

Farm Building Plans

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A Well-Planned Farm Home

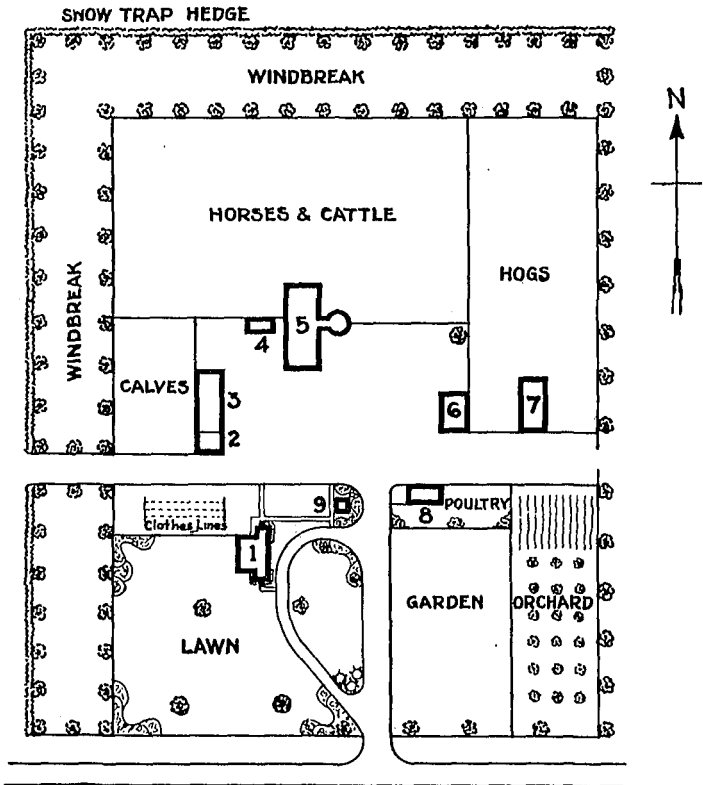
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FARM BUILDING PLANS

Importance of Farm Buildings

The buildings on a well-developed farm represent about one fifth of the value of the farmer's investment and are worthy of more attention and study than they usually receive. The farm may be considered as a manufacturing establishment, the fields furnishing the raw materials and the buildings serving as the central plant. There is often great loss if the buildings are not adequate to shelter the livestock and feed supplies. Young animals will perish in unfavorable weather and farm machinery depreciates rapidly if poorly sheltered. Milk will be more healthful if produced under sanitary conditions. The supply will be more abundant if animals are comfortably housed. The health and happiness of the occupants will be greatly increased in a well-planned modern house.



FARMSTEAD—PLAN 221

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|--------------------|--------------------------|------------------|
| 1. House | 4. Ice and Milk House | 7. Hog House |
| 2. Shop and Garage | 5. Barn | 8. Poultry House |
| 3. Machine Shed | 6. Corn Crib and Granary | 9. Well house |

Essentials of a Good Farmstead

A study of the essentials of a good farmstead shows that the following points should be considered:

1. Ease of access to the fields and pastures and yet near enough to the public road not to be isolated. Usually this locates the farmstead near the middle of one side of the farm.

2. Good drainage around the buildings. This will prevent the water from rain and melting snow from collecting and making the yards and roads almost impassable.

3. Suitable size. The size should be suited to the size of the farm and should take into consideration the kind of farming and the future development of the business.

4. Convenient arrangement of the buildings so that the work of feeding stock, etc., can be done without extra travel.

5. Proper distance of other buildings from the house so that odors, flies, and noises will not be objectionable and danger from fire will not be serious, and yet not so far that unnecessary time will be needed in going to and from them.

6. Proper distance of buildings from road to avoid dust and danger from passing automobiles.

7. Proper location of trees, shrubs, and garden. Trees for the windbreak should be in the direction of the prevailing winds in winter. In Minnesota, this is north and west. The shrubs should be so located as to improve the appearance. The garden and orchard should be near enough for the vegetables and fruits to be cared for and gathered without unnecessary travel.

8. Convenient driveways. These add much to the satisfaction derived from a well-laid-out farmstead.

9. Attractiveness of view from house. It is well to consider this point carefully when locating windbreaks, shrubs, etc., as a view toward the road, the village, or a lake adds to the enjoyment of life. The view from the kitchen windows should be carefully considered, as much time is spent in the kitchen of a farmhouse.

10. The attractive appearance from the public road has much to do with the value of a farmstead and the satisfaction derived from it. The house should have the most carefully selected site and the barns and other buildings should be somewhat in the background.

Building Plans

There are several sources from which the farmer may obtain building plans to aid him in his selection. The lumber and millwork companies, through the local lumber dealer, are giving very efficient service. The barn equipment companies are also supplying valuable information for one who is intending to build.

Carpenters and lumber dealers should have plans of good farm buildings on hand, as they can often help to select the local materials that can be most economically used. In fact, only local men can give a close estimate of the cost of a building and the cost usually determines its size and quality.

Plans of farm buildings have been prepared by the Division of Agricultural Engineering in co-operation with the other divisions of

the University Department of Agriculture. These plans are on file in the offices of the county agents of the state, where farmers may look them over.

Plans in this bulletin may be obtained for 10 cents each or 100 copies of any one blueprint may be obtained for \$3.50. The entire set bound in limp cloth will be sent for \$3.50. The set in four loose-leaf binders, separated as follows: houses, animal shelters, storage buildings, and miscellaneous plans, may be had for \$10. Send orders to Bulletin Department, University Farm, St. Paul, Minn.

HOUSES

PLAN	SIZE	
111	12x20	Kitchen and bedroom, future living room
112	12x24	Kitchen and bedroom, future living room
109	16x26	Two story: kitchen, living room, 2 bedrooms
110	16x26	Two story: kitchen, living room, and future living room; 2 bedrooms and future bedroom
108	20x22	Kitchen, bedroom, combined dining and living room
107	22x24	Kitchen, 2 bedrooms, combined dining and living room
220	22x24	Kitchen, combined dining and living room, 2 bedrooms, and rear porch with grade door
324	22x24	Kitchen, combined dining and living room, 2 bedrooms, and rear porch with grade door
141	22x24	Two story: kitchen, combined dining and living room, pantry, and first floor bedroom; 2 bedrooms
106	24x26	Combined kitchen and dining room and 2 bedrooms
303	24x26	One and one-half story: kitchen, combined dining and living room, 2 bedrooms, and bathroom
304		Second floor plan and side elevation of plan 303
104	24x29	Combined kitchen, dining, and living room, 2 bedrooms, wash room, and future bedroom
103	24x30	Kitchen, combined dining and living room, bedroom, wash room, cellar stairs with grade door, and future bedroom
279	24x30	Kitchen, combined dining and living room, 2 bedrooms, bathroom, and rear porch with grade door
281	24x30	Kitchen, combined dining and living room, 2 bedrooms, bathroom, and cellar stairs with grade door
287	26x26	Kitchen, combined dining and living room, first floor bedroom and bathroom; 2 bedrooms
288		Front and side elevations of plan 287
325	26x26	Two story: kitchen, combined dining and living room, bathroom; 3 bedrooms
326		Front and side elevations of plan 325
105	26x28	Kitchen, living room, 2 bedrooms, cellar stairs with grade door
239	26x28	Two story: kitchen, dining room, living room, sun room, first floor bedroom; 3 bedrooms and bathroom
240		Front and side elevations of plan 239
263	26x30	One and one-half story: kitchen, dining room, living room, sun room, first floor bedroom; 3 bedrooms, and bathroom
264		Front and side elevations of plan 263
102	26x32	One and one-half story: kitchen, dining room, living room, first floor bedroom and bathroom; 2 bedrooms, sleeping porch, and storage room
247	26x34	One and one-half story: kitchen, dining room, living room, first floor bedroom, and bathroom; 3 bedrooms
248		Second floor plan and side elevation of plan 247
123	26x36	Kitchen, living room, 3 bedrooms, cellar stairs with grade door
257	28x30	Two story: kitchen, dining room, living room, first floor bedroom; 4 bedrooms, and bathroom
258		Front and side elevations of plan 257
181	28x32	One and one-half story: kitchen, dining room, living room, sun room, first floor bedroom, and bathroom; 3 bedrooms
182		Front and side elevations of plan 181
122	28x32	Two story: kitchen, dining room, living room, library; 4 bedrooms, bathroom, and sleeping porch
124		Front and side elevations of plan 122

PLAN	SIZE	
143		Basement plan of plan 122
222	28x32	Two story: kitchen, dining room, living room, first floor laundry, pantry; 4 bedrooms, and bathroom
223		Front and side elevations of plan 222
131	28x34	One and one-half story: kitchen, dining room, living room, office, toilet room, sewing room, sun room; 3 bedrooms, and bathroom
132		Front and side elevations of plan 131
126	28x38	Kitchen, dining room, living room, cellar stairs with grade door, pantry, 3 bedrooms, and bathroom
241	28x38	One and one-half story: kitchen, combined dining and living room, 2 bedrooms, and bathroom; 3 bedrooms
242		Front and side elevations of plan 241
203	30x30	Two story: kitchen, dining room, living room, sun room; 3 bedrooms, bathroom, and sleeping porch
204		Front and side elevations of plan 203
212	30x30	Two story: kitchen, dining room, living room, wash room, bedroom, and toilet room; 4 bedrooms, and bathroom
213		Front and side elevations of plan 212
230		Part floor plan showing kitchen, laundry, and men's washroom
298		Stair construction
299		Stairways
215		Wall section of house, names of parts shown

BARNs

Beef

176	58x90	40 cows, 4 pens for young stock, 2 cow pens, 2 bull pens, 8 calf pens
177		End elevation and cross-section of plan 176; Gothic roof, 12-ft. lean-tos

Bull

153	14x14	Shed-roof
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Feeding

138	24x50	Closed feeding space, bull pen
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General Purpose

113	16x18	2 horses, 2 cows
114	16x32	3 horses, 5 cows
115	16x36	3 horses, 4 cows, 3 young stock, pen
236	16x36	Straw stable; 3 horses, 4 cows, 2 young stock, pen
265	28x32	2 horses, 9 cows, calf pen, pen; cows facing out
117	32x50	5 horses, 9 cows, 4 young stock, cow pen, calf pen; cows facing in
277	32x56	5 horses, 10 cows, calf pen, 3 pens; cows facing in
118	34x60	5 horses, box stall, 11 cows, 4 young stock, cow pen, calf pen; cows facing out
197	34x60	5 horses, 12 cows, 3 young stock, cow pen, calf pen, bull pen; cows facing out
119	34x70	5 horses, box stall, 14 cows, 7 young stock, bull pen, cow pen, calf pen; cows facing out
130		Second floor plan of plan 119; 2 grain bins, storage room, and hay mow
244	34x72	5 horses, harness room, 15 cows, 5 young stock, cow pen, calf pen, bull pen; cows facing in
245	34x72	5 horses, harness room, 16 cows, 6 young stock, cow pen, calf pen, bull pen; cows facing out
271	34x72	5 horses, harness room, 15 cows, 5 young stock, cow pen, calf pen, bull pen; cows facing out
133	34x80	7 horses, box stall, stationary elevator, 12 cows, 7 young stock, cow pen, calf pen, bull pen; cows facing out
134		Second floor plan of plan 133; 4 bins, straw and hay mow
174	36x76	5 horses, harness room, box stall, 15 cows, 6 young stock, cow pen, calf pen, bull pen; cows facing out

Horse

185	34x64	12 single stalls at one end, 4 box stalls, feed room, harness room
186	34x66	12 single stalls along one side, 4 box stalls, feed room, harness room

Sheep

PLAN	SIZE	
192	24x32	Shed roof; 50 ewes

Stalls

121		Cows facing either in or out, raised feed alley
188		Cows facing either in or out
187		Single horse, showing details

Stanchions

238		Calf
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Types of Roofs

120		Gambrel roof, width 32 ft.; cows facing in
116		Gambrel roof, width 34 ft.; cows facing out
205		Gambrel roof, width 36 ft.; cows facing out
333		Gothic roof; sawed rafters
254		Gothic roof, width 32 ft.; cows facing in
139		Gothic roof, width 34 ft.; cows facing out
180		Gothic roof, width 36 ft.; cows facing out

Ventilation

320		Gravity system
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CORN CRIBS AND GRANARIES

199	24x32	Driveway: corn on one side and grain on the other
193	26x32	Driveway: elevator, grain bins over driveway
194		Side and end elevations of plan 193

Corn Cribs

166	16x24	Studding 8 ft.: seed corn drying house, capacity 150 bushels
189	24x32	Driveway: capacity 1500 bushels

Granaries

168	16x24	Studding 12 ft.: 4 bins, capacity 2000 bushels
293	26x34	Driveway: elevator, capacity 9000 bushels
294		Side elevation and cross-section of plan 293

FARMSTEADS

251		Development for first, tenth, and twentieth years
145		East facing, rectangular arrangement with two driveways
148		East facing, out-buildings in row parallel to highway
151		East facing, out-buildings in two rows at right angles to highway
319		Measurements
144		North facing, rectangular arrangement with two driveways
196		North facing, modified rectangular arrangement
142		South facing, rectangular arrangement with two driveways
221		South facing, rectangular arrangement with one driveway
146		West facing, rectangular arrangement with two driveways
318		Wiring

GARAGES

184	12x18	1-car; gable roof
311	16x18	1-car, work-bench; hip roof
183	18x20	2-car; hip roof
209	18x20	Auto, tractor, work bench; hip roof
310	18x20	Auto, tractor, work bench; hip roof

HOG HOUSES

289	8x16	Movable hog house, 2 pens; shed roof
306	14x14	Brooder house, 4 pens; gable roof

PLAN	SIZE	
202	22x32	7-pen, 8x9½, feed room; gable roof
101	24x48	12-pen, 8x9, straw storage; gable roof
173	24x48	10-pen, 8x9, feed room, cooker room; half monitor roof
275	24x48	10-pen, 8x9, feed room, boiler room; half monitor roof with inclined wall

Hog Cots

154	6x7	"A" type hog cot
285	6x7	Gambrel roof hog cot
152	6x8	Gable roof hog cot

Hog Shades

246	10x12	Board roof
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ICE HOUSES

171	12x14	Studding 12 ft.; capacity 16 tons
283	12x24	Ice storage 12x14, capacity 14 tons; milk room 10x12

MACHINE SHEDS

210	18x48	Studding 8 ft.: shop and garage 18x20, machinery storage 18x28
253	18x56	Studding 6 and 8 ft.: garage 14x18, machinery storage 18x42
301	20x24	Studding 9 ft.: for combine harvester
127	22x28	Studding 12 ft.: for tractor and separator
208	24x60	Studding 10 ft.: shop 13x18, garage 11x18, machinery storage 24x42
128	24x66	Or longer, studding 10 ft.: shop 16x24, garage 12x24, threshing outfit 24x24
270	36x50	Studding 7 ft., no posts on floor

MILK HOUSES

305	8x8	Cooling tank 2x6
195	10x12	Showing location of separator, cooling tank, etc.
314	10x12	Cooling tank, wash tank, heater and separator
283	12x24	Milk room 10x12, ice storage 12x14, capacity 14 tons

POTATO WAREHOUSES

156	40x50	First floor: total capacity 14,000 bushels
155		Basement of plan 156
162	40x50	First floor: total capacity 16,000 bushels
161		Basement of plan 162
158	40x70	First floor: total capacity 25,000 bushels
157		Basement of plan 158
160	40x80	First floor: total capacity 22,000 bushels
159		Basement of plan 160
167	40x100	First floor: total capacity 29,000 bushels
165		Basement of plan 167
163		Section and wall construction

POULTRY HOUSES

179	16x30	2-pen: broken gable roof, straw loft, sloping ceiling
149	16x30	2-pen: shed roof
150	16x30	2-pen: broken gable roof, sloping ceiling
164	16x32	2-pen: broken gable roof, sloping ceiling
200	16x32	2-pen: shed roof
228	16x32	2-pen: broken gable roof, sloping ceiling
218	20x180	8-pen, 20x20: feed house 20x24
219		Elevation, section, and details of plan 218

Brooder Houses

269	12x14	Brooder house
266	16x20	Brooder house with cool room

Colony House

129	4x8	Colony coop for chicks
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PRIVIES

PLAN	SIZE	
190	4x4½	Earth vault
191	4x4½	Dry earth

ROADSIDE MARKETS

316	5x6	Portable
255	12x12	With counter and shelves

SEPTIC TANK

323		One chamber
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SHOPS AND GARAGES

311	16x18	Workbench, auto
209	18x20	Workbench, auto, tractor
310	18x20	Workbench, auto, tractor

SILOS

226	12x24	Crib, octagon
227		Roof framing for plan 226
125		Roof framing 12, 14, and 16 ft.

SMOKE HOUSE

317	5½x6	Brick and concrete
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STORAGE CELLARS

243	12x20	Capacity 910 bushels, pole frame
201	12x25	Capacity 900 bushels, concrete
229	12x34	Capacity 1150 bushels, concrete

MISCELLANEOUS

PLAN		PLAN	
307	Alfalfa rack (for poultry)	216	Laying out rafters
260	Arbor for lawn or garden	250	Loading chute, take-down
217	Beehive	233	Location of windows for sunlight
272	Bench hook	286	Mailbox post
291	Berry-box carrier	309	Measuring box
300	Berry-box carrier	278	Mechanical pacer, for spacing posts
262	Bird feeder	252	Milk-cooling tank
198	Breeding crate (for swine)	232	Milk stool with support for pail
147	Breeding rack (for cattle)	267	Miter box
136	Bundle rack	315	Nail box
261	Clothes-line post with arbor	290	Nests, 2 high, 5 wide
169	Concrete tank, 5x12 ft.	231	Poultry feed hoppers
140	Dairy record sheet holder	292	Sand box for children
172	Dairy record sheet holder	302	Sawbuck
274	Drawing board	308	Sawhorse
313	Drawing table	273	Saw jointer
295	Dry mash feeder	276	Self-feeder for beef calves
256	Dynamite cap box	135	Self-feeder for swine, 2x4 ft.
331	Evener and single tree	175	Self-feeder for swine, 2x10 ft.
178	Farm name post	297	Squaring a foundation
234	Feed rack for cattle, 8x16 ft.	207	Stitching clamps
235	Feed rack for cattle, 5x16 ft.	268	Tool box, 9x34 in.
259	Feed rack for cattle, on runners	249	Tool cabinet for the farm shop
327	Fence-post bracing	312	Tool cabinet, two doors
284	Garden seat	224	Trap nest, trigger trip
330	Hammer handle	225	Trap nest, trip board
137	Hay rack	282	T Square
321	Hip rafters	214	Types of roofs
322	Hotbed	296	Water stand (for poultry)
211	Kitchen cabinet	206	Wool box for tying fleeces
328	Kitchen work table	280	Wool sack holder
237	Laundry bench for 2 tubs	170	Workbench for farm shop, 12 ft. long
329	Lawn seat	332	Wren house