



June 17, 2004

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The Canada Plan Service is a co-operative provincial network of agricultural engineers, design draftspersons and livestock specialists. It is concerned with the planning, design and construction of modern farm buildings to serve the needs of Canadian agriculture. The Service gathers ideas from across the country and develops these as engineered construction and management recommendations. This makes the latest building technologies and farmstead management practices available to all Canadian farmers.

Each provincial department of agriculture has engineers and other extension specialists who work with farmers that request help in planning building renovations and new construction. Ten technical committees, composed of experts drawn from these specialists and the farm buildings industry, outline and develop the Canada Plan Service publications. These are numbered as series 1000 through 10000, corresponding to: beef; dairy; swine; sheep; poultry; fruits, vegetables and greenhouses; grain, forage and feeds; special structures; building engineering; and environment.

Canada Plan Service publications are prepared by each of the provinces and the Yukon and distributed by the CPS Co-ordination Unit. Some publications take the form of detailed construction plans on large drawing sheets; others are letter-sized management and construction leaflets. When released by the Co-ordination Unit, a copy is distributed to each province and the Yukon, who in turn reproduce and distribute them according to their needs.

A complete information package for a typical farm construction project might consist of two to seven large sheets of drawings plus one or two leaflets giving management and construction information

This index lists the English-language plans and their corresponding leaflets available by number and title. A corresponding index is available that lists those available in French. The letters M I in the 'Plan' column indicate that the plan is available in both 'metric' and 'imperial' dimensions. If you prefer the imperial version of plan 1114, for example, select plan 1114, not M 1114. Many newer leaflets listed as M(I) give both metric (and imperial) dimensions in the same leaflet. Plans that begin with the letter "S" indicate that they were designed in Saskatchewan.

CPS Plans and Leaflets are now available online through the Internet. They can be viewed, printed or downloaded as PDF files.

The Web Site Address for the Canada Plan Service is **www.cps.gov.on.ca**

For additional information please contact

Saskatchewan CPS Library

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**Saskatchewan
Agriculture, Food
and Rural
Revitalization**

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Plan Leaflet No. Title

BEEF CATTLE

	M I	1000	Beef Cattle Housing and Equipment (also see S-100)
I	I	1113	Open-end Beef Barn, Mechanical Feeding
M I	M I	1114	Open-end Beef Barn, Drive-through Feeding
M I	M (I)	1303	Calving Barn
	M	1351	Rigid Frame Calf Range Shelter
	M I	1352	Calf Range Shelter
	I	1353	Portable Pipe Frame Calving Shelter
I	I	1401	Dairy Beef Starter Barn
M I	M I	1453	Western Feedlot for South-facing Slope
M I	M I	1454	Western Feedlot for Diagonal Slope
	I	1455	Cow-Calf Feedlot for 50 Cows
M I	M I	1611	Portable Calf Creep Feeder
	M I	1621	Covered Feed Bunk
	M I	1622	Bunk Feed Cart
	M I	1623	Expandable Feed Bunk
	M I	1633	Fenceline Feeder (Pipe Frame)
	M	1633a	Fenceline Feed Bunks
	M	1640	Positive Shock Fence Feeding of Giant Bales
	M	1641	Two Wire Feeding of Giant Bales
	M I	1642	Giant Bale Feeders (Steel)
	M I	1643	Giant Bale Feeder (Wood)
	M I	1646	Portable Hay Feeder
	M I	1647	Weathervane Mineral Feeder
	M I	1649	Grain Self-feeder
M	M	1650	Chopped Hay Self-Feeder
	M I	1651	Chopped Hay Feeder for Cattle
	M (I)	1800	Cattle Handling Facilities
	M I	1811	Corral and Feedlot Fencing
	M I	1812	Crowding Gate
	M I	1813	Working Chute
	I	1813a	Working Chute: Option Two
	M I	1814	Blocking Gates
	M I	1816	Stationary Adjustable Loading Chute
	M I	1817	Adjustable Loading Chute
	M I	1818	Pregnancy Testing and A.I. Chute
	M I	1819	Herringbone A.I. Breeding Chute
	I	1820	Loading System for Large Trucks
	I	1821	Calf Branding Facility
	M I	1831	Minimum Working Corral
	M I	1835	Large Working Corral
	I	1836	Cattle Working Corral
	M (I)	S-100	Beef Cattle Housing and Equipment Guidelines
	I	S-104	Porous Windbreak Fencing (also see 8368)
	I	S-111	Feed Bunk and Cart
I	I	S-140	50 Cow Calf Feedlot
I	I	S-145	100 Cow Calf Feedlot - Expandable for Feeder Cattle
I	I	S-150	Pole Frame Cattle Shed Single Slope Roof
I	I	S-160	Feedlot – 88 Pens (110' x 70')
I	I	S-161	Feedlot (400 or 800 Head) Mechanical Feeding
I	I	S-162	Feedlot (3600 Head) Earth Surface
I	I	S-163	Feedlot (12000 Head) Earth Surface
I	I	S-164	Feedlot (12000 Head) Earth Surface
	I	S-165	Feed Bunk and Pad
	I	S-181	Single Animal Scale and Scale Cage
	I	S-182	One-Way Gates for Solid-Sided Working Chutes
	I	S-184	Working Chute Cross Section
	I	S-185	Curved Working Chute with Sorting Pens

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Plan Leaflet No. Title

BEEF CATTLE (continued)

I S- 186 Tight-Curved Working Chute
 I S- 187 Semi-Circular Crowding Alley and Working Chute
 I S- 188 By-Pass Curved Chute
 I S- 189 Compact Curved Working Chute

DAIRY CATTLE

M (I) 2000 Dairy Cattle Housing and Equipment
 I 2002 Free Stall Partitions
 M I 2101 Free Stall Dairy System - 60 Cows
 I 2102 Free Stall Dairy System - Slotted Floors
 M (I) 2104 Free Stall Dairy System, 100 to 200 Cows
 I 2106 Free Stall Dairy System - 200 Stalls
 M 2220 Single Story Tie Stall Barn
 M I M (I) 2342 Cold Calf Nursery
 M I M (I) 2343 Warm Calf Nursery - Individual Pens
 I 2402 Open-front Heifer Barn
 M I M (I) 2403 Bedded Pack Heifer Barn
 M I M (I) 2404 Free Stall Dairy Calf and Heifer Barn
 M I M I 2501 Herringbone Milking Centre (Single Return Alley)
 M I M I 2502 Herringbone Milking Centre (Two Return Alleys)
 I 2503 Milking Parlour Bonding to Prevent Tingle Voltage
 M I 2512 Milkhouse, Outside Vestibule
 M I 2513 Milkhouse, Office and Washroom
 I 2514 Milkhouse with Equipment Room
 M I 2623 Feed Cart
 M I 2658 Tombstone Feed Fence for Young and Adult Cattle
 M I 2663 Mineral Feeding Box
 M I 2806 Bullyard
 M I 2821 Single Headrail Tie Stall
 M I 2822 Low Arch Chain Tie Stall
 M I 2823 Stanchion Tie Stall
 M I 2831 Portable Tie Stall Unit for Calves
 M I 2832 Calf Hutch
 M I 2834 Individual Calf Pen

SWINE

M (I) 3000 Swine Housing and Equipment
 M (I) 3002 Site and Facilities Planning for Swine
 M (I) 3003 Swine Barn Construction and Services
 I 3112 Hog Barn - Farrow-to-Finish Pens
 M I M 3236 Breeding-Gestation Unit, Pen Stalls and Group Pens
 M I M 3241 Two-room Breeding and Gestation Unit
 M I M (I) 3303 Three-room Farrowing, Three-room Weanling Unit
 M I M (I) 3304 Five-room Farrowing, Five-room Weanling Unit
 M M I 3428 Grower-finisher Unit
 M I M 3433 Naturally Ventilated Grower-finisher Barn
 M I M (I) 3434 Grower-finisher, Natural Ventilation, Truss Roof
 M I M 3435 Modified Open-front Grower-finisher
 I 3550 Alternative Low-cost Swine Housing
 M (I) 3700 Swine Manure Systems
 M (I) 3701 Cast-in-place Concrete Slotted Floors for Swine
 M 3800 Farrowing Pens
 I 3803 Farrowing Crate with Side Creeps
 M I 3812 Welded Steel Farrowing Stall
 M I 3843 Gestation Pen Stalls
 I 3952 Swine Barn Lighting Worksheet

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SWINE (continued)

I S-301 Outdoor Sow Housing
 I S-304 Low Cost Feeder Pig Housing

SHEEP

	M I	4000	Sheep Housing
M I	M I	4111	Pole Frame Sheep Shed
I		4121	Semi-Confinement Sheep Facilities for 1000 Ewes
I		4122	Sheep Drylot Unit
	M (I)	4123	Sheep Drylot Unit
I	I	4151	Open-end Pole Sheep Barn, Drive-thru Feeding
M I	M I	4152	Open-end Pole Sheep Barn, Mechanical Feeding
M I	M I	4154	Slotted Floor Sheep Barn
I		4311	Lambing Unit
	M (I)	4312	Expandable Lambing Unit
	I	4551	Shearing Table
	M I	4552	Shearing Floor and Fleece-sorting Table
	M I	4553	Fleece Packing Frame
	M I	4611	6-sided Sheep Feeder
	M I	4612	Adjustable Feed Bunk Adapted for Sheep
	M I	4613	Fixed Mineral Box
	M I	4614	Portable Mineral Box
	M I	4615	Grain Feeders for Lambs
	M I	4616	Sheep Fenceline Feeder, Steel Posts
	M I	4617	Sheep Fenceline Feeder, Wood Posts
	M I	4621	Hay and Grain Feeder for Sheep
	M I	4622	Walk Through Sheep Feeder
	M I	4623	Lamb Creep with Feeder
	M I	4624	Portable Hay Feeding Fence for Sheep
	M I	4625	Sheep Feed Rack
	M I	4628	Chopped Hay Feeder for Sheep
	I	4629	Large Round Bale Sheep Feeder
	M I	4632	Sheep Salt and Mineral Feeder
	M (I)	4633	Walk Through Hay and Grain Feeder
	M (I)	4811	Sheep Corral Unit
	M (I)	4812	Working Chute
	M I	4813	Sheep Corral Fencing and Gates
	M (I)	4831	Portable Claiming Pen
	M I	4832	Portable Fence Sections
	M	4841	Sheep Loading Chute for Double Decker Truck
	I	S-420	Sheep Handling Facilities - 100 Head
	I	S-431	Semi-Confinement Sheep Facilities (40 Ewes, 75 Feeder Lambs)
	I	S-432	Semi-Confinement Sheep Facilities (80 Ewes, 150 Feeder Lambs)
	I	S-433	Semi-Confinement Sheep Facilities (160 Ewes, 300 Feeder Lambs)
	I	S-434	Semi-Confinement Sheep Facilities (240 Ewes, 450 Feeder Lambs)
	I	S-461	Hay and Grain Feeder for Sheep
	I	S-482	Electric Wire Fencing for Sheep Pastures

POULTRY

	M I	5000	Poultry Housing
	I	5015	Nests
I	I	5101	General Purpose Single Story Poultry House
	M (I)	5210	Layer Housing
I	M (I)	5255	300 Hen Laying House (Minimum Facilities)
	M (I)	5310	Broiler Housing
	M (I)	5320	Pullet Housing

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POULTRY (continued)

I 5602 Lighting for Poultry Housing
 M 5603 Water Requirements for Poultry
 M (I) 5702 Proper Disposal of Dead Poultry
 M (I) 5911 Light-Restricting Fan Houses and Air Inlets

FRUITS, VEGETABLES AND GREENHOUSES

M (I) 6000 Fruit and Vegetable Storage
 I 6002 Onion Storage Building
 M I M I 6110 Bulk Vegetable Storage Wall (Not Refrigerated)
 M I M I 6111 Refrigerated Bulk Vegetable Storage Wall
 M I M I 6112 Refrigerated Pallet Fruit and Vegetable Storage Wall
 M I 6113 Controlled Atmosphere Pallet Storage Walls
 M I M I 6115 Bulk Vegetable Storage Interior Wall
 M M 6116 Controlled Atmosphere (CA) Storage
 M I M I 6119 Hotbed and Coldframe
 M I M I 6121 Insulated Storage Doors
 I I 6122 Potato Bin Bulkhead
 M I M 6131 Steel Ceiling Diaphragm for Bulk Vegetable Storage
 M I 6311 Braced Rafter Bulk Vegetable Storage
 M I M (I) 6312 Bulk Potato Storage with Side Air Plenum
 I M (I) 6313 Bulk Potato Storage, 2500 tonnes, 2 Bins
 I M (I) 6314 Bulk Potato Storage, 1725 tonnes (1900 tons), 3 bins
 I M (I) 6315 Bulk Potato Storage, 590 tonnes (650 tons), 2 bins
 I M (I) 6319 Walk-In Cooler
 M I 6321 Small Rootcellar
 M (I) 6330 Fruit and Vegetable Storage Insulation
 M 6666 Tunnel Forced-Air Coolers
 M 6701 Greenhouse Heating Requirements
 M (I) 6704 Greenhouse Ventilation
 M I M 6720 Two Layer Polyethylene Greenhouse
 I S- 601 Basement Vegetable Storage
 I S- 691 Pea Sheller

GRAIN, FORAGE AND FEED

M (I) 7000 Grain, Forage and Feed Structures
 M I M (I) 7111 Foundation for Circular Steel Grain Bins
 I 7114 Concrete Footings for Steel Hopper Bottom Bins
 M I 7123 Portable Granary – 1300 Bushels (12' x 16')
 M (I) 7128 Tall Portable Self-supporting Grain Wall
 M (I) 7129 Short Portable Self-supporting Grain Wall
 M I M (I) 7134 Grain Bin Arrangements
 I I 7212 Corn Crib
 M M 7231 Dump Pit and Leg Boot
 M (I) 7410 Silo Gas
 M (I) 7432 Pole-Type Horizontal Silo
 M I M (I) 7435 Above-ground Horizontal Silo
 M I M (I) 7436 Roofed Horizontal Silo
 M I M (I) 7601 Hay Storage for Round or Rectangular Bales
 I M I 7602 Hay Storage with Trusses Spaced 8 ft.
 M (I) 7651 Heap Silos
 M I M (I) 7821 Grain and Feed Processing Centre
 M I M (I) 7824 Multiple Feed Bins
 I S- 711 Natural Air Grain Drying Foundation for Circular Steel Grain Bins
 I S- 720 In-Line Grain Bin Arrangements
 I S- 791 Concrete Footings for Steel Hopper Bottom Bins

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SPECIAL STRUCTURES

M I	M I	8161	Open-end Pole Barn – Gable End Roof
M I	M I	8162	Open-front Pole Shed – Single Slope Roof – Side to Side Rafters
M I	M I	8163	Open-front, Clear-span Pole Barn – Gable End Roof
I	I	8164	Pole Frame Cattle Shed - Single Slope Roof – Front to Back Rafters
I	I	8201	Barn for Riding Horses
I	I	8202	Barn for Riding Horses - 6 or 10 Box Stalls
M I	M (I)	8203	Two-story Horse Barn
I	I	8211	100 Goat Milking Barn & Feed Area
	M	8242	Rabbitry
	M	8246	Rabbit Hutches
M	M	8248	240 Doe Rabbitry
M I	M (I)	8311	Pole Framed Machinery Storage (End Opening Doors – Knee Braced)
I	I	8312	Pole Framed Machinery Storage (Side Opening Doors – Diaphragm Roof Braced)
M I	M (I)	8313	Stud Wall Machinery Storage (Diaphragm Roof Braced)
M I	M (I)	8314	Stud Wall Machinery Storage (Knee Braced)
M (I)	M (I)	8315	Gambrel Roof Barn
I	I	8342	One Car Garage (14' x 26')
I	I	8343	Two Car Garage (22' x 26')
	M I	8362	Texas Gate (Vehicle Pass)
	M I	8364	Farm Gate
	M (I)	8365	Page Wire Fencing
	M (I)	8366	Barbed Wire Field Fencing
	M (I)	8367	Barbed Wire Suspension Fencing
	M I	8368	Windbreak Fences (also see S-104)
I		8421	Circular Portable Fertilizer Bin - 8' High
I		8422	Circular Portable Fertilizer Bin - 4' High
M I		8440	Cistern
I		S-806	Farm Workshop (44'X32')

BUILDING ENGINEERING

	M	9010	Building in Metric
	M (I)	9011	Metric Fact Sheet
	M	9012	Specifying Concrete for Agricultural Applications
	M (I)	9100	Roof Trusses
	M I	9101	Building Your Own Roof Trusses
	M (I)	9102	Truss Erecting and Bracing
	M (I)	9250	Gambrel Roof Braced Rafters
	M (I)	9301	Roof Purlins and Rafters
	M (I)	9307	Knee-brace Systems for Windbracing Farm Buildings
	M (I)	9308	Buttresses for Windbracing Farm Buildings
	M(I)	9309	Concrete Retaining Walls
	M	9310	Steel Roof Diaphragm Wind Bracing with Stud Walls
	M I	9311	Sawn and Round Pole Selection Charts
	M (I)	9312	Plate Beams and Lintels
M I	M	9314	Insulated Pole Frame Walls
M I	M I	9324	Insulated Stud Frame Walls
	M I	9341	Sliding Doors
I	M (I)	9342	Insulated Bi-fold Shop Door
	M I	9351	Plastic Curtain Wall Ventilation
	M I	9355	Tilt-in-wall Panel Ventilation
M I	M	9371	Steel Ceiling Diaphragm
M	M	9374	Plywood Ceiling Diaphragm
	M	9401	Wood Preservatives
	M (I)	9451	Rodent and Bird Control in Farm Buildings
	M	9611	Stray Voltage
	M (I)	9700	Fan Ventilation Principles and Rates

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BUILDING ENGINEERING (continued)

	M (I)	9702	Troubleshooting Livestock and Poultry Ventilation Problems
	M (I)	9703	Ventilation Instruments
	M (I)	9705	Selecting Fans for Livestock Buildings
	I	9706	Temporary Winter Back-draft Damper
	M (I)	9707	Protecting Workers in Livestock Barns From Dust and Gases
	M (I)	9708	Farm Workers Health Problems Related to Air Quality Inside Livestock Barns
	M (I)	9710	Fresh Air Inlets
	M I	9715	Self-adjusting Slot Air Inlets
M (I)	M	9731	Passive Solar Shop Heating
	M I	9732	Solar Ventilation Wall with Heat Storage
	M (I)	9735	Hot Water Floor and Space Heating
	M (I)	9750	Ventilating and Heating Small Livestock Rooms
	M (I)	9760	Natural Ventilation
	M	9765	Sizing Openings for Naturally Ventilated Barns

ENVIRONMENT

	M	10702	Manure Handling From Barn to Storage for Beef and Dairy Cattle
	M	10703	Manure Handling From Barn to Storage for Poultry Facilities
	M	10704	Odour Control for Livestock Facilities
M I	M I	10706	Clay-lined Manure Storage Pond with Pumping Dock
M I	M I	10707	Curbed Storage Slabs for Stacked Manure
M I	M I	10708	Rectangular Roofed Storage for Semi-solid Manure
	M	10710	Manure Gas
M I	M (I)	10712	Concrete Covered Rectangular Manure Tanks
M I	M (I)	10713	Open Rectangular Manure Storage
M(I)		10730	Open Circular Manure Storage Tanks
M(I)		10731	Open Rectangular Manure Storage Tanks with Cantilever Walls
M(I)		10732	Open Rectangular Manure Storage Tanks with Buttressed Walls
M(I)		10733	Covered Circular Manure Storage Tanks
M(I)		10734	Covered Rectangular Manure Storage Tanks