracing are not needed. Additional savings are gained through the use of exact lengths and sizes of lumber.





## No. 1101

Size: 54/x60' Length can be varied in 12' Units





## No. 1102

Size: 54'x60' Length can be varied in 10' Units

# Timber Frame FEEDER.... BARN

Plan No. 1101, the 4-SQUARE Timber Frame Feeder Barn, is of standard timber frame construction with concrete foundation. It is engineered for great strength, durability, and long life. Specification of ready-to-use lumber in standard sizes reduces building time and material waste. See blue-prints for construction details.

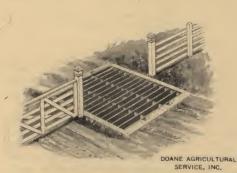
THESE two "drop-center" barns, while identical in size and having wide adaptability for many uses, are of different types of construction.

# U. M. U. Pole ... Frame FEEDER.... ... BARN

Plan No. 1102, the 4-SQUARE Utility Multi-Use barn is of pole construction. Long-life, properly treated poles of cedar, form the frame and foundation. With these poles set firmly in the ground, the barn is exceptionally wind-resistant. There are no excavations for footings or foundations, no concrete, no sills, no cross or side bracing. Ground leveling is unnecessary as uniformity is gained and the roof made level by girts nailed across the poles.

# WEYERHAEUSER 4 SQUARE

### BARN EQUIPMENT\_



CATTLE GUARD S-1110

Length 8'; Width 12'

This guard saves the farmer's time in getting off and on tractors or trucks to open and close gates. It is wide enough and strong enough to permit tractor, truck, or combine to drive through



HAY FEEDING RACK FOR SHEEP

8' Long; 3' High; 2' Wide The sheep feed without dragging the hay out on the ground. For feeding grain, a tight wood bottom can be added.



#### HAY AND GRAIN S-1505 RACK FOR SHEEP

8' Long; 3' High; 2' Wide This sturdy, economical wood rack is spe-cially designed for feeding hay, grain, and ensilage separately—or all three at one time.

FOR SHEEP

S-1501

FEEDING TROUGH



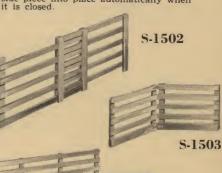
#### FEEDING RACK S-1101

This fence-like rack saves feed and saves labor. The cattle eat with their heads through the rail openings. This prevents spreading the feed on the ground.



#### **CATTLE STANCHION S-1102**

This wood stanchion opens and closes easily. A latch at the top locks the side piece into place automatically when it is closed.



S-1503

#### PEN PANELS AND HURDLES

This type of extension hurdle is valuable cround a sheep farm for shutting off a lane or closing a doorway without shutting out air and light. It can be used for moving sheep about the yard or for closing off a farm gate.





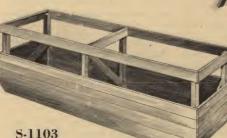
Type 4



MILKING STOOLS S-1105

#### S-1107 BARN WALL FEED BUNK

This bunk is for the inside wall of the barn. The plan provides for 12 foot bunk sections, supported on brackets.



FEEDING BUNK FOR CATTLE

Size: 16' Long; 4' Wide; 4'- $71/_2''$  High This strong bunk, mounted on skids, is easy to move, yet hard to tip over. The stock can feed from the ends as well as the sides.



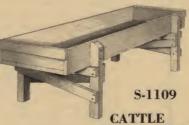
10' Long; 4'-31/2" Wide; 2'-6" High

This well-braced grain bunk will "stay put" even with the front quarters of the cattle in the box. While it's planned to take abuse, two men can move it easily.



16' Long; 2'-6" Wide; 2'-9" High
This trough is hard to tip. The guard rail across
the top keeps the sheep out of the trough.

Capacity—75 Gallons
8' Long; 1'-9" Wide; 2' High
The sides of this trough are sloped inward toward the bottom. This keeps the ends tight.
A power saw at the lumber yard can quickly make the necessary cuts.



FEED BUNK

This strong bunk is  $10^{\circ}$  long and  $3^{\circ}$ - $4\frac{1}{2}^{\prime\prime}$  wide. The box itself is  $2^{\circ}$ - $6^{\prime\prime}$  wide inside. This narrow width permits cattle to feed from one side only and still clean the entire box.

## WEYERHAEUSER

4-SQUARE

HOG HOUSES



ARE DESIGNED TO PROMOTE SANITATION ... MAKE IT EASIER TO PRODUCE MORE PORK

#### **PROFITS**

#### COME FROM HEALTHY HOGS

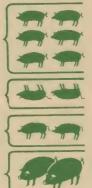


HOGS are one of the most profitable animals on the farm. They quickly turn feed into meat. They respond most favorably to good care and cleanliness.

It is easier to give good care and to provide sanitation with properly designed and well constructed houses and equipment.

#### SANITATION PAYS

It is a generally accepted fact that on the average—"one-third of the pigs farrowed die before they are weaned and another third are stunted and unprofitable, leaving only a third that are profitably grown to maturity. It has been proved that if pigs are raised from healthy sows, in clean pens and on clean ground, the damage from worms and necro can be prevented. Farmers who practice this system of raising pigs find it simple, practical, and effective. They report raising 20% to 30% more pigs from the same number of sows. They also raise thriftier and more uniform pigs."



## RAISE 2 MORE PIGS PER LITTER WITH SANITATION SYSTEM

One authority on the subject of successful hog raising writes: "Raise more pigs per sow. Only healthy pigs make a profit. Pigs are born free from disease and parasites—and sanitary methods are necessary to keep them that way. Movable colony and individual hog houses are helpful in solving the sanitation problem."

YOU'LL find among the hog houses shown in the Weyerhaeuser 4-SQUARE Farm Building Service a size and type and cost to meet your needs. You'll find these buildings will safeguard animal health and assure comfort. They are convenient to work with and will save labor.

You'll find them engineered for economy, long life, and durability.

#### PORTABLE AND COLONY HOUSING

Many hog raisers prefer portable houses which can be moved to clean ground for farrowing—and moved often during the growing season. The portable house is associated with the Clean Range Sanitary System and has gained wide popularity.

Those who prefer the permanently located colony house use it in two ways. In one, they farrow in the colony house and later move the sow and her litter to clean pasture where range shelters are provided. In the other, they remove the sows at weaning time and confine the pigs to the central house. If the colony house is used, sanitation is best effected by surrounding the house with an easily cleaned concrete feeding and exercise platform, tightly fenced.

#### **BUILDINGS DESIGNED FOR HOGS**

The housing requirements for hogs are provided for in every design of the 4-SQUARE Farm Building Service. Baby pigs need warmth, dryness, sunlight, ventilation. Accordingly these houses are all designed for tight, weatherproof construction. To preserve animal heat, the interior space in the large houses is reduced without sacrifice of head room or floor area. Ample light is provided, yet windows are kept at a minimum, for large areas of glass cause heat losses. Good ventilation is provided to keep the air dry and fresh.

#### FLOORS OPTIONAL

Opinions differ as to the advisability of having a floor in a portable hog house. It has been pointed out that floors are not desirable from a sanitary standpoint since the principle behind the use of the portable house is to move it often so as to take advantage of clean ground. Accordingly, carrying an old floor along may mean simply carrying the contamination.

However, there are instances where soil drainage and ground conditions are unsuitable and where floors are needed. With these cases in mind, sectional floor panels small enough to be easily removed and cleaned have been developed for more recently designed houses.

Safety features such as pig rail guards or sloping roofs, low door sills, and even non-slipping floors are included. Pens are the right size so the sow can make a good even bed. Pen partitions, gates, pig rails, and floor panels in most designs are removable.

#### DESIGNED FOR CONVENIENCE

A farmer has two things to do with a building. He has to pay for it—and he has to work with it. With this in view, these plans were developed to save money and shorten farm chores.

Buildings must pay for themselves. And since every farmer must decide for himself what type of hog house he can afford, he'll find a type to meet his needs among these plans.

These houses are designed as tools for the most efficient protection and production of pork. They are planned so that the attendant can quickly and conveniently do all the necessary work. Since cleaning of pens and houses is most important, special consideration is given to quick and easy access. The size and placement of the alleyways, doors, and windows are planned for utmost value. And finally, the general design and appearance of these structures make them valuable and eye-pleasing assets to the farmstead.

#### PLANNING FOR OTHER USES

Farmers who build these days are giving more consideration to buildings that can serve more than one use. As you read the descriptions of these Weyerhaeuser 4-SQUARE Hog Houses you see how all of the more recently developed structures can serve as housing for other animals. When cash incomes are small it is necessary to select multi-use structures that can work the year round. Well-engineered, soundly-constructed portable buildings on skids always have a high resale value, can be financed as chattels, and if owned by tenant farmers, can be moved from farm to farm. Built of wood, these buildings offer greatest values.

## Two-Section HOG HOUSES OFFER THE COMBINED FEATURES OF CENTRAL AND PORTABLE HOUSING

THE Two-Section hog house has won wide popularity among hog raisers because it has proved to be a practical, convenient structure of many uses. It saves labor in care and management. As a portable house, it helps to maintain sanitation on clean range for growing pigs. As a central house, it enables the operator to care for several sows and litters. In the spring the house can be separated and used for a variety of needs.

Many farmers prefer the two-section house over smaller individual houses. It is more convenient. During farrowing the operator can be inside the house and under cover, out of snow and weather. The house can be artificially heated. There is plenty of room above the pens for storage of feed, straw or equipment.

The two-section hog house is offered in two sizes and two types of construction, each equipped with ample feeding aisles.

The calendar of uses shows the many ways in which this building can be used-how it greatly reduces housing costs, how it saves labor, and reduces pig losses.



- · A building that pays its way
- Portability—sanitation plus the labor-saving facilities of a central farrowing house
- Less outside wall exposed to weather as compared to single unit houses, making warm quarters for winter farrowing
- Cool, comfortable quarters for summer farrowing
- Place for feed, buckets, troughs in each
- Room to work in house without being in pens with sows
- Replaceable skid shoe
- Provides summer shade
- Year 'round shelter
- One half to one third as many houses to work with and move as single unit types
- Place for stove without being in pens with sows
- Straw loft if desired
- May be used for calves, sheep, range shelters for poultry
- Movable through a 10 foot gate

#### CALENDAR OF YEAR-ROUND USE

#### **JANUARY**

Usually in January the sows have been bred but are not yet ready to farrow. The two sections of the hog house placed together make a winter shelter. The pen sections are removed and gates raised to give sows free run. About 15 sows can be housed in a 4-pen house, and from 20 to 25 in a 6-pen house.

Just Before Farrowing

In February or March, just before farrowing, the two sections are scrubbed and moved to clean, well drained ground, with house ridge running east and west. One sow is put in each pen. In extremely cold weather, two lanterns can be used to pro-vide sufficient heat.

A generous feeding alley permits working with sows and pigs without going into the pens. Part of alley can be used as an emergency pen, or a self-feeder for pigs can be put in alleyway, and panels raised so only the pigs can get to feeder. Note space over pens which can be used for storage or straw loft.

#### APRIL

When weather moderates, the houses are separated. The north half standing open to the south, and the other half lined up with it and also facing south so as to get the benefit of sunshine for sanitation and warmth.

At Weaning Time

At weaning time pigs are left with one section, and sows are moved with the other section. From weaning to marketing, the houses are moved periodically to take advantage of fresh, clean ground to reduce disease and losses, and to spread manure. By this time the weather will be warm enough so that the sections may be faced to the north to provide more shade.







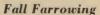






#### In Hot Weather

The 2 sections are placed facing each other about 10 feet apart. Planks, poles, or the movable floor panels, with straw placed over them are laid across from ridge to ridge. The rear skids are blocked up to permit breezes to blow through. This provides shade-so essential for rapid summer gains.



For late summer or fall farrowing the houses are thoroughly cleaned, moved to new ground, faced north, and rear skid blocked up. This gives the advantage of shade and breeze and makes comfortable quarters for hot weather farrowing.

#### SEPT.-OCT.

When fall advances, the houses are again faced south so the sun can warm them.

#### NOV.-DEC.

As the weather grows colder the sections are brought back together again, forming a warm, comfortable house giving sows and pigs free run. This completes a cycle of use

The hog raiser using the 2-litter system will find the Two-Section Hog Houses working for him 12 months of every year. This reduces unit costs.

#### Other Uses Make this a True Utility Structure

There are many other uses for this eco-nomical, practical structure. When the units are placed at right angles, they serve as a shelter for sheep and as lambing pens. They can do duty as range shelters for poultry and turkeys, or a feeding place for calves.



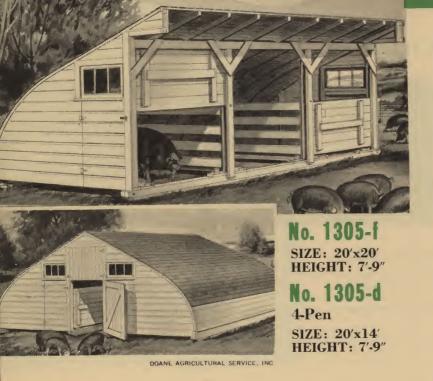












## 6-PEN U. M. U. Arched Roof Two Section HOG HOUSE

GLUED LAMINATED wood arches are used in these houses. The arches are continuous members running from floor to roof ridge. They make a stronger, more rigid structure, yet one that is light in weight and easily moved—a feature which is very important in houses this size. They are pleasing in style and more wind-resistant. Wood arches come ready for erection, thus saving time and material. Floors are optional-see working drawings.

The houses are formed by placing two sections together. Each section is mounted on skids, is portable, and will pass through a 10' gate. The sections for the 6-pen house are 10'x20'. The sections for the 4-pen house are 10'x14'. All pens are 6'x8'.

Dutch doors open into a 4' alleyway. Hog doors are at each end of each section with adequate 3-light windows over each door. Blueprints show

how roof windows and removable floor panels can be built if they are desired.

Pen partitions are removable. Gates can be raised to make entire area free for running. Pig guard rails are included. Space over pens can be used for straw loft or for storage of feed, bedding, or equipment. The design of this house means less space to be heated, yet there is full head room and floor area. Plans provide for longlife wood shingles, and durable wood drop siding on the ends and side walls to resist damage from rubbing by



SIZE: 18'-10"x16' HEIGHT: 8'

No. 1303-f

6-Pen

SIZE: 18'-10"x20' HEIGHT: 8'

## 4-PEN U.M.U. Two Section HOG HOUSE

THE SECTIONS for the 4-pen house are 9'-5" wide by 16' long, and placed together form a building 18'-10"x16'. For the 6-pen house, sections are 9'-5"x20' and form a house 18'-10"x20'. All pens are at least 6'x8'. Both sections are portable, mounted on skids, and will pass through a 10' gate. Floors are optional.

This building is of standard frame construction and designed with rigid, sturdy bracing to withstand moving from pasture to pasture. The structure is strong and securely tied together. Its eight foot height at ridge gives ample head room for the attendant.

Celloglass windows are indicated at each end of each section. Pig doors are below windows. The man-door opens onto a 2'-10" alleyway. The blueprints show how to build removable floor panels if they are desired.

Other features include replaceable skid wearing shoes, removable pen partitions, gates that can be raised, pig guard rails. Space over pens can be used for storage of feed, bedding, or equipment, or as a straw loft. Wood shingles and drop siding are recommended.

## 3-Pen Arched Roof Vertical Front HOG HOUSE

**DESIGNED** to meet all the requirements for safe and sanitary farrowing, these portable houses also provide for the comfort and convenience of the farmer. Protected from snow and weather, the farmer can work inside these houses. Their 8 foot height gives ample head room. Yet with the arch design, the space to be heated is materially reduced. The pen size is a full 6'x8'. The building cost is reasonable.

Like every portable structure built with glued laminated wood arches, these houses are strong, rigid, yet light in weight for ease in hauling. Factory built arches come ready for erection and save time and material in building.

Features include: Two 4-light windows in the 2-pen house, four in the 3-pen house. The windows are tip-in type, giving plenty of light and ventilation. Each pen has a dutch door. The top half can be opened for the admission of sunlight or for feeding without going into pen. The bottom half serves as a pig door. The sectional floor panels are removable. Pig rail guards are provided. Pen partitions are removable. Skids have replaceable wearing shoes. Durable wood shin-

# 3-Pen Shed Roof HOG HOUSE

THESE HOUSES, combining convenience and economy, are of standard frame construction with special attention given to secure joining and rigid bracing, so important in a portable house. The use of standard lengths and sizes of ready-to-use lumber eliminates needless sawing and fitting and material waste.

The front height gives plenty of head room for the farmer. He can work with the pigs during farrowing without exposing either himself or the young animals to the weather. The rear wall is 3 feet high on the inside, thus reducing the space to be heated.

Features: Tip-in windows provide light and ventilation. Removable floor panels and pen partitions. Skids with replaceable wearing shoes. Pig guard rails. Each pen has a dutch door. The top half can be opened for the admission of sunlight, or for feeding the pigs. The lower half is the pig



No. 1306-b 2-Pen SIZE: 8'x14' HEIGHT: 8'

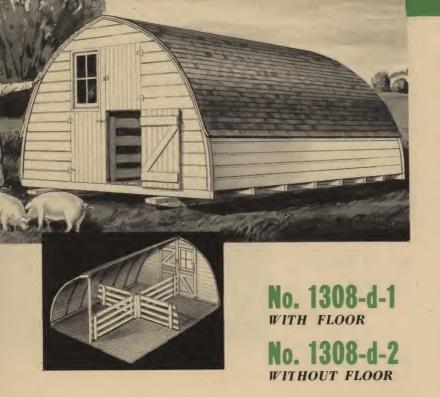
gles and drop siding are specified for long life.

These houses can serve other uses, such as calf barns and lambing pens. They can be converted for poultry, or if lined with end-matched lumber, can be used for the storage of grain.



door. The roof is the correct pitch for the use of durable, stay-put wood shingles.

These portable structures offer additional values for any farm because they can also serve as shelters for poultry, calves, or grain.





# GAMBREL ROOF 4-Pen HOG HOUSE

SIZE: 12'x16' HEIGHT: 9'-6"

No. 1312-d

BOTH OF THE ABOVE BUILDINGS CAN SERVE MANY OTHER USES

# ARCHED ROOF 4-Pen HOG HOUSE

SIZE: 12'x16' HEIGHT: 8'

THE two models shown on this page are receiving much praise from farmers wherever they are used—because they permit the taking care of four sows in one building. The houses illustrated are similar in size, function, and features. Their difference is one of design and construction. Each house has four 6'x8' pens.

There is a dutch door, man-size, at each end of the buildings. Each pen has its pig door. A large 4-light window at each end, tip-in type provides light and ventilation. Other methods of ventilation can be added if desired. Houses are mounted on skids. Partitions and pig rails are removable. The houses are easy to build.

In the arch roof house the glued laminated wood arched rafter is used. It is a continuous framing member from floor to roof. This arch gives a sturdy, wind-resistant structure, that is light in weight for easy hauling yet exceedingly rigid. Floors are optional. Durable wood shingles and drop siding five boards high on the sides are specified. Arch construction provides ample head room, yet there is less space to be heated—a cozy, comfortable, fine appearing structure.

In the Gambrel Roof House shown below. engineers have made use of the glued gusset plate to impart extra rigidity to the building. Frames are made first and reenforced with glued gusset plates which make them rigidly braced, securely tied, complete structural units. The gambrel roof reduces inside space for easy heating. It is a pleasing design which harmonizes with other farm buildings.

## Rigid Frame COLONY HOG HOUSE

**SPECIALLY DESIGNED** for the centralized handling of a large number of brood sows, this structure contains eleven 6'x8' pens, a 5'x8' feed room and a 4' alleyway running the length of the building. There are no obstructing posts.

Light is provided by roof windows,

and ventilation by 12" galvanized iron ventilators. Each pen is equipped with removable pig guard rails. The pen partitions are removable. Concrete ramps lead from each hog pen door. The feed room saves time and labor.

The glued gusset plate used in bracing the roof rafters makes it possible to meet all requirements for heavy wind and snow loads, and yet support the roof without posts. Thus the entire area is post-free, and when partitions are removed, makes an ideal feeding and loafing room. It also permits the owner to make any interior arrangement he desires.

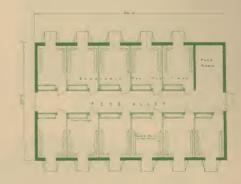
Entrance to the house is by dutch doors at each end, opening onto the alleyway. An outside concrete feeding floor is recommended as a sanitary feeding and exercising platform.



No. 1371

SIZE: 22'x36' HEIGHT: 9'





## A-TYPE 1-Pen HOG HOUSE

**DESIGNED** for low cost, light weight, and ease of entry, this individual A-type Hog House mounted on skids has many features for animal health and working convenience. The sidewall door is of dutch type, running from ridge to floor. The top half can be opened for admission of sunlight. When bottom half is opened, it is easy to get into the house. A hinged pig door is at the front. Shielded air vents provide ventilation without draft and make it safe to close the house during cold or wet weather. Small windows at each end admit light sufficient for pigs to see. Sloping walls of the A-type house form a safe space for little pigs. Crushing is prevented. In cold weather A-type houses are placed close together and straw packed between them.

# Modified A-TYPE 1-Pen HOG HOUSE No. 1314-a SIZE: 7'x7' HEIGHT: 5'

TO DEVELOP an individual hog house that would give complete protection during early farrowing, and still be cool in summer, engineers have placed a hinged door in roof, a pig door in one end, and hinged the entire side wall which, when raised, provides shade.

The sloping walls give maximum protection to baby pigs. The roof of this modified A-type house is low, reducing the space to be heated when the house is closed for farrowing in cold weather. Ventilation is obtained by shielded air vents in gable end. Pen is mounted on skids. The blueprints show how this house can be built in panel sections and delivered to the farm for quick and easy erection.



No. 1302-a SIZE: 7'x7' HEIGHT: 6'-3"



No. 1314-b 2-Pen 7'x14' House



No. 1307-a SIZE: 6'x8' HEIGHT: 6'-6"



No. 1310-a





HEIGHT: Front 4' Rear 3'-6"

No. 1313-a
1-Pen 6'x8'
No. 1313-b
2-Pen 12'x8'
No. 1313-c
3-Pen 18'x8'

## 1-Pen Combination Roof HOG HOUSE

THIS SINGLE pen house is convenient to work with. Access is through a man-size dutch door running the full height of the sloping rear wall. The top half opens to the sun. Pig doors are at one end of the house.

A special feature is the hinged front, which when raised rests on sturdy 2x4 pull-out slides. These slides make the entire frame of the house a wind-resistant support for the raised side. A special catch securely locks side when closed.

This house is cool in hot weather. With the side raised, the pig door and upper half of dutch door open, the house is open to every breeze as well as to the cleansing rays of the sun. Raised panel makes a canopy  $3\frac{1}{2}x8'$  providing shade.

### 1-Pen Gable Roof HOG HOUSE

**THIS PORTABLE** house, mounted on skids, has the feature of a pig door located at the corner. This arrangement provides the sow with better space for making a bed. The young pigs are protected by removable pig rails.

The roof door can be left open for sunlight and coolness. The rear side of the house is hinged and when raised it rests on pull-out slides, thus providing a sturdy sun shade that will not easily be blown off by the wind. This panel is 3'-3"x8' and gives a good shaded area. When side is closed a locking device holds it firmly. In bad weather, good ventilation is gained by shielded vents in gable ends.

### 175 Bu. Arched Roof HOG FEEDER

This new feeder fills a long standing need for a really practical and entirely dependable feeder. With its capacity of 175 bushels, this feeder will take care of about 80 one hundred pound shoats—and when used for feeding protein only, in combination with ear corn feeding, the one feeder will handle 160 pigs.

It is almost impossible to clog up this feeder regardless of the kind of feed. The throat opening and trough width and depth have been planned to take grain, shelled corn, or milled feed smoothly and uniformly without the use of agitators or moving parts and without waste. No adjustments are required when the feed is changed. There are no delicate parts to get out of order. With its glued laminated arched frame construction, this feeder is light in weight for easy moving, yet exceedingly strong.

# Modified HOG HOUSES

The pen size in these houses is 6'x8'. The heights are low. This conserves animal heat and makes for warmer quarters. The operator can reach the pigs by way of a roof door placed on the high side.

Another feature of this design is the location of the hog door. It is at the front corner. This arrangement gives full usable nesting room. The rear walls are hinged, and when raised they rest on 2x4 pull-out slides to form an awning 3'x8' for each pen which provides summer shade. These slides are constructed to form strong wind-resistant supports, which reduce racking and shaking.

With the rear walls raised, and all the doors open, these houses become good summer range shelters. Mounted on skids, these houses are strongly constructed and rigidly braced to withstand frequent moving. The 8' width will pass easily through a standard gate.

WEYERHAEUSER 4-SQUARE HOG EQUIPMENT



Feeding Platform, 10'x16'; Hopper Height, 4' Capacity, 100 Bushels Shelled Corn

When you fill this hopper you know that all the feed will be eaten on the floor—no feed trampled on ground.

One end of the feeder can be used for ear corn, and the other for protein supplement or mill feed, or the entire feeder can be used for mill feed. If desired, mill feed can be put in one end and protein supplement or mineral in the other. By simply removing the feeding trough and increasing the throat 2" the feeder will handle ear corn.



10'x16' Feeding Platform-56 Bushel Capacity This sturdy, portable feeder saves much chore time. Frequent re-fillings are avoided. The corn-tight platform also prevents feed waste.

Guard rails are used on all sides of the feeding platform. These rails are spaced above the platform so that only the cobs can get off the platform. The hogs cannot push the ears under the rails until all the corn is removed. Any corn that falls off the ears while the hog is eating remains on the platform to be

#### S-1311 FEEDING **FLOOR** Size: 10' Wide; This floor is built on skids so that it can be moved quickly to fresh, clean ground. A hog self-feeder may be placed on the platform. The drawings show how the skids, built up of three pieces of 2x4, provide a wearing shoe that is easy to replace

S-1304

S-1302

HOG TROUGH Size: 2'x12'



ELECTRIC

PIG BROODER S-130 1'-0" High; 5'-9" Across the Front; Sides 4'-0" Long

Two chief causes of the loss of baby pigs after farrowing are chilling, or crushing by the sow. This electric pig brooder or hover

saves more pigs per litter. The brooder is easy to make.

30-BUSHEL OPEN TROUGH HOG FEEDER

Trough divider boards prevent hogs from rooting feed out of trough. ing roof protects the trough.



S-1305 ALFALFA FEED RACK FOR

HOGS AND SHEEP Length 6'-0"; Width 3'-0"; Height 3'-4" The slats are spaced so that the hogs can get only a mouthful at a time. This prevents spreading feed all over the ground. The rack will feed 30 to 40 sows or 130 to 150 shoats.



The snug-fitted guard is quickly remov-

able for cleaning. It keeps pigs out of trough and prevents crowding.

#### **30-BUSHEL CLOSED** TROUGH FEEDER

**ADJUSTABLE** PIG AND LAMB

10' Long x 2'-6" High

CREEP

With this feeder you get away from clogging because the sides of the bins are wide at the bottom. That prevents the feed from sticking up on the sides. It has three bins: for shelled corn, mill feed, and minerals. Doors will not stick because they are hinged on a  $\frac{1}{2}$ " rod with  $\frac{3}{4}$ " pipe bushings.



#### **CLOSED TROUGH** HOG FEEDER

Capacity: 100 Bushels
Size: Length 8'; Overall Width 5'
The doors swing freely in all kinds of weather because they are hinged on a ½" rod which passes through 3/4" pipe bushings located in each door and in each of the 2"x2" blocks. This feeder has 16 trough doors-8 on each side.



#### HANGING HOPPER HOG FEEDER

The hopper is a box with open ends, which is suspended by wire, chains, or bolts over the trough. To work feed down, hogs push hopper back and forth. With this hopper, troughs can be used on all four sides. A roof is provided for outside as well as inside use.

# WEYERHAEUSER 4-SQUARE CROP STORAGE BUILDINGS

CRIBS
GRANARIES
SILOS

### A Selection of Types and Capacities for Protecting the Full Value of the Crops

THE HARVESTED CROP represents all the hard work of the growing season—all the costs of seed and labor, machinery and power. Crops are the source of feeding and marketing profits. The United States Department of Agriculture states that as much as 20% of the farmer's corn is often lost through improper storage. Similar losses also are experienced in wheat and soybeans. The proper curing and complete protection of crops call for the careful selection of storage buildings. The United States Department of Agriculture also states:

"It is unwise to attempt to erect any substantial building, particularly large grain storages, without carefully prepared plans. Unless each feature of the construction, arrangement, and equipment is studied, and its relation to other features definitely determined before erection is started, costly mistakes may be made. Errors in design are easily corrected on paper. Changes in the completed or partly finished structure may prove very expensive."

In This Service, the storage buildings are designed to meet all the requirements so carefully defined by the program of complete farm storage. That the granary:

- be a substantial and permanent structure
- hold grain without loss of quantity
- protect grain against conditions that would cause lowering in quality
- afford protection against rats, birds, poultry, insects
- provide reasonable safety from fire and wind
- require forcible breaking, in order to be entered when sealed.

And for cribs, the requirements are:

- that the crib be a substantial structure
- provide adequate ventilation to properly condition the corn
- afford protection against weather and rodents.

#### ENGINEERED STORAGE BUILDINGS

In designing crop storage, whether grain, ear corn, or silage, the engineer is dealing with heavy dead loads on foundations and floors, strong lateral pressures of the stored contents on side walls, and wind and snow loads on the structure itself.

Here is a job that calls for accurate calculations of loads and pressures, and careful design of foundations, walls, bracing, and roof, to develop a building that will do the job.

Every Weyerhaeuser 4-SQUARE storage structure is carefully engineered. The foundations, which are often the cause of building failures, have been given special study and consideration. They are designed for great strength with footings specified for various types of soil.

Walls are planned to be built of framing members selected for strength, and joined and braced for unusual rigidity to withstand side pressures. Durable red cedar shingles give a tight, serviceable roof. In the event fumigation is necessary, Weyerhaeuser 4-SQUARE granaries are designed for tight construction to prevent leakage of fumigant.

Provisions are made for thorough rat-proofing of all structures.

#### BUILD A TIGHT GRANARY FOR FUMIGATION

THE ANNUAL LOSS from insect infestation of grain is staggering. It runs into millions of dollars a year. Protection against insects has been the subject of much study by the U. S. Department of Agriculture and state agricultural colleges. The following material is from government bulletins on the subject.

"Nearly all grain crops except in the extreme North, are usually somewhat infected when ripe for harvest. Delays in getting the crop under cover and into bins where it can be treated, if necessary, offer insects more time to multiply and infest other kernels.

"It pays from an insect-damage standpoint to harvest as soon as possible after the crop is matured and to treat as soon as possible to kill any insects in the crop. It is much more profitable to fumigate early and successfully than to send infested grain to market and get a lower price."

One of the essential requirements of farm grain storage is that the structure be tight—tight enough to permit effective fumigation. Cleanliness is also highly important to the reduction of insect infestation. Granaries should be designed so they are easy to keep clean

There are many state and federal bulletins on insect infestation, and it pays every grower of grain to read them carefully.

# Arched Roof CORN CRIB and GRANARY

FROM its strong foundation to its streamlined, wind-resistant roof, this arched roof grain storage building has been carefully engineered in every detail. The many superior features of this attractive, convenient structure were made possible by the development of the glued laminated wood rafter.

**Foundation and Floor:** The drawing at the left illustrates a choice between a concrete floor and foundation with a built-in shelling trench or a wood floor on concrete piers.

A strong foundation is one of the basic requirements for good grain storage because of the tremendous loads carried. The blueprints contain a table showing the proper placement of piers and the correct size of foundation walls and footings for 5 types of soil.

The wood floor, built on concrete piers, with wood girders and joists, is 34" above ground. At this height the floor is free of ground moisture, thus giving better protection to corn. The 34" between ground and floor gives space for dogs and cats to run and keep rats away. Since a tight floor is not needed for ear corn storage, the wood floor provides desirable ventilation, allowing air to work up through ear corn.

The use of the wood floor provides a stronger structure because the studs are bolted to the floor joists, thus tying the framing members together to better resist the outward thrust of the corn. Strength is important at this point because of the loads of stored contents.

Crib Construction: The cribs are 8' wide, an accepted width for the proper drying of ear corn under most conditions. The detail drawing shows standard beveled cribbing, spaced to permit air movement, used on the sidewalls of cribs, on the inside of the laminated wood rafters, and outside of the grain bin frame. The end walls are braced at each end.

You get Low-cost Storage and a Stronger Building with the Arched Roof Corn Crib and Granary







Gable Roof Capacity: Ear Corn 3584 bu. Small Grain 2790 bu. Gambrel Roof 3387 bu. 2252 bu. Arched Roo: 4416 bu. 2636 bu.

Arched Roof corn crib and granary provides 23.3% more ear corn storage than the Gambrel Roof type, and 18.84% more than the Gable Roof in the same size buildings. This is made possible through the use of the glued laminated wood rafter.

These modern arched factory-built rafters are engineered not only to withstand heavy snow and wind loads, but also the loads of stored grain. They form a storage space that is free from obstructing braces and permit the storage of corn almost to the roof ridge. With the glued laminated wood rafter, more storage space can also be obtained with a lower wall. The wall is only 10' high as compared to the 14 foot and 18 foot walls of the gable and gambrel buildings.



## No. 2101-a

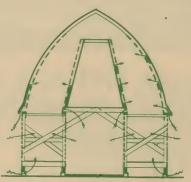
**CAPACITY:** 

4400 BU. EAR CORN 2600 BU. SMALL GRAIN

Size: 27'x32' Height: 36'

Cribs 8' wide

Alley 11' wide 12' high



Ventilation: The drawing with the arrows indicates the movement of air through the ear corn. Air enters from the bottom through the wood floor, the sides of the cribs, through a screened opening at the cornice extending the length of the building, and along the sides of the grain bin. Air circulation is complete, thorough, efficient.

Grain Bin: To hold the load of small grain, the bin floor joists are doubled and bolted to sides of bin studding. The walls are tied together lengthwise with %" steel rods running the full length of building. Lining is end-matched flooring. Hinged cover keeps grain clean and provides a tight closure for fumigation.

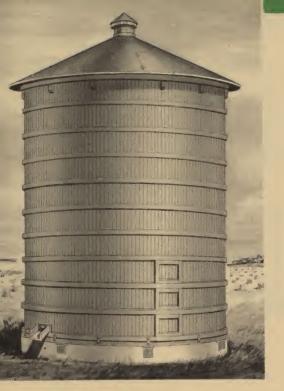
Rat Proof: Hardware cloth is placed between studding and cribbing to a height of 24" from the sill plate. Above this wire screen an 8" galvanized metal strip is fastened.

Other Features: A cupola provides housing and space for grain elevator. Access doors to cribs are off the driveway. Roof is designed for durable, weather-tight, red cedar shingles.

## No. 2101-b

This design differs from 2101-a only in framework. It is planned to make full use of the structural advantages of factory glued laminated wood arches and timber connectors. Arches for outside studs and rafters are one single unit extending from foundation to ridge. Continuous arches are also used for the inside driveway and grain bin studding, running from sill to top of bin.





# No. 2102 1,500 Bu. Diameter 16', No. 2107 3,000 Bu. Diameter 16', Height 20' No. 2108 5,200 Bu. Diameter 16', Height 32'

No. 2109 16,000 Bu. Diameter 28', Height 32'

# Circular GRAIN BINS

GLUED LAMINATED WOOD HOOP CONSTRUCTION

CAPACITIES 1500 TO 16,000 BUSHELS

**WOOD** is the most satisfactory material for grain storage when it is properly used in correctly designed bins. It prevents quick temperature changes in the bin. It is a good insulator. It retards condensation and sweating.

Low Cost Storage: The round or cylindrical grain bin stores more bushels per dollar than other shapes because it requires less materials. This type of bin for farm storage is now entirely practical. The development of reliable structural glues makes possible the building of glued laminated wood hoops right on the job from materials available in the lumber yard. (It's easy to make these hoops—see working drawings.)

Strong, Rigid Structure: These 4-SQUARE bins are not like the ordinary wood stave silo type of construction. They are rigid and strong. Every piece of lining is nailed to every hoop with two nails. Thick staves are not necessary. A lining of Douglas Fir flooring is used for tightness and to resist bulging between hoops, which are spaced 2' on centers. This spacing permits use of standard lengths, saves material, eliminates sawing.

Easy to Build: The Blueprints show how easily the hoops can be built, without the use of clamps, by unskilled workmen. The roof plates are set up on horses and used as a form. Strips of Douglas Fir are coated with structural glue and bent against blocks nailed on the plate. Nails hold the laminations in position while glue sets. Tops of hoops are beveled to shed rain. In tall bins 4 sets of spiral bracing inside the bin serve as wind bracing when bin is empty.

**Ventilation** is provided by roof ventilator. When it is closed the bin is tight enough for fumigating. Tall circular bins require less fumigant than other shapes.



# No. 2104 SIZE: 8'x32' Additional lengths in units of 5'3" Double Crib—2000 bu. capacity. Showing how two cribs can be positioned with driveway between and roof formed by extending rafters.

# 1000 BUSHEL CORN CRIB

THIS CRIB illustrates how greater strength as well as greater economy are combined through skilled planning. Meeting all the requirements for the proper drying and protection of ear corn, this design is also unique in its foundation structure. To avoid long, unsupported walls, this crib is built on short cross piers—spaced 5'-3" on centers. This brings the load bearing foundations closer together and distributes the load to more piers.

Floors: Since the foundation runs the short way, joists are laid the long way with the floor laid crosswise. This permits shoveling with the grain of the floor boards.

**Doors:** Each 32' structure has 3 shelling doors and 2 access doors at bottom. Two sets of filling doors, one below the other, the length of the crib, give a lower shovel lift.

Rat Proof: A strip of galvanized sheeting 12" wide is run over each foundation wall between joists and flooring. Wire cloth 24" wide is placed between studs and cribbing. Then above that runs an 8" galvanized rat guard.

Alternate Width: In northern climates cribs can be built 6' wide.

## 1000 Bu. GRAIN BOX No. 2103 SIZE: 12'x12'

Here is a valuable and economical piece of equipment at threshing time. It meets the need for temporary storage. Mounted on skids, it can be hauled to threshing location. Covered with canvas or waterproof paper, it provides reasonably safe temporary protection against rain and snow. A permanent roof can be built if desired. Chutes are provided for easy loading into trucks or grain wagons.

This 4-SQUARE utility grain box is designed to be built with very little nailing, which leaves the lumber nearly  $100\,\%$  salvageable. Specifications call for lumber in exact standard lengths and dimensions. This saves sawing and fitting, eliminates wastes, and leaves the lumber in good condition for other uses.

The bracing strength to withstand the pressure of stored grain is provided by  $\frac{3}{4}$ " steel rods. Tongued and grooved lumber is specified for the floor to assure tight construction.

## 1800 Bu. GRANARY No. 2106 SIZE: 14'x24'

This granary contains 4 bins, each with its outside filling door, and scoop doors opening into a 6' alleyway, which can be used as a seed cleaning space or for the storage of approximately 700 additional bushels.

Windows are tip-in type at each gable end. There is a window in alley door for additional light. The granary is weather tight, permits easy fumigation and qualifies for sealed storage.

Construction. Three continuous foundation walls, 8" thick and extending below frost line, carry the loads. The structure is strong and rigid to withstand pressure of stored grain. The floor joists are tied to the wall studs, thus making the granary a strong structural unit. The tops of the studs are braced with diagonal ties at the plate line. Rat-proofed with 12" metal strip over each concrete pier and 8" galvanized metal strip around building at floor joist level.

## 6400 Bu. GRANARY No. 2105 SIZE: 31'x32'

There are six bins in this granary; four 10'x16' are on the ground floor with partitions running to the roof, and two 11'x16' bins are above the central 11' driveway. The bins may be filled to the roof through weatherproof hatches, thus giving full use of storage space. Scoop doors and gravity spouts make emptying easy.

Construction. Blueprints provide for foundation wall 8" thick reaching below frost line. This will support fully loaded granary. Wood or concrete floor. Corners are tied together securely by diagonal bracing at plate line. The bin walls serve as cross ties. Rat-proofed with shields and metal strip. Tightly constructed for fumigation.



GLUED LAMINATED HOOPS

Capacity approximately 92 tons.

IT IS recognized by competent authorities that wood is the best and most economical material for silo construction.

This silo is low in original cost. Made from wood, it has better insulating qualities. Wood also is the one material which is not injured by the action of silage acids. In fact, one authority says:—"The acid juices of silage act as a preservative to the silage and also to the wood with which it comes in contact."

And now with the development of modern industrial glues, it is possible to make, on the job, glued laminated wood hoops of great strength, and build a better, longer lasting wood silo.

The wood hoops eliminate the necessity of steel bands and overcome the continuous inconvenience of tightening and loosening them. Once this silo is up, it requires no adjustments.

Engineered for Strength. This silo is engineered to withstand the lateral pressure of grass or legume silage which is often twice that of corn silage. Firmly anchored to a strong foundation, this wood silo will withstand violent wind loads without the use of guy wires or support. Likewise, it will also withstand the lifting pressure of the silage which is particularly strong with grass silage.

Foundation. The foundation is made strong enough to support

Foundation. The foundation is made strong enough to support its great load. It is designed to shed water where the silo joins the foundation. The silo is solidly anchored to the foundation with  $\frac{1}{2}$ " x45" anchor bolts running up through the first two hoops and deep into the concrete foundation. The silo and foundation are thus formed into one complete, continuous structural unit with every part securely tied together. A floor drain is provided.

Walls are of tight-fitting tongued and grooved Douglas Fir flooring. A filling door is in the roof, and there are access doors the full height of the structure. This silo is an ideal size for filling and unloading. It is convenient to use.

This silo was planned for feeding a herd of 20 cows 180 days. The diameter of the silo can be reduced or increased to hold more or less silage as required.











# WEYERHAEUSER 4-SQUARE FARM SERVICE BUILDINGS



MACHINERY SHELTERS
GARAGES
SHOPS
MILK HOUSES

#### MACHINERY SHEDS AND SHOPS PAY

Machinery shelters not only protect expensive implements from rain, snow, and sun, but they provide a place to keep lubricating equipment, parts, and small tools. They serve as a farm machine garage, a central shelter for storing, packing, inspection, and servicing.

The majority of farm machines are used only a few days a year. Then they lie idle for many months. To keep such machines in top working condition between seasons of use, protection is necessary. Vital moving parts must not be allowed to rust. Manufacturers have built many years of life into equipment, and care and protection will deliver extra years of service.

Machinery shops pay. When facilities are at hand and the jobs can be done conveniently, easily and comfortably, repairs are more likely to be done on time. A well equipped shop makes the job easier to do. Shops that are housed in the machinery shelter, along with the machines, make work easier.

#### THE TECO CONNECTOR

Increases the Working Efficiency of Wood.

The Teco Metal Timber Connector, one of the new developments in timber engineering, provides a more efficient means of joining timber members. The Teco connector increases the working efficiency of wood.

Under the bolt, rod, and cast iron plate method, only 40% to 60% of the working strength of the wood member was utilized. The modern Teco connector effects the utilization of as much as 80% of the working strength of the timber, thus making possible the use of lighter, more economical and more available timbers. Where a bolt is used the load is carried on one side of bolt hole whereas the ring connector imbedded in the joining members distributes the stress on the outside of its groove over one-half the circumference and against the inside of its groove on the opposite side.

#### THE GLUED LAMINATED WOOD RAFTER

The development of modern structural glues makes possible the glued laminated wood arched rafters. These rafters are continuous framing members, often extending from foundation to roof ridge, and combine sidewall and roof members into a single, strong unit.

The Army and Navy used glued laminated wood arches in the construction of airplane hangars, drill halls, storage buildings. They obtained vast spaces free of posts and braces with all inside areas usable.

braces with all inside areas usable.

Machine Shelters built of glued laminated wood arches bring similar advantages to the farm. Wide postfree, brace-free spans assure maximum use of floor space, full protection against weather, and strong, durable, wind-resistant structures.

## and glued la 4-SOUARE MILK HOUSES

The milk house is an accepted and essential unit of equipment on every farm that produces milk for market. As a special building used in the handling and storage of milk, it has design requirements which are fairly uniform.

#### SHELTERS DESIGNED FOR EASY USE

#### Large Openings-Post-free Spans

A machinery shed gives protection—but it won't give protection unless it is used. The first requirement of a good shelter building is to make it as easy to use the shelter as to leave the machinery outdoors.

Too often an implement that is in daily use is left out at night or during storms. If it is as easy to put the machine in a shed as to leave it in the field or farm yard, the implements will get the protection needed.

Weyerhaeuser 4-SQUARE Machinery Sheds are designed for easy use—with large openings and clearances, with easy drive-im and drive-through features so that a tractor can pull a machine in, park overnight, and drive out next morning.

Clearances and openings are big so as to provide for the larger pieces of equipment that are now on farms, and with an eye to future needs for the big machines that may be developed.

Wide post-free spans are another important feature of these 4-SQUARE sheds. They make all the inside space available, and make it easy to maneuver the machinery in place with tractors.

These buildings are engineered to withstand snow and wind loads. The strong foundations firmly support the structures. Concrete floors are indicated in some cases. They make it easier to handle machinery and provide dry floors.

#### OPEN OR CLOSED

The farmer has his choice, in these Weyerhaeuser 4-SQUARE designs, of either the open or closed types of shelter. Both have their advantages and application in various climates—both protect against the most damaging effects of exposure to alternate rains and sunshine, sudden showers and blazing heat.

All the 4-SQUARE Machinery Shelters are designed for our modern power age—for tractor-drawn equipment, for easy entrance and exit, for continuous use. They make it as easy to shelter machinery as to leave it exposed outdoors.

#### Weyerhaeuser 4-Square Shelter is Low in Cost

Essential as machine shelter is, the average farmer cannot afford to spend too much for it. With this in mind, Weyerhaeuser engineers have designed first rate shelter at low cost by taking advantage of the economies afforded by the use of the standard lengths and sizes of ready-to-use lumber, metal connectors, and glued laminated wood rafters.

4-Square milk houses meet the requirements of milk ordinances and at the same time offer the farmer low-cost, economical, long-life structures. Their features are detailed on one of the following pages.

# Arched Roof... MACHINERY SHED

(GLUED LAMINATED WOOD RAFTERS)

MANY a man has looked at the giant airplane hangars built of glued laminated arched rafters—seen the vast post-free, brace-free spans, the clear, unobstructed roomy interiors, the ease with which tractors park giant bombers in them for protection, and wished he had a small edition of those airplane hangars as a machinery shelter for his farm.

The Weyerhaeuser 4-SQUARE Arched Roof Machinery Shed, 36'x60', has over 2000 square feet of usable space. The structure is 20 feet to roof ridge. Space for large machines down the center—small tools and implements along the side walls.

100% "drive through." One end door of sliding type is 14' wide by 12' high, the other end door is 12'x12'. Drive the tractor in, park the machinery (there are no posts nor braces), drive out. The door openings are large to accommodate the biggest machines of today and tomorrow.

Engineered to resist hard winds and heavy snow loads, the factory-built glued laminated arches form the side wall and roof frame in one continuous piece, running from foundation to roof ridge. Anchored at the sill plate with special angle irons and joined at the ridge with metal plates, these arched rafters are strong, rigid, and windresistant. Their modern, streamlined design makes a handsome building.



No. 3205 SIZE: 36'x60' HEIGHT: 20'

LENGTH IS VARIABLE IN 10' UNITS TO SUIT REQUIREMENTS



Save Material, Time, and Labor. These arches are delivered to the job site ready for erection. A four man crew can erect these arches in 5 hours. All that is necessary is to join arches at ridge, raise into place, anchor at sill.

A concrete floor and foundation footings extending below frost line are specified. Western Red Cedar Shingles for the roof are recommended for long life and durability.

## MACHINERY SHED and SHOP

50 FOOT TRUSS POLE FRAME

THERE ARE no obstructions in the entire 50 foot span. The roof is supported by Teco connectored roof trusses resting on poles set into ground to a depth of nearly six feet. Consequently, this building will resist strong wind loads. The shed is economical to build and highly practical because it is easy to use.

Designed for large farms where shelter is required for several tractors, and large equipment such as combines, corn pickers, binders, and hay loaders. The clearances under the roof, 10 feet at the sides and 14'-6" at the end,

permit tractors to drive in, unhook the implements, and drive on.

Enclosed Shop: A 20'x32' shop is provided for repair work and the storage of parts, lubricating equipment, grease, and fuel. Its sliding doors are large enough to accommodate most machinery. Other implements can be repaired and serviced in the shed.

A strong overhead beam in the shop is a support for tackle used in hoisting heavy equipment for repair. A chimney for a forge and stove is provided. Over the shop is a storage loft. An entry door to this loft is under



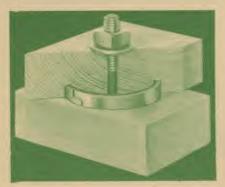
No. 3204 SIZE: 32'x50' WITH 20' SHOP ADDITION EXTENSIBLE IN LENGTH BY 50 FT. UNITS

the machinery shed roof. A ladder from the shop leads to a trap door in loft floor.

Special Truss: The roof truss is joined by Teco connectors, a modern means of joining timbers which permits the use of smaller timber members which are available in lumber yards.

Open sheds are gaining wide acceptance, because they are easy to use and at the same time provide protection against the damage that results when uncovered machinery is continuously exposed to alternate rain and blistering sun, and sleet, ice and snow.





Teco Timber Connectors increase the strength of joints in timber construction by providing a large bearing area for the surrounding timber, thus distributing the stresses over practically the entire cross sections of the timbers involved.

#### No. 3201 SIZE: 30'x48' Length Variable in 16' Units

No. 3203

SIZE:

24'x50'

# 30' Trussed Roof MACHINERY ... SHED

A MACHINE SHELTER increases in value as its usability is increased. If it's easy to use—convenient to get machinery under shelter quickly, has no obstructing posts—machinery will get the protection it needs.

Convenience, rigidity, long-life and economy characterize this structure.

The openings on one side are 14' high, 16' wide. The end opening is 20' wide. There is 100% ease of entry and exit. There is room for a tractor to drive in

with even the largest machines, unhook, and get out. There are no inside posts to interfere. A large load of hay can be driven in for protection from a sudden shower or for overnight protection. The large openings have a special value in keeping the shelter usable should the size of machines be increased.

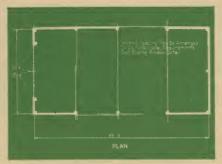
A 10 overhang of the roof at the rear makes a convenient overnight shelter for tractor and attached implements without unhooking.

Construction: Engineered for snow and wind loads, and extra rigidity. The posts are 4'x4' set on concrete piers. Fewer posts are required because the roof is supported by strong trusses built with Teco connectors. Because of the Teco connector, which utilizes up to 80% of the working strength of lumber, lighter pieces of stock can be used. Roof is covered with durable, wind and hail resistant red cedar shingles.

Economy of material and construction time have been achieved through careful engineering with modern materials. Maximum roof area has been obtained

at low cost and with few obstructing posts.





FLOOR PLAN

# PoleFrameU.M.U. Machinery Shed

THIS MODERN, low cost machinery shed is designed for modern tractor-drawn equipment, with large opening to permit the tractor to drive in with the large implements, unhook, and drive straight out without turning. There are no obstructing inside posts.

At one end is a large door 15'x14', giving sufficient clearance for even large combines. There is a large door on each side permitting straight drive through. One door is 10' high by 12' wide, the others are 10' high by 14' wide. Doors may be left open.

This shelter can be built as a complete open building, or with a repair shop enclosed at one end, or as an entirely enclosed shelter.

#### LOW COST, POLE FRAME CONSTRUCTION

With pole construction, building costs are reduced to an exceptionally low figure. Poles furnish both the foundation and the framing. Poles should be butt treated and placed in the ground to a depth of several feet. This type of construction gives unusual stability and rigidity. Wood shingles are indicated for long life.

# COMBINATION GARAGE and SHOP

A CONVENIENTLY arranged and adequately equipped machine shop is essential to the smooth running of machinery and the prevention of machine lay-ups. This building is designed to meet farm needs in a very practical manner.

There is garage space for two vehicles—car and tractor or truck, and room for a large, well-lighted repair shop.

A strong beam, properly placed for easy use, provides support for block and tackle to be used in hoisting tractors and other farm implements when making repairs. Space is provided for a stove and a forge, and for two work benches—one for metal and one for wood working. Plans for a coal storage bin with floor sloped toward door are included in the blueprints.

A loft in the gable provides ample and useful storage. Access is through door in gable end. Ventilating louvres are located in opposite gable end. Doors are 9'x8' swing-up type. Concrete floor and apron are specified.

Engineered for rigid, economical construction, maximum use of standard lengths and sizes of ready-to-use lumber, and long-life red cedar shingles.



# No. 3202

SIZE: 24'x30'



# ONE and TWO Car GARAGES

THESE GARAGES offer maximum value in tight, weather-proof shelter at low cost. They are of good standard construction, with rigid framing and bracing.

Ample space is provided for cars and the storage of tools, tires and accessories.

The doors are 8'x7' stock, swing-up type. These have certain advantages over sliding or swing doors. When open, they are inside the building out of the wind. They are never clogged with snow.

These garages are of single wall construction which can be insulated if desired. The floor is concrete slab, provided with expansion joint, and sloped to drain toward door. A concrete apron extends from the door.

Imbedded in the concrete door sill is an angle iron against which the door rests to provide a durable, tight fit for the doors.

Economy of materials and construction is achieved



No. 3206 ONE CAR GARAGE, SIZE: 12'x20'

No. 3207 TWO CAR GARAGE, SIZE: 20'x20' Any of these buildings can be purchased on instalment terms, arranged to suit convenience of purchaser. No Down Payment Required.

by designing for the maximum use of standard stock items—doors, windows, and ready-to-use lumber, in exact lengths and sizes, which fit the plans without needless sawing, fitting, or material waste.



No. 3101 SIZE: 10'x14'

No. 3102 SIZE: 8'x12'

No. 3103 SIZE: 12'x18' Two Room

## SANITARY MILKHOUSES

**THESE PLANS** make it possible for the dairy man to select the size of milk house he needs, with complete assurance that it meets the sanitation requirements of milk shed ordinances.\* It has been engineered for convenience, low cost, and long life.

The floor plans shown are suggestions only. The owner can arrange the interior and the placement of the building to suit his conditions. The size of the cooling tank can be varied in accordance with the volume of milk to be cooled.

Provision is made for making work easier by the convenient and related location of cooling tank, separator, wash tank, can storage rack and heater.

All three houses are insulated with double-thick Balsam-Wool. Insulation is highly desirable in a milk house to maintain uniform temperatures. Walls and ceilings are of end-

matched lumber, tongued and grooved at ends and edges to provide a smooth, tight fit—a perfect base for an easy-to-clean enamel finish.

The floors are concrete and slope to a drain, making them easier to clean. The foundation is carried well above

The floors are concrete and slope to a drain, making them easier to clean. The foundation is carried well above floor for greater sanitation and long life. Cooling tanks are of reenforced concrete, insulated with two 2" planks, which serve as a form and remain in place when concrete is poured.

Ventilation is provided by a roof vent. Windows and doors are screened. Concrete entrance stoop is a further aid to sanitation. Long lasting, durable wood shingles are recommended.

Low cost is achieved by planning for a maximum use of standard lengths and sizes of ready-to-use lumber, which eliminates needless sawing, fitting and material waste. These houses are economical and durable.

\*The location of the milk house in relation to the barn is specifically defined by the milk ordinance applying to a district. Consult the ordinances before building.

## 40 Foot WINDMILL TOWER

No. 3301

TECO CONNECTOR CONSTRUCTION

BY UTILIZING Teco Metal Connectors, Weyerhaeuser engineers have designed an exceptionally strong, wind-resistant tower. It will easily support an average size windmill head or a large size wind generator. The tower is low in cost, will serve a long span of years.

The lumber specified is all standard lengths and sizes. There is no waste. The legs are four pieces of 4"x4"x40' Douglas fir windmill stock. They can also be made of shorter lengths spliced together. Every diagonal brace is standard length lumber—2"x4"x6', 8', 10', and 12'. Therefore no sawing is required. The struts are 4"x4".\*

Bolt holes and grooves for Teco connectors are made in legs according to the blueprints. Two faces (see illustration at bottom of page) are put together on the ground, raised, tipped together at the top, by means of a rope, anchored to the foundation, and the other two faces

finished by bolting on the cross members. The bracing pattern of the adjoining faces alternate. The horizontal members of one face meet the diagonal members of the other. This design reduces the loads on all braces.

The strong foundation is securely anchored in the ground. A platform and ladder complete the structure. Lightness and low cost are made possible by the efficiency of Teco connectored joints.





#### THEFT

# LUMBER OF FINE QUALITY WILL AGAIN BE AVAILABLE

# Choose Your Plans Now

You can plan your building program with assurance that quality lumber will again be available as soon as war needs are satisfied.

Because there has been a scarcity of lumber for farms and homes during these war years, some people feel that there will be a permanent shortage. But the facts do not warrant that belief. Our government is receiving lumber, tremendous quantities of it and lumber of the highest quality. Today, war needs come first, and while those needs are being satisfied, there will not be enough lumber for domestic needs.

America has plenty of timber of saw log size, millions and millions of acres ready to yield their harvest of mature trees. Add to this great reserve of standing timber the new trees that are growing, and you have combined resources promising a continuous supply of lumber.

Furthermore, it will be lumber of high quality. Great progress has been made in methods of manufacturing. As only one example, modern dry kilns can today produce properly seasoned lumber in a small fraction of the time required under the older air drying methods—and the kiln dried lumber so produced is equal to or superior in quality to the best air dried product.

No reconversion problem exists in the lumber industry. War needs and civilian needs are largely similar. When war needs are satisfied, lumber manufacturers will simply ship the lumber then produced to your local dealer for your use.

Modern forestry management is making real progress toward its goal of making the growth of new trees equal or exceed the harvest. Forestry is a part of agriculture. It is concerned with the growing and harvesting of trees. An ever-increasing number of lumber companies are adjusting their forest harvesting methods so that reforestation of the logged over lands will take place without undue delay.

Timber is a crop. It is our greatest natural renewable resource. Wood is the friend of man—wood is our most reliable and most economical material for construction.

# WEYERHAEUSER SALES COMPANY

For help with your farm building problems and for further information regarding the

#### WEYERHAEUSER 4-SQUARE FARM SERVICE

please consult any of the following retail lumber dealers . . .

#### IDAHO

		IDAIIG		
Town	Dealer		Town	Dealer
Aberdeen	Tri-State Lumber Co.		Melba	Boise Payette Lumber Co.
American Falls	Boise Payette Lumber Co.		Menan	Boise Payette Lumber Co.
Anaconda	Gimble Lumber & Fuel Co.		Meridian	Boise Payette Lumber Co.
Arco .	Boise Payette Lumber Co.		Middleton	Boise Payette Lumber Co.
Arimo	Nelson Lumber & Coal Co.		Montpelier	Boise Payette Lumber Co.
Ashton	Tri-State Lumber Co.		Moscow	Montpelier Coal & Lumber Co.
Blackfoot	Boise Payette Lumber Co. Tri-State Lumber Co.		IVIOSCOW	Gallup Yards, Inc. Madison Lumber & Mill Co. Standard Lumber Company
Boise	Boise Payette Lumber Co. Home Lumber & Coal Co. McCaslin Lumber Company		Mountain Home	Boise Payette Lumber Co. Home Lumber & Coal Co.
	Parr Lumber Company		Nampa	Boise Payette Lumber Co. Lloyd Lumber Company
Buhl	Boise Payette Lumber Co. Home Lumber & Coal Co.			Stones, Incorporated
Burley	Burley Lumber Company		New Plymouth	Van Petten Lumber Company
bulley	Farmers Equity Company		Notus	Boise Payette Lumber Co.
C-11-11	Tri-State Lumber Company		Parma	Boise Payette Lumber Co.
Caldwell	Boise Payette Lumber Co. Home Lumber & Coal Co. Irrigators Lumber Co.		Payette	Boise Payette Lumber Co. Van Petten Lumber Company
Cascade	Boise Payette Lumber Co.		Pocatello	Bannock Lumber & Coal Co.
Craigmont	Madison Lumber & Mill Co.			Boise Payette Lumber Co. Idaho Lumber & Hardware Co.
Driggs	Tri-State Lumber Company			Pocatello Lumber Company Tri-State Lumber Company
Eagle	Boise Payette Lumber Co.		Preston	Preston Lumber Company
Emmett	Boise Payette Lumber Co.		Rexburg	Tri-State Lumber Company
Filer	Tri-State Lumber Company		Richfield	Tri-State Lumber Company
Firth	Tri-State Lumber Company			
Fruitland	Boise Payette Lumber Co.		Rigby	Boise Payette Lumber Co.
Genesee	Farmers Union Producers Co.		Ririe	Tri-State Lumber Company
Glenn's Ferry	Boise Payette Lumber Co.		Roberts	Boise Payette Lumber Co.
Gooding	Boise Payette Lumber Co. Tri-State Lumber Company		Rupert	Boise Payette Lumber Company Tri-State Lumber Company
Hailey	Francis Jones, Inc.		St. Anthony	Orme Auto & Lumber Company
Hazleton	Tri-State Lumber Company			Tri-State Lumber Company
Homedale	Homedale Forwarding Co. Home Lumber & Coal Company		Salmon	Lemhi Lumber Company
Hurley	Cassia Lumber & Seed Co.		Shelley	Boise Payette Lumber Company
Idaho Falls	Boise Payette Lumber Co. Bonneville Lumber Company		Shoshone	Boise Payette Lumber Company Tri-State Lumber Company
	Grimmett Building & Supply Co. Tri-State Lumber Company		Soda Springs	Wm. S. Gagon
Jerome	Boise Payette Lumber Co.		Star	Boise Payette Lumber Company
	Jerome Lumber Company North Side Lumber & Merc. Co.		Twin Falls	Boise Payette Lumber Company
Kellogg	Kellogg Lumber			Home Lumber & Coal Co. Keel-Wilkinson-Stronk Lumber Co.
Kimberley	Tri-State Lumber Company			Tri-State Lumber Company Twin Falls Lumber Company
Kuna	Boise Payette Lumber Co.		Ucon	Boise Payette Lumber Company
Lewiston	Home Lumber Company		Wallace	Wallace Lumber & Mfg. Company
	Lewiston-Clarkston Lumber Co. Madison Lumber & Mill Co.		Wendell	Boise Payette Lumber Company
	Troy Lumber Company		Weiser	Boise Payette Lumber Company
Mackay	Tri-State Lumber Company		44 C13C1	Home Lumber & Coal Company
Marsing	Boise Payette Lumber Co.		Wilder	Boise Payette Lumber Company
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