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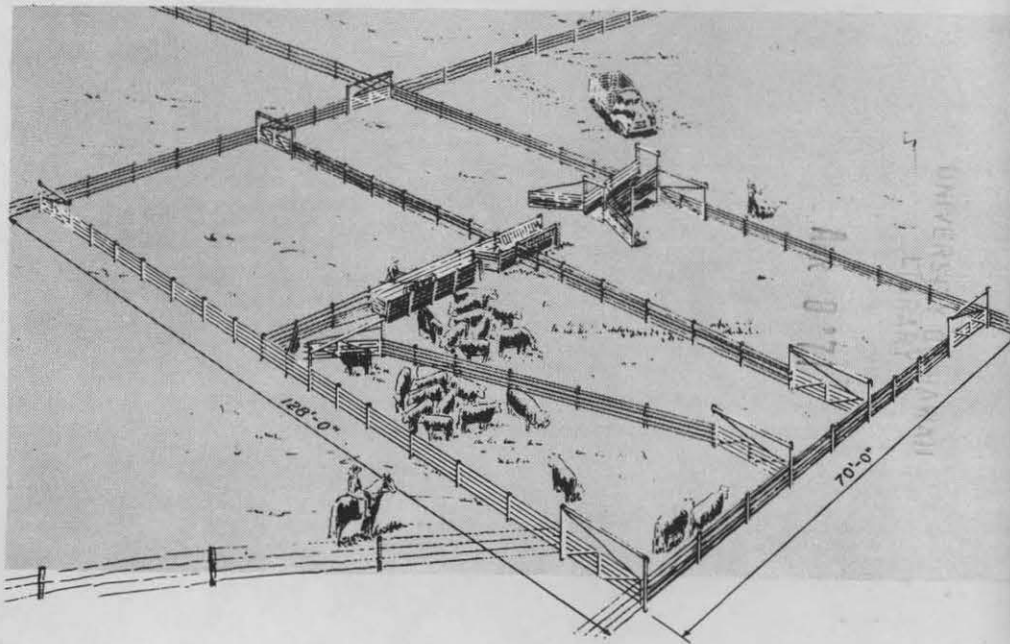
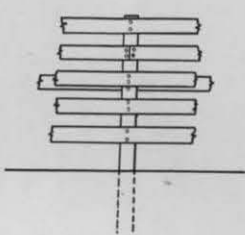
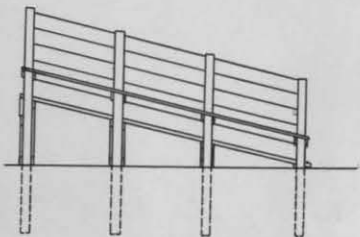
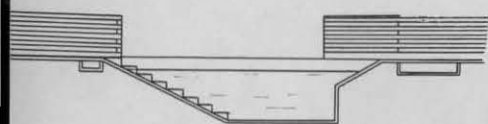
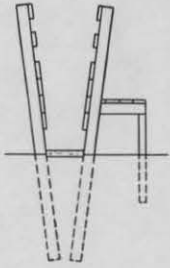
# UNIVERSITY OF IDAHO

## College of Agriculture

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# Corrals for Working and Handling Beef Cattle

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# Corrals

## For Working and Handling Beef Cattle

Working and handling cattle involves many variables. Because of these variables it is doubtful that any one particular idea will work best under all conditions. Each corral system is unique to the conditions in which it is placed.

A good corral system, adapted to the needs of the cattleman it serves, can:

- .....provide easy handling of cattle
- .....reduce stress in the animals
- .....facilitate management practices that will produce healthier cattle, free from many costly livestock pests

.....save valuable time and reduce animal weight loss normally associated with livestock handling.

The information compiled here is directed toward the cattleman who has need for working and handling relatively large numbers of cattle in short periods of time. With adequate corral facilities, necessary livestock practices such as vaccinating, castrating, branding, and pest control can more easily be performed. Community corral facilities, centrally located, provide the individual cattleman with the use of complete cattle handling facilities. Such community corrals can justify installing such expensive items as weighing scales and dipping vats.

## WORKING CHUTES

### Construction and Design of Working Chutes

Working chutes for handling large numbers of cattle should handle at least 12 animals at one time. A chute 40 to 50 feet long is usually satisfactory.

Generally cattle will work more easily in a chute constructed on a curvature with about a 40-foot radius. A sharper curve sometimes spooks the animals, possibly because they think there is no opening ahead. Straight chutes will work satisfactorily if they have solid sides, so that the only opening the cattle can see is the one at the headgate.

A roughened concrete slab or an aggregate base of gravel, slag, or cinders for the floor of the chute eliminates much of the mud during wet weather. Manure removal is made easier by leaving an 8-inch opening along the bottom on each side. Solid 2-inch

boarding above this bottom opening will reduce accidents and encourage the smooth flow of animals through the chute (see figure 2). Small openings cut through the side boards at a height of 24 inches above the floor will allow insertion of rods or pipes for blocking off the cattle.

Avoid construction that allows animals to gain footholds on the sides of the chute. Pole rails, widely spaced board rails, or chute sides that slope outward in excess of 2 inches per foot of height are undesirable for this reason.

An elevated walkway along one side of the chute facilitates crowding and inspecting of the cattle. For a curved chute, this walkway should be on the inside of the curve.

Space posts at five foot intervals and plant them in the ground at depths varying from 2½ feet in heavy gravelly soil to 4 feet in light clay soil.

Overhead cross-members between posts are not recommended because of the inconvenience and danger they present. Chute posts should have at least 5 inch diameter tops. Treat posts with preservative to 12 inches above the ground line. Pole tops should be at least 5 feet above the floor of the chute.

You can place cutting gates on one or both sides of the working chute. These gates can be used to direct cattle into sorting pens or into other facilities such as a calf chute, dipping vat, scale, or table. You may want a man door, located a short distance behind the squeeze chute, to facilitate veterinary work. This man door should open inward so as to block the chute and hold back other cattle.

You can build working chutes with several styles of cross sections. Each of the main construction designs is discussed briefly below:

Figure 1 : The major labor-saving feature of a corral system is an efficient working chute.



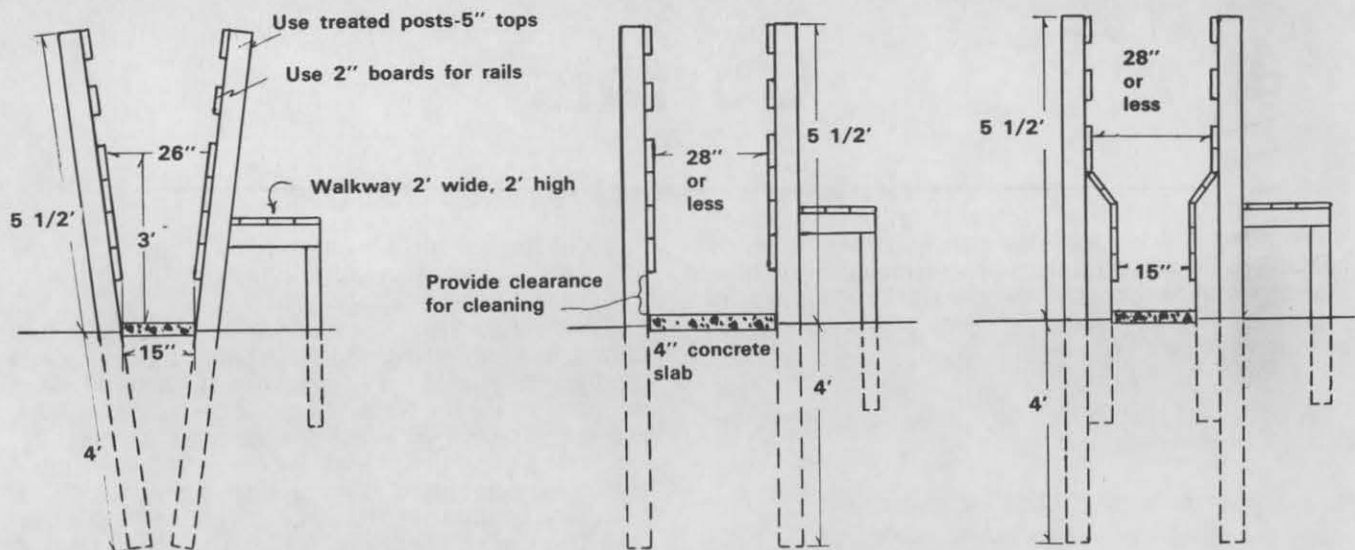


Figure 2: Cross sections and materials lists for typical working chute designs.

**Materials list for V-type working chute 40 feet long**  
 Posts (5' spacings):

- 18 - 9 1/2' treated posts, 5" min. tops
- 9 - 4' treated posts, 3" min. tops

**Chute sides:**

- 560 board feet of 2" boarding

**Walkway:**

- 190 lineal feet of 2" x 6"

**Concrete for chute floor:**

- 2/3 cubic yard

**Fasteners:**

- 264 - 3/8" x 8" carriage bolts with washers
- 3 lbs - 16 d nails for walkway

**1. Straight-sided chute**

Parallel sides should be approximately 28 inches apart for large mature animals, less for smaller cattle.

**Advantages:** Easiest type of chute to construct. Straight sides resist animals climbing up and will accommodate gates if needed.

**Disadvantage:** When the chute is of adequate width to handle mature animals, calves can turn around. (Drop sides can be inserted in the straight-sided chute to narrow it for handling calves. It is more desirable however to have a separate calf chute, approximately 20 inches wide.)

**2. V-Chute**

V-chutes should be approximately 15 inches wide at the floor and 26 inches wide at a height of 3 feet above the floor.

**Advantages:** It is better adapted to accommodate animals of different sizes and animals with horns.

**Disadvantages:** If sides are sloped too much

**Materials list for 40' straight - sided chute**

Same as for V-type chute except use 1 1/3 cu. yds. concrete

**Materials list for Y-type working chute 40' long**

to the materials list for the V-type chute add the following:

An additional 80 board feet of 2" boarding for chute sides

An additional 18 - 5' treated posts with 6" min. tops.

Instead of 264 - 3/8" x 8" carriage bolts, use 144-3/8" x 8" carriage bolts & 180-3/8" x 12" carriage bolts.

(over 2 inch spread per foot of rise) or if the sides are constructed so as to provide footholds, animals will be able to climb with their front feet and possibly turn over and go down.

**3. Y-Chute**

Straight sides for the first 24 inches of height should be approximately 15 inches apart; both sides then slope outward to produce a width of about 28 inches.

**Advantages:** Accommodate both large animals and calves.

**Disadvantages:** More difficult and expensive to build. Animals tend to gain footholds on the sloping part of the chute. This contributes to their turning around and bunching up.

**4. Adjustable Chutes**

These are ideal from the standpoint of handling cattle of different sizes, but they are considerably more expensive and difficult to build and maintain. Also they are slow and cumbersome to manipulate if handling groups of mixed cattle.

**RESTRAINING FACILITIES**

Any device used to restrain an animal needs to fulfill these four purposes. 1) It must function properly and dependably with little or no maintenance; 2) It must restrain the animal to whatever degree is necessary while allowing access for treatment; 3) It must minimize the possibility of injury to the

animal and to the stockman; and 4) It needs to provide easy and fast operation.

It is more desirable and more economical to purchase high quality cattle handling equipment than to attempt to build your own.

## The Squeeze Chute

Select an adequate restraining device for the proper treating of cattle. A squeeze chute may have any or all of the following features: 1) adjustable width at base, 2) blocking and release mechanisms for controlling squeeze pressure, 2) leg restrainers, 4) removable or swing-away panels or bars to obtain access, 5) horizontal and/or vertical adjustment on headgate, 6) front opening exit, 7) side opening

exit, 8) chin block and nose snubber, 9) rear blocking gate.

## Cradles or Tables

Calf cradles and bull tables are useful. Cradles effectively restrain the animal in an accessible position and offer a high degree of safety to both the animal and the operator. Tilt tables have replaced crude cumbersome stocks as the best means of performing operations requiring complete restraint.

## PEST CONTROL FACILITIES

Animal thriftiness and increased weight gains more than offset the cost of carrying out an effective insect pest control program. Periodic and regular treatment for the control of lice, grubs, and summer flies is essential to good herd management. A centrally located corral system with pest control facilities can be used frequently by the cattlemen of an entire community.

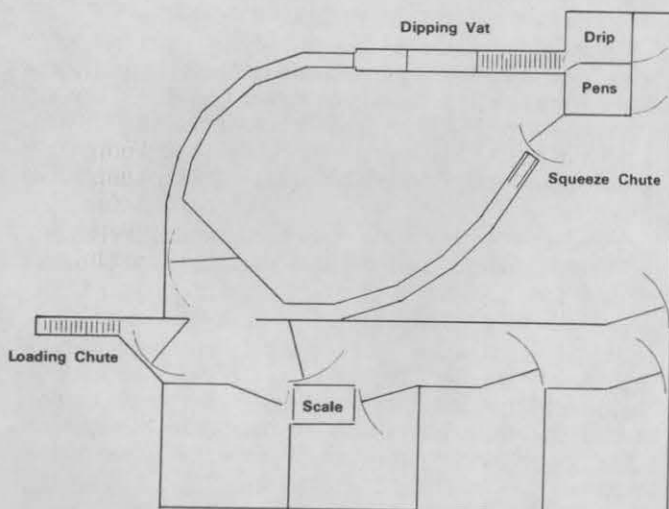


Figure 3 : Pest control and cattle weighing facilities should be coordinated with other functions of the corral system.

## Handling of Pesticides

When you handle any form of pesticides, take extreme care to prevent the accidental contamination of cattle and the environment. In other words, avoid any misuse that poses a threat to the health of men or animals. Read container labels carefully. Be sure to follow directions for mixing and applying chemicals. Dispose of excess chemicals and of empty pesticide containers according to the recommendations of the chemical supplier and within all regulations established by law. Avoid prolonged skin contact with chemicals. Wash hands thoroughly before eating.

## Spraying for Pest Control

If a corral system is to accommodate a spraying program for pest control, build a spray pen. This

pen should not be over fifteen feet wide with solid sides, good drainage, and a rough-paved or gravel surface. This type pen will keep the animals close enough to the spray nozzle to give good spray penetration and will reduce drift of the spray materials. To reduce the inherent tendency of a spotty job from spray applications move the cattle back and forth during the spraying period.

Certain special safety precautions should be followed when spraying insecticides. On a windy day, sprayed chemicals can drift for a considerable distance. Spray-operators and livestock handlers should wear respirators. Runoff from the floor of the spray pen should be controlled to prevent pollution.

## Dipping Vats

Dipping vats are increasing in popularity as a means of livestock pest control. A properly constructed system of chutes and pens with a dipping vat can provide fast, positive pest control. You can buy a metal vat or you can build a concrete vat from available plans. However if poorly constructed, a concrete tank will require continued maintenance and regular sealing. Consider the location of a dipping vat carefully so that it can accommodate the greatest number of cattle.

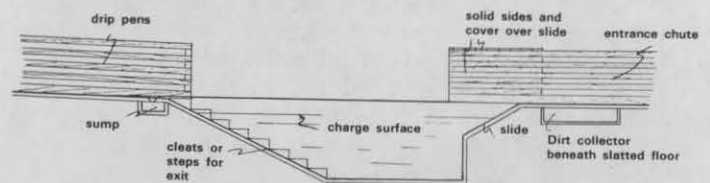


Figure 4 : Dipping vats produce fast, positive pest control results.

If you plan to have a dipping vat in your corral system, be sure to consider these points:

1. Adequate space requirements. The vat itself will probably be from 28 to 32 feet long, plus an entry chute on one end and a drip pen on the other.
2. Covered entrance. Solid walls and a roof over the entrance to the vat will reduce the tendency of the animals to hesitate and stall.
3. Sump-filter-diversion system for dripping pens. A sump-filter-diversion system should be used to filter the drainage from the drip pens before re-

turning it to the vat. When the vat is not being used, the system can be set to divert storm runoff and thereby prevent diluting the dip vat charge.

4. Adequate water supply. Most vats require approximately 3,000 gallons for each charging.

5. Supply tank. A storage and mixing tank, accurately calibrated, of 500 gallons minimum capacity keeps additional charge material always available.

6. Vat cover. A removable cover, kept over the vat when it is not in use, will prevent dilution and contamination of the charge from rain, snow, dust, weeds, and small animals. It will also safeguard

against the accidental drowning of children who might be playing in the area.

7. Waste disposal. Used vat solutions should be pumped out and, if necessary, hauled away for disposal. Take measures to avoid the contamination of streams, ground water supplies, and productive soil. For information regarding the control of chemical pollutants, contact the Environmental Improvement Division, State Department of Health.

8. Cattle movements between vat and corrals. Be sure to integrate the dipping vat and the rest of the corral system so that cattle movements to and from the vat can be accomplished with a minimum of stress.

## SCALES

Scales used in conjunction with a corral system serve the following purposes:

1. Provide accurate and reliable sale weights during marketing.

2. Provide records for beef cattle improvement programs in selecting herd replacements.

3. Measure rate of gain during winter feeding or summer grazing.

4. Determine weight loss due to shrink in handling and shipping.

5. Provide weighing service for hay or grain producers.

Single animal scales should be oriented to the working chute.

Carload-lot scales should be located along one side of the working alleyway so livestock can either by-pass the scale or move directly into the scale enclosure for weighing.

Enclose the scale if possible for lowered maintenance and increased comfort and convenience. Place windows for good visibility of the scale platform. Install artificial lighting.

Select a scale with a weighing capacity capability capable of meeting the largest anticipated volume demand. A carload lot scale with a 30,000 lb. capacity is recommended for marketing cattle. A large scale with a self-contained or an "A" type

lever can be used to weigh individual animals. Select a single animal scale with 1 pound increments if a beef performance testing program is planned.

The livestock scale should definitely be equipped with a ticket printer to verify weight records and to avoid human error in market transactions.

To avoid exceeding the weighing capacity of a scale provide one square foot or less of platform space for each 110 pounds of rated capacity (recommendation by Packers and Stockyards Administration, USDA). This means a 3,000 pound capacity scale should not exceed 28 square feet of platform area.

Purchase your scale from a reputable manufacturer. Modern two-section design, cast iron or welded steel levers, suspension bearings and structural steel weighbridges are recommended.

Install the scale according to manufacturers' recommendations. The scale pit should be of concrete construction, well-drained, obstruction free, and of adequate size to house the scale mechanism while providing space for inspection and maintenance.

A scale should be serviced regularly by a competent scale mechanic and tested semi-annually by a competent scale testing agency approved by the Idaho Bureau of Weights and Measures, State Department of Agriculture.

## LOADING CHUTES

A loading chute is the connecting link between the corral system and the various types of vehicles used to transport the livestock. This means the location of the loading chute is one of the most important considerations in determining the working efficiency of a corral. Various types and sizes of vehicles need to have fast, firm access, even during inclement weather. Also, the location of the chute to the other component parts of the working corral must facilitate fast, positive movement of the

cattle.

### Dimensions for Loading Chutes

The ramp in a loading chute should provide a safe gradual slope for the cattle to climb. Ten feet is considered a minimum length, while many cattlemen prefer loading chutes up to 16 feet long. If natural ground slope exists, it is often possible to build a loading chute that does not require an elevated incline.

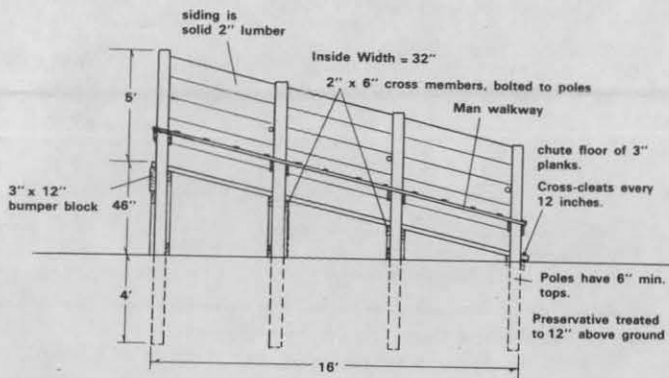


Figure 5 : A loading chute needs to be sturdily made and provide for positive control of the cattle.

#### BILL OF MATERIALS

Poles, 6" min. tops, preservative treated  
 2-14'  
 4-12'  
 2-10'

#### Supporting material

82 lineal feet of 2" x 6"

#### Chute floor:

3 - 3" x 12" - 18' long  
 50 lineal feet of 2" x 4" for cleats

#### Bumper block:

1 - 3" x 12" - 4' long

#### Chute sides:

350 board feet of 2" material

#### Walkway:

2 - 2" x 8" - 18' long  
 20 lineal ft. of 1" x 2" for cleats

#### Bolts:

16 - 1/2" x 12" machine bolts, washers for each end  
 8 - 1/2" x 10" machine bolts, washers for each end

A level platform at least five feet long at the top of the ramp reduces the likelihood of the animal injuring itself as it moves from the loading chute into the truck or trailer. Expansion gates at the

head of the chute can be used to provide positive chuting into the truck.

The height of loading platforms to accommodate various sizes of trucks vary from 30 to 50 inches. The most practical chutes for general loading are constructed 46 inches high.

Most chutes are approximately 32 inches wide. Narrow chutes discourage turning and jamming up. Wide chutes, up to 60 inches, allow faster loading into large commercial trucks. However wide chutes cost more to build and cattle tend to "jam up," particularly if the truck doorway is narrower than the chute.

Be sure to treat posts used in the construction of a loading chute. They should have six inch minimum diameter tops. Set at depths varying from 3 feet in heavy gravelly soil to 5 feet in light clay soil. The posts need to be long enough to provide chute sides at least 5 feet high. Post spacings should not exceed 6 feet.

A walkway along one side of the chute should be 15 to 20 inches wide and approximately 20 inches higher than the floor of the chute.

#### Construction Materials

For constructing the sides of the chute, 2-inch rough-cut lumber is preferred to poles. For easier and safer cattle loading make at least the bottom 24 inches of the chute sides solid. Don't let spacings between the upper boards exceed six inches. A blocking gate or an insert bar can be used at the base of the chute to prevent the cattle from backing out.

For permanent installations, it is recommended that the bumper block be made of reinforced concrete 10 inches thick. However, by exercising care when backing vehicles against it, a bumper block of heavy timber can last for many years.

Use rough three-inch planks to form the ramp base. Cross members between the chute posts support the planks. Use cleats on the ramp to minimize slipping. Do not use gravel fill as a ramp base unless the ramp is nearly level.

## PENS AND ALLEYWAYS

The number of separate pens needed in a corral system depends on the degree of separation required in sorting the cattle. Allow for at least one pen in addition to those needed for holding sorted animals. You will have greater flexibility with more small pens than with fewer large ones.

### Holding Pens

Allow enough space in holding pens so the animals can lie down (see table 1 for suggested space requirements). A holding pen normally will have a minimum area of 500 sq. ft.

Provide automatic watering facilities. Fence line feed bunks, preferably of concrete construction, are useful if cattle are held for extended periods. Good drainage is a necessity. Provide 4 to 6 percent slope or approximately 1/2 inch drop per foot.

Pens should have handy gate access to the working alley and to crowding pens.

### Sorting Pens

Sorting pens require less space per animal than do the holding pens (see table 1). Two sorting pens are a minimum for a working corral system. Each pen should have at least 250 sq. ft. of ground area and hold between 20 and 40 head of cattle. Handy access gates to the working alley and to the holding pens are needed.

### Crowding Pens

Crowding pens should contain about 1 1/2 times the floor area of the largest truck to be loaded. Be sure there is a minimum area of 150 sq. ft. Build the crowding pens so they narrow gradually toward the

Table 1: Working corrals for beef cattle should meet the space and water requirements shown.

	Calves less than 600 lbs.	Animals 600 lbs. to 1000 lbs.	Mature Animals	Heavy Cows	Herd Bulls	Mixed Range Cattle
Holding Pens (sq. ft./head) 500 sq. ft. minimum	10	15	20	25	25	15-20
Sorting Pens (sq. ft./head) 250 sq. ft. minimum	8	12	15	20	20	12-15
Crowding Pens 150 sq. ft. minimum		(1 1/2 times the floor area of the largest truck loaded out)				
Water Requirements (gals./day)	8	10	12	15	15	10



Figure 6 : Alleyways with convenient access to all pens and chutes are a necessary part of a working corral.

chute opening. Be sure to have a crowding gate that can effectively force the cattle. Some cattlemen verify that solid sides on crowding pens make moving cattle easier.

### Alleyways

Alleyways serve as passageways for livestock between pens, for sorting purposes and for truck or equipment access. Build alleys at least 12 feet wide to accommodate trucks and cleaning equipment and for easy cattle movement. Have direct gate access to all pens from the alley. Make the gates along the alleyway 12 feet long and capable of swinging either way. Extra gates are useful in alleyways to assist in sorting or for forming additional pens. Alleyways should not occupy more than 20 percent of the total corral area unless their space can also be used effectively as pens.

## FENCES AND GATES

A corral system cannot be more dependable than the fences and gates that make it up. To reduce maintenance costs and livestock injuries use high quality construction techniques.

Figure 7 : A critical point in the construction of fences is the butting together of rails.



### Preserving Wood for Longer Life

The preservative treatment of posts, bottom rails, and other wood members that come in contact with the ground is highly recommended. Cold-soak treatments, using creosote, pentachlorophenol, or copper naphthenate solutions are satisfactory if the following precautions are followed.

Use creosote undiluted for maximum protection. Do not mix petroleum products with creosote as this may form a sludge that hinders penetration.

When using pentachlorophenol, select a solution with at least five-percent "penta" by weight. Use diesel oil or low grade stove oil for diluting.

Mix copper naphthenate-petroleum oil solutions so there is a copper metal equivalent of at least one-percent.

The wood to be treated should be peeled, well seasoned and unglazed. If a glaze is present, pound the timber with an incising hammer to allow penetration of the preservative.



Soak the poles until the preservative has penetrated evenly to a depth of at least 1/2 inch. This may take from several hours to several days. To determine the necessary soaking time, soak a "sample" pole and inspect it at regular intervals.

To provide the protection wanted, ranch preservative treatments need to be controlled carefully. It is not unusual for commercially treated poles to contain up to four times the amount of preservative material that ranch treated poles receive.

### Selection and Spacing of Posts and Rails

Set posts at depths varying from 2 1/2 feet in heavy gravelly soil to 4-feet in light clay soil. Use preservative treated posts with at least four inch tops. Sound, discarded railroad ties make excellent corral posts.

Space your posts no more than six feet apart for maximum durability over years of hard service. You can extend spacing up to ten feet if you use heavier posts and rails.

Fence rails normally are made of either rough-cut boards (2" x 6" for up to 6 foot post spacing, 2" x 8" for longer post spacings) or of poles (minimum 3" small end). Pole rails may be less expensive, particularly if a rancher has his own supply. Rough-cut board rails are easier to install, generally require less maintenance, and provide greater control of spacings between rails.

Fasten rails to posts with 1/2" bolts. Use U-bolts for extra strength particularly if rails are butted together at a single post. The use of lag screws, nails, or tie wires are not recommended because of the need for periodic checking and reinforcing.

If cattle are worked on both sides of a fence, bolt a single guard rail to the post on the back side at a height of 36 to 40 inches above the ground.

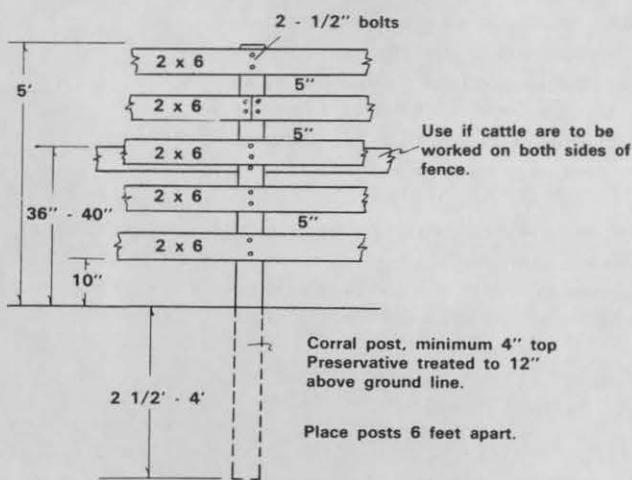


Figure 8 : Details of Corral Fence.

### Corral Gates

Corral gates must provide the structural support necessary for livestock. In addition, gates need to swing without binding, resist sagging, and open freely despite accumulations of snow or manure.

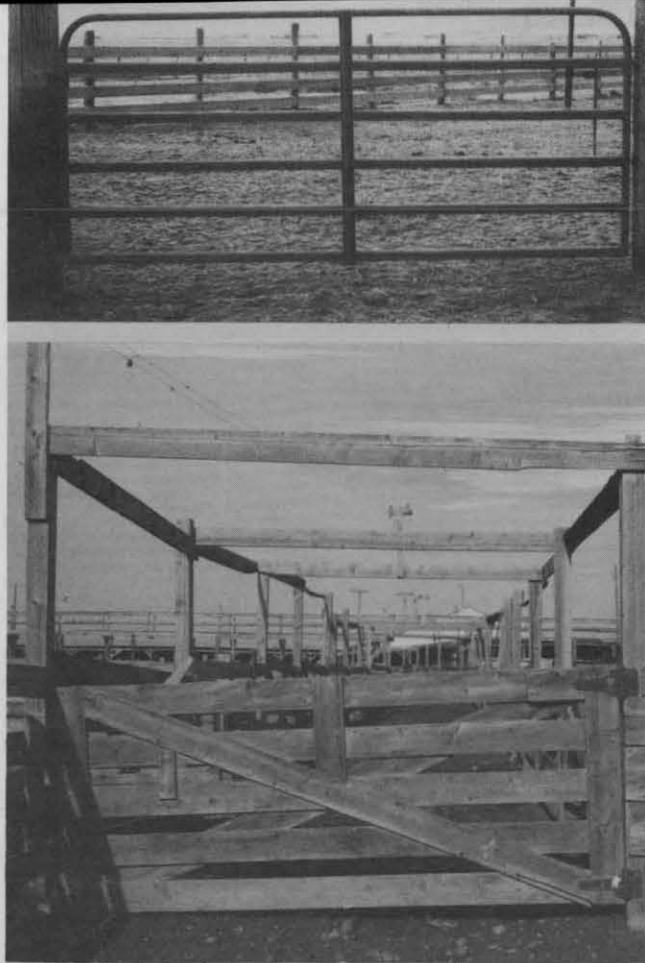


Figure 9 : Upper: Dependability and ease of operation are two reasons for having good gates. Lower: Installations that result in sagging gates are poor investments.

Make gates and fences the same height. One less bottom rail often is used on gates than on fences. This allows for extra clearance beneath the gate. However, don't have more than 12 inches of under-gate clearance since cattle will attempt to crawl underneath.

The length of most gates in a working corral needs to be coordinated to the width of alleyways or crowding areas. Gates 10 to 12 feet long are most common. These gates must have a substantial lock and catch to prevent breaking open under pressure.

Gate posts should have 10 inch diameter butts and be set at least 4 feet deep. Overhead stringers between gate posts provide increased rigidity. If stringers are installed, allow clearance for a horse and a rider or for equipment that might need to pass under it. At least 10 feet of clearance is recommended.

Corral gates of metal construction offer some advantage over wood construction, particularly if the gates are subject to extreme wear or abuse. Easier operation, less sagging, and longer life will compensate for additional cost of metal gates. You should seriously consider commercially constructed gates unless your ranch-built gates can offer similar convenience and dependability.

## DESIGNING A CORRAL SYSTEM

### Selecting the Site

Locate your corral system in the most logical and convenient place to receive maximum use. A corral serving a community should be centrally located so cattlemen can trail or transport their stock to it with minimum effort. The best place for a cattle association corral is along the route cattle follow when being moved between ranges and ranches.



Figure 10 : Improper location of a corral can result in undesirable conditions during wet weather.

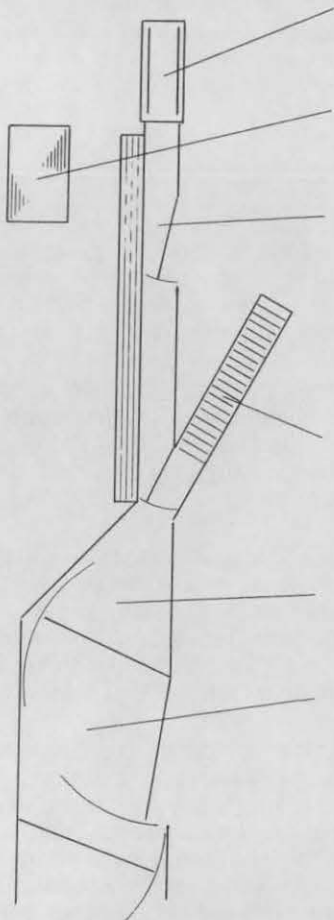
Select an area with enough space to permit future expansion. Provide room for loading and unloading and for parking trucks and other vehicles.

Locate the corral where it will be easily accessible to main roads, even in adverse weather. Use snow fences and diversion ditches to protect loading and unloading areas from snow and mud.

Select a site with sufficient drainage to prevent ponding of runoff water in the pens. A slope of four to six percent usually is adequate. Sandy or gravelly soils require less slope; clay soils require more. If the slope is toward the south, it dries faster following stormy weather. Be sure to consider availability of electrical power for night illumination and for the operation of electrical equipment. Any expense involved in the building of a power line to the corral site needs to be considered against the convenience of the location.

If possible, select the site to take advantage of trees, buildings or hills that serve as windbreaks.

The site should be selected to minimize the possibility of pollution. Place the corral system where prevailing winds will not carry odors directly past homes or public facilities where people congregate. Manure from the corral system must not be allowed to flow into streams or onto roadways.



#### Squeeze Chute or Table:

- Provide easy, positive control of livestock
- Minimize danger or injury to both animal and operator

#### Veterinary Storage Shed:

- Door is kept locked when not being used
- Contains a refrigerator for storage of medicines and vaccines

#### Working Chute:

- Strongly built - needs no overhead cross support
- Has good drainage and a firm base
- Cutting gates can be used for sorting the cattle
- Blocking facilities prevent animals from backing up
- Solid, smooth sides encourage trouble-free cattle movement
- Has elevated walkway along one side

#### Loading Chute:

- Long enough to form easy ramp incline
- Steps or cleats prevent slippage
- Easily accessible by trucks even in wet weather
- Strongly constructed to withstand truck impact

#### Crowding Pen:

- Narrows gradually to chute width
- Gate provides positive crowding
- Single crowding pen can serve several chutes

#### Alleyway:

- Wide enough to allow easy movement of cattle and equipment
- Gates should be long enough to block alleyway
- Extra gates allow use of alleyway as sorting pens
- Alleyway can be used for livestock sorting

Figure 11 : Features of good cattle working facilities.

## Analyzing Your Needs

When first attempting to design your corral system, concentrate on the general orientation of the pens, chutes, and other facilities. After you have found a general layout that seems appropriate, draw it to scale.

If you need to relate your plan to an existing corral system, try to utilize only well constructed facilities. Because the corral system will last many years, it is poor economy to utilize even a well built

part of an existing system if it is going to lower corral efficiency or restrict future expansion.

As you study different corral plans, look for ideas on facility location and on pen arrangement that can be utilized to the best advantage on your site. Use the information in this publication to assist you in designing corral facilities that will provide dependable, safe cattle handling.

Use Table 2 to help evaluate your needs both at the present time and in the future.

Table 2: Chart for planning corral needs. Evaluate the condition and the adequacy of present facilities. For future planning indicate the size, type, and number of units desired.

		Present	Future
1. Maximum loading of corral system at any one time.	No. of cows		
	No. of calves		
	No. of yearlings		
	No. of bulls		
	Total		
2. Total holding pen area needed (see table 1)			
3. Number of holding pens desired			
4. Total sorting pen area needed (see table 1)			
5. Number of sorting pens desired			
6. Loading chutes			
7. Working chutes			
8. Restraining facilities			
9. Weighing scales			
10. Pest control facilities			
11. Water requirements (see table 1)			

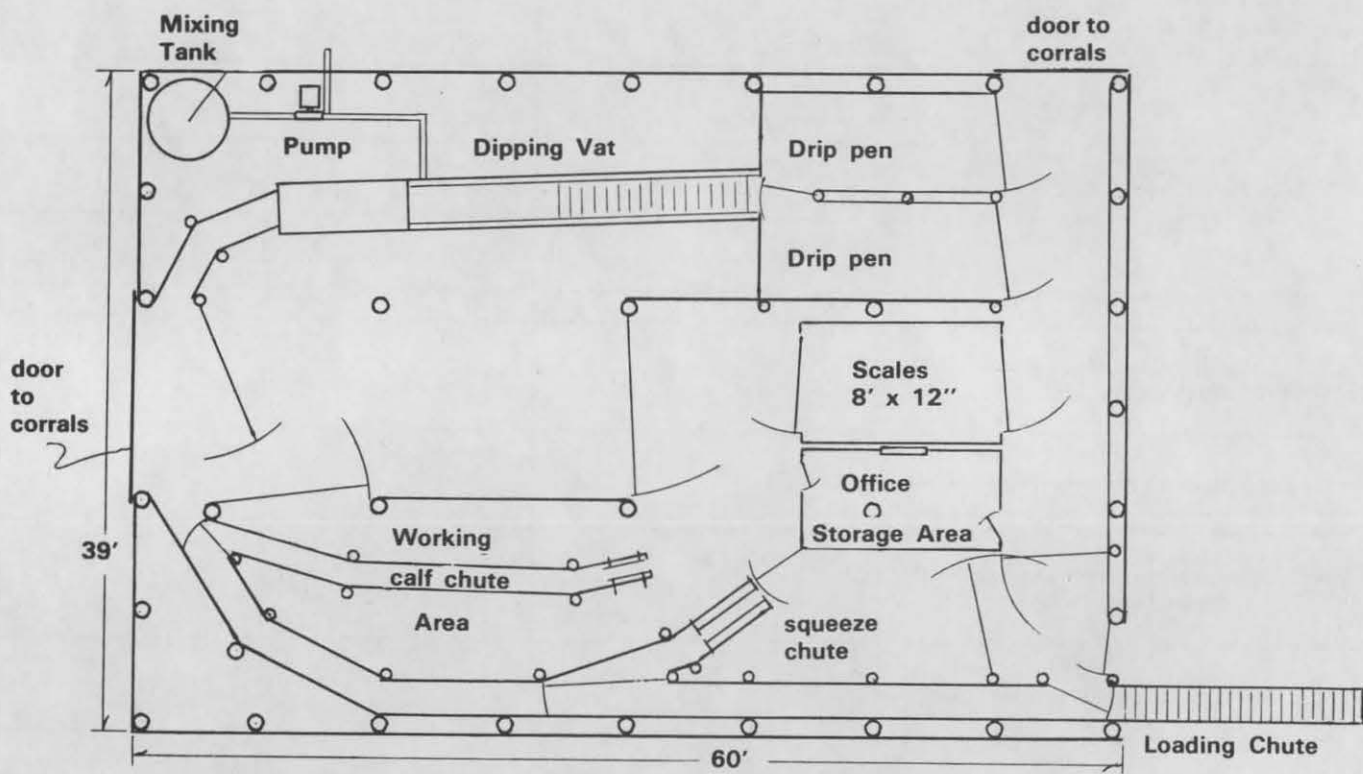
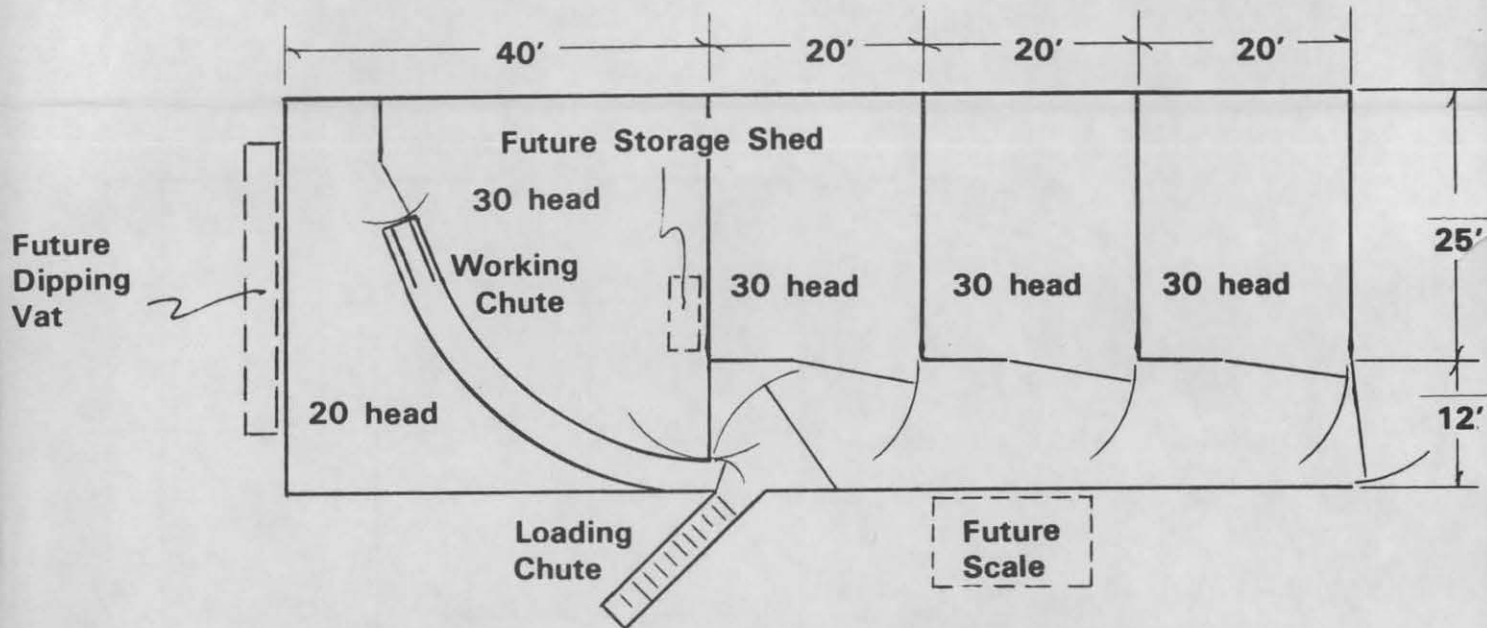


Figure 12: Housed Cattle-Working Facilities, Modified from Farm Building Plan No. 5830, Scale: 1" = 10'

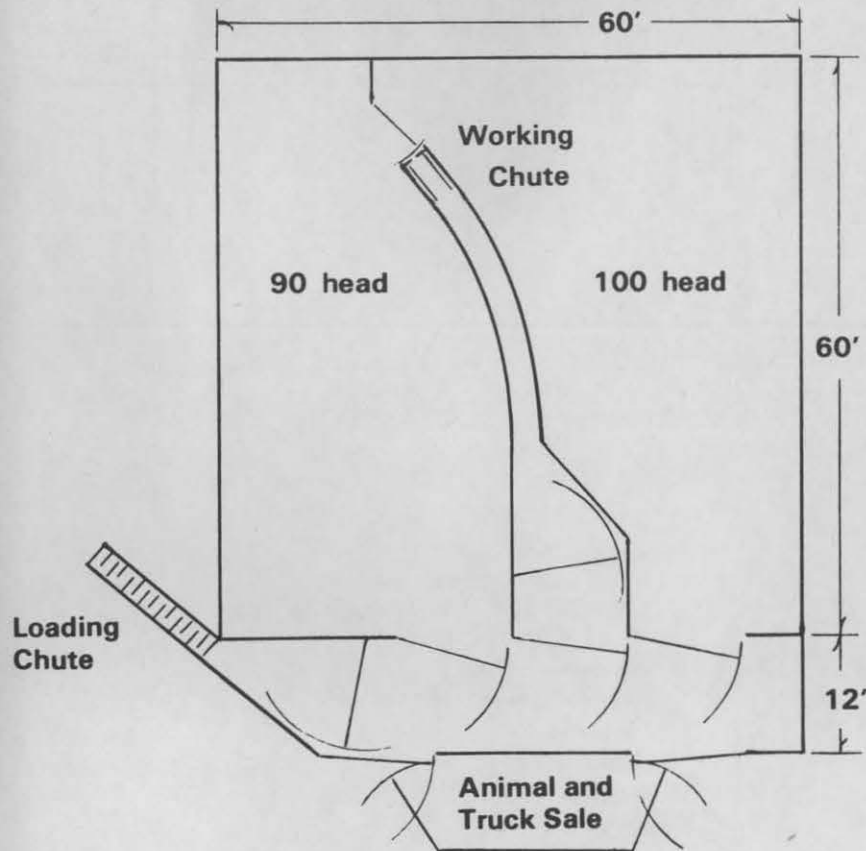


**MATERIALS:**

- 367 feet of corral fence (refer to figure 8)
- 56 corral posts
- 8 gate posts
- 1940 lineal feet of 2" railing
- 1088 machine bolts with washers
- 40 feet of working chute (refer to figure 2)

- 16 feet loading chute (refer to figure 5)
- 6 - 12 foot gates
- 1 - 6 foot gate
- 1 - 3 foot gate
- 1 squeeze chute

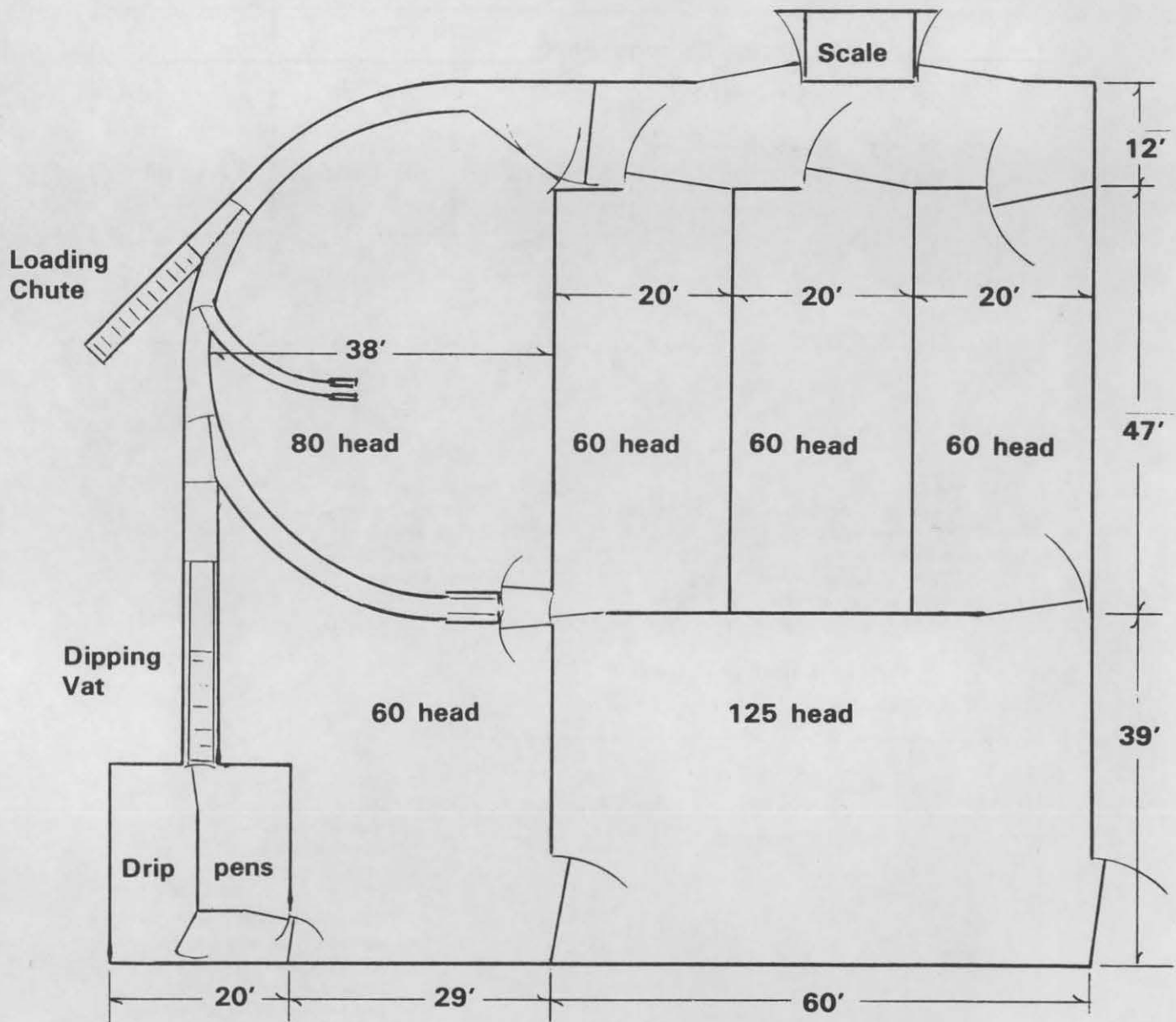
**Future Expansion Area**



**MATERIAL:**

- 323 feet of corral fence (refer to figure 8)
- 48 corral posts
- 10 gate posts
- 1700 lineal feet of railing
- 986 machine bolts with washers
- 30 feet of V-type working chute (refer to figure 2)
- 14 chute posts
- 7 walkway posts
- 420 board feet of 2" railing
- 150 lineal feet of 2x6 for walkway
- 1/2 cubic yard of concrete
- 206 carriage bolts with washers
- 2 1/4 lbs. of 16 d nails
- 16 foot loading chute (refer to figure 5)
- 7 - 12 foot gates
- 2 - 10 foot gates
- 1 - 8 foot gate
- 1 - squeeze chute
- 1 animal and truck scale

Figure 13: Corral systems showing dimensions, capacities and materials.



#### MATERIALS

565 feet of corral fence (refer to figure 8)

90 corral posts

20 gate posts

3131 lineal feet of railing

1870 machine bolts with washers

100 feet of straight-sided working chute (refer to figure 2)

42 chute posts

21 walkway posts

1400 board feet of railing

475 lineal feet of 2 x 6 for walkway

3 1/3 cubic yards of concrete

660 carriage bolts with washers

7 1/2 lbs. of 16 d nails

16 feet of calf chute

8 - 7' posts 4" min. tops

200 board feet of 2" boarding for rails

96 - 3/8" x 8" carriage bolts with washers

16 foot loading chute

10 - 12 foot gates

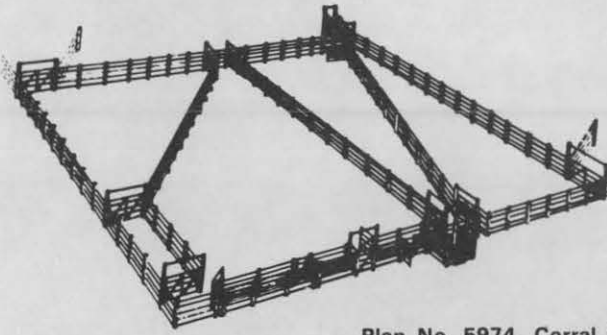
10 - 6 foot gates

1 squeeze chute

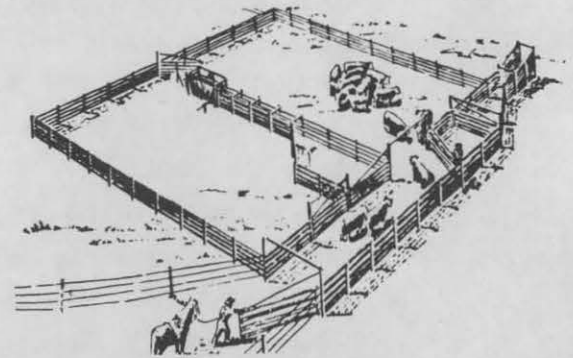
1 calf cradle

1 scale

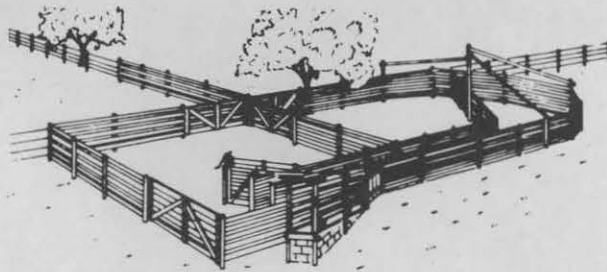
1 dipping vat



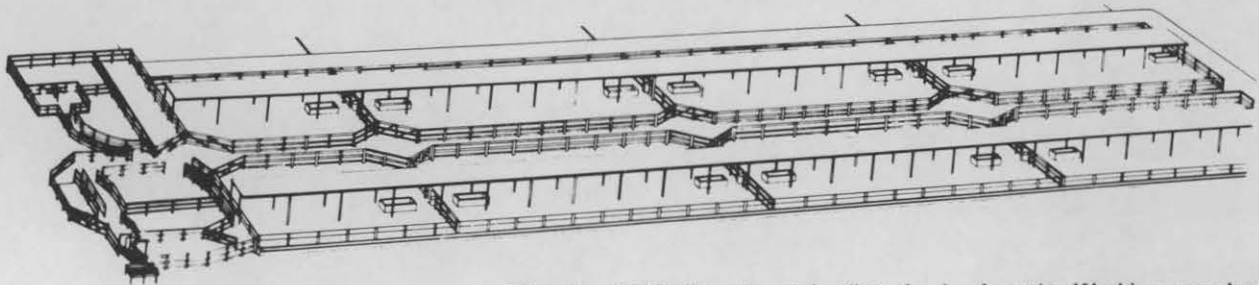
Plan No. 5974. Corral for beef cattle — 120' x 140'. Four pens with loading chute, walkway scales and squeeze chute.



Plan No. 5835. Corral layout — 60' x 72'. Adapts easily to expansion and to the addition of scales.



Plan No. 5991. Beef cattle corral — 24' x 62'. Two holding pens, a crowding pen, and loading ramp.



Plan No. 5920. Corral and feedlots for beef cattle. Working area has curved chute, scales, and loading ramp. Feeding area is optional.

Figure 14 Sketches of corral systems for which plans are available. See the back cover for information on how to obtain these plans.

## Suggested Plans, Catalogs, and Bulletins for Cattlemen

"Beef Equipment Plans," Catalog No. MWPS-6, \$1.00.

Order from Midwest Plan Service, Iowa State University, Ames, Iowa, 50010.

Beef Cattle Corral, No. 5991, \$1.00

Corral for Beef Cattle, No. 5974, \$.50

Range Corral with Chute, Gate, and Fence Details, No. 5952, \$2.00

Ranch Corral, No. 7241-5, \$.50

Corral With Curved Chute, No. 6049, \$1.00

Six Corrals for Beef Cattle, No. 5835, \$1.50

Gates and Fences for Stock Corrals, No. 5961, \$.50

Vat for Dipping Cattle, No. 5876, \$.50

Cattle Dipping Vat, No. 5940, \$1.50

Corral and Feedlots for Beef Cattle, No. 5920, \$.50

Loading Ramp and Six-way Sorting Trap, No. 5960, \$.50

Loading Chute, No. 5852, \$.50

Loading Chute, No. 744-6, \$.50

Variable Width Chute, No. 5850, \$1.00

Cattle Guards, No. 6051, \$1.00

Pole Construction, 39' x 60', No. 5830, \$.50

Plans for Cattle Facilities, Catalog No. C-1, Free

Preservative Treatment of Fence Posts and Farm Timbers, Farmers Bulletin No. 2049, Free

Order from County Agricultural Agent or from Farm Building Plan Service, Agricultural Engineering Department, University of Idaho, Moscow, Idaho 83843.