



# Prairie Rose Wind Farm

200 MW Facility

in

Luverne, MN

## Project Overview

Operational Capacity: 200 megawatts

Annual Power Production: Approximately  
60,000 homes

Carbon Dioxide Displaced: Roughly 360,000  
tons

Turbines: 119 (1.68 megawatt each)

Participating Land: About 20,000 acres

Project Investment: \$350 million

Jobs: 10 to 15 full-time jobs created after the project's completion; around 200 short-term construction jobs created during development; plus the countless workers needed to manufacture and supply the wind turbines.

Once producing power, the Prairie Rose Wind Farm will become the area's cash crop and will provide a significant revenue boost in the sum of just over \$1 million each year to landowners in the project's footprint. The energy produced by the wind farm will be taxed – providing an estimated revenue increase to Rock and Pipestone Counties of \$594,278 each year (\$11.9 million over the next 20 years), and a tax revenue inflow each year of at least \$184,570 to local townships. (80% to County, 20% to city or township).

Lease agreements have been signed with landowners for the towers, and rights have been acquired for placement of nearly 30 miles of transmission line that will run from the center of the wind farm to the Split Rock Substation near Brandon, S.D.

## **How is land supporting a wind energy conversion system treated for taxation purposes?**

The land area that supports a wind tower, its auxiliary improvements, and a road is taxable as real property to the fee owner. The property tax classification must be based on the most probable use of the property if it were not improved with a wind energy conversion system, but the valuation methodology used is at the discretion of the county assessor. For instance, a wind tower site located in a corn field would be properly classified as agricultural for tax purposes, but its value would be like commercial , industrial or other types of property not used for agricultural purposes. In other words, the value of a wind tower site would be comparable to the value established for some communication tower and billboard sites. However, if approved by the County, the value is the same as the value of similar land that is not improved with a wind energy system.

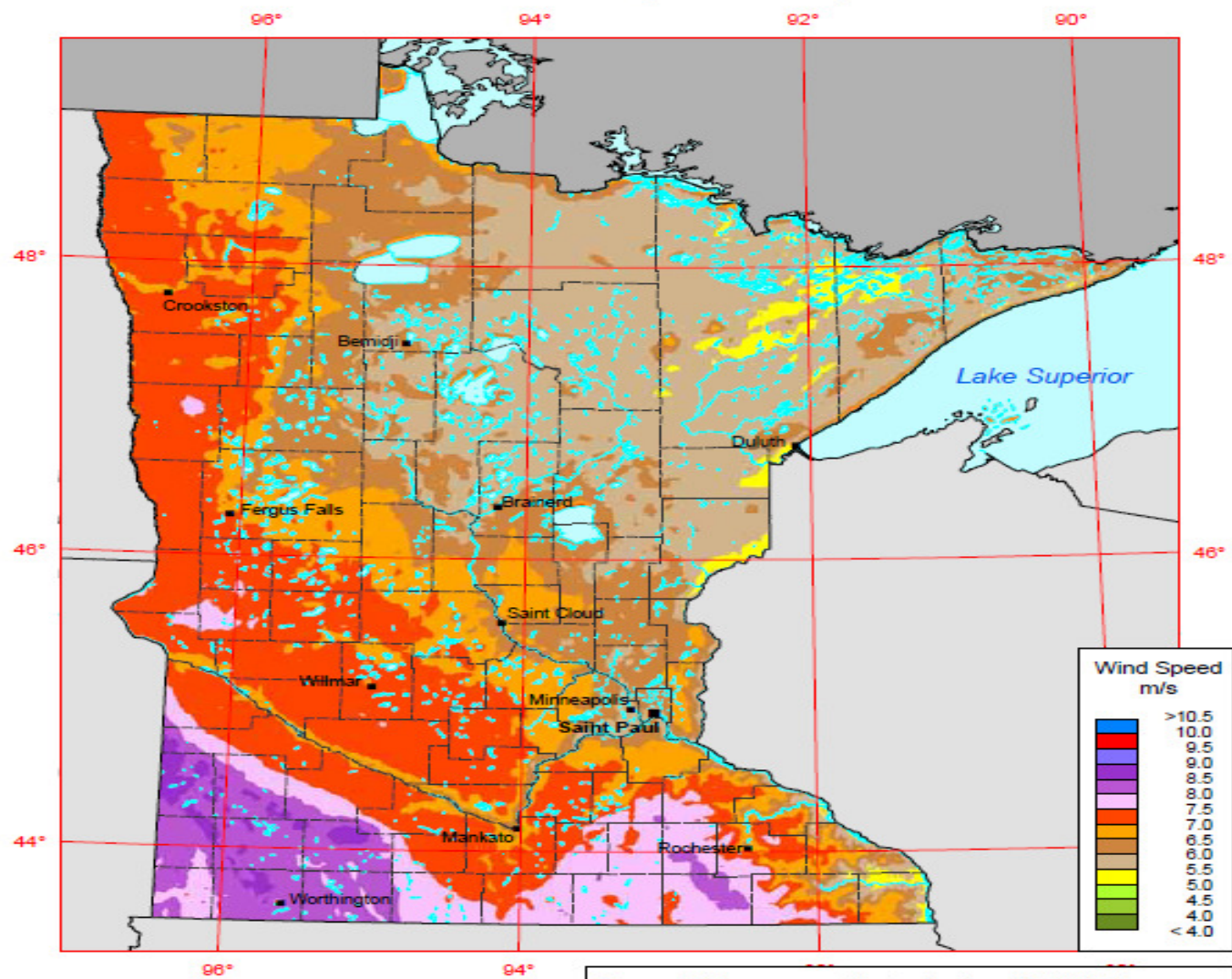
# WEPT (Wind Energy Production Tax)

- Tax Calculation:
- Nameplate Capacity in MW hours converted to Kw Hours
- Large (>12 MW) Kwh x 0.12 cents
- Med (2-12 MW) Kwh x 0.036 cents
- Small (0.25 - 2 MW) Kwh x 0.012 cents
- Exempt  $\leq 0.25$  MW

**Is there an alternative method of property taxation that can be applied to a wind energy conversion system?**

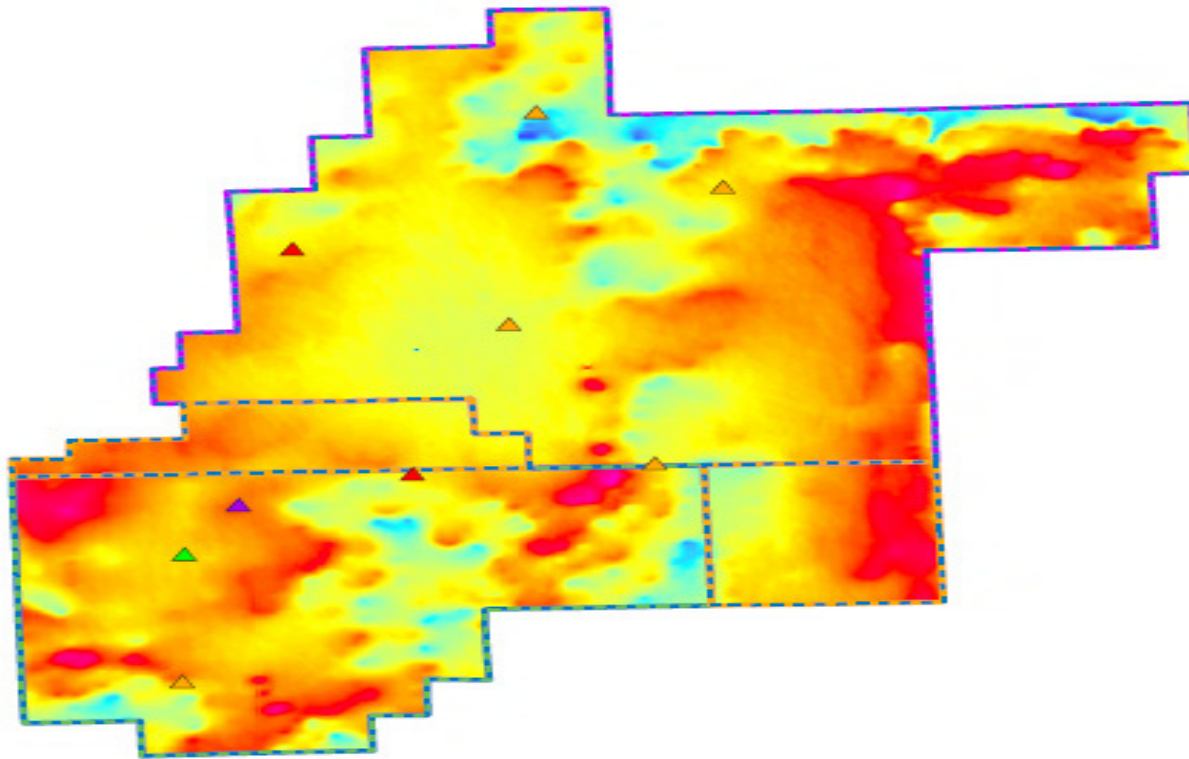
Yes, a company may negotiate with the county to establish a payment in lieu of the wind energy production tax. This payment must cover fees and compensation to the county and city or township where the facility is located to maintain the public infrastructure and services. It may be based on production capacity, historical production, or other factors agreed upon by the parties. The in lieu of tax agreement must also be signed by all parties and filed with the Commissioner of Revenue and county recorder. This exemption from the production tax is effective for the same duration as the payments are in effect.

# Minnesota - Annual Average Wind Speed at 80 m



Source: Wind resource estimates developed by AWS Truepower, LLC for windNavigator®. Web: <http://www.windnavigator.com> | <http://www.awstruepower.com>. Spatial resolution of wind resource data: 2.5 km. Projection: UTM Zone 15 WGS84.

# WIND RESOURCE



Wind Speed  
m/s  
High : 8.2802  
Low : 7.7597

- Existing Met Towers
- Proposed 60m Met Towers
- Proposed 80m Met Tower
- Solar Location

Map Date:  
9/23/2010

0 0.5 1  
Miles



	Murray
Rock	Nobles

AREA OF INTEREST



# CURRENT AERIAL



**LEGEND**

-  Project Boundary
-  Municipal Boundaries
-  County Boundaries

**DATA SOURCES:**  
 AERONIMO WIND ENERGY  
 2008

0 1 2  
 MILES

Map Date:  
 9/23/2010



**AREA OF INTEREST**

	Murray
	Nobles

# RCN

- 119 Towers required for 200MW facility
- \$350MM for 200MW project
- Or \$1.75MM per MW

# Land Requirement

Approximately 10 megawatts (MW) can be placed on a section of land. Wind turbines are usually spaced 5 to 10 rotor diameters apart. The spacing criteria allow approximately twelve 750-kilowatt (kW) turbines or six 1.5-MW turbines on a section of land. Developers usually place the turbines as close together as possible to reduce the costs for wire and roads, but they do not want to create wake losses by placing the turbines too close together.

# Income to Property Owner

- 1<sup>st</sup> year payment for a 160 acre tract w/one turbine =
- \$6,000 per turbine
- \$20/acre rent w/2% escalation
- =\$3,200 per year
- Total Payment would be \$9,200 for the 1<sup>st</sup> yr.
- Multiplied by 119 turbines = \$1,094,800



**GEVO – formerly Agri-Energy Ethanol Plant**

# Gevo Isobutanol/Ethanol Facility

- Purchased in Sep 2010 from Agri-Energy for \$20.7MM.
- 22MGPY Ethanol Facility/67,000T DDG
- The cost to retrofit the facility to produce Isobutanol is approx. \$17MM
- Annual production of isobutanol is est. @ 18MGPY









172 Acres of Pasture Land is under contract for \$4,100/acre. Located off blacktop road NW of Luverne. Up until this sale, typical pasture rents were between \$50-\$75/acre, but are likely to increase as a result of this sale.



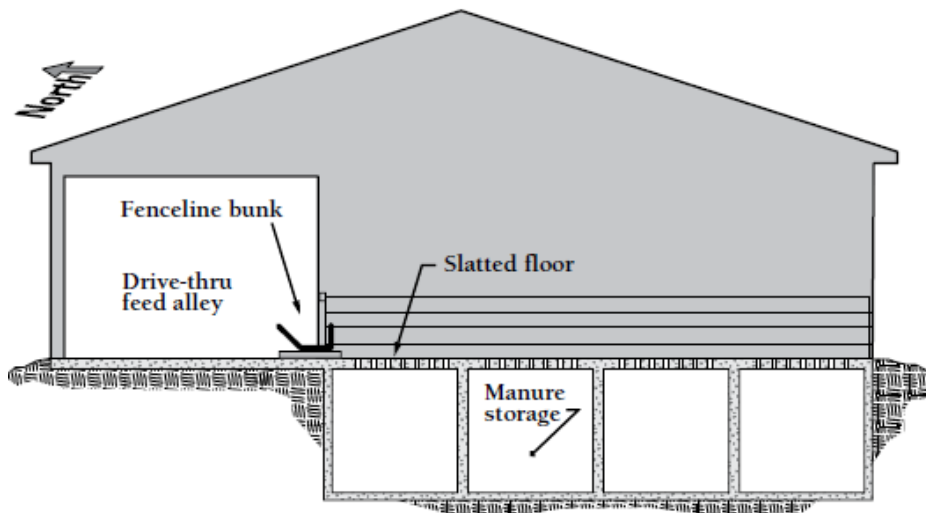
# Ahrendt Brothers Pit Barn



# Types of Feedlots

## Confinement with deep pits

- 2/3 acre for 1,000 head
- Very Large Investment ~\$1,000,000
- Total manure capture
- Minimal maintenance



# Cost to Build

- Per 1,500 Head
  - Earthen Lot with Windbreak = \$365/hd = **\$547,910**
  - Earthen Lot with Shed = \$625/hd = **\$937,910**
  - Concrete Lot with Shed = \$743/hd = **\$1,114,910**
  - Confinement-Solid Floor = \$613/hd = **\$919,410**
  - Confinement-Slatted Floor = \$705/hd = **\$1,058,160**

Data from Iowa State University, 2007

<b>Ahrendt Brothers Partnership</b>		
<b>Pit Barn Summary of Costs - 2011</b>		
<b>109 X 350</b>		
<b>1350 capacity</b>		
Wieser Concrete Products, Inc - concrete slats		286,582.00
Land Management - permit		957.69
ProAg Engineering Inc - design/survey		6,278.50
Tinklenberg Lumber - rebar for concrete		64,835.59
Buffalo Ridge Concrete - concrete material		129,039.67
McClure Electric		32,451.90
Remme Construction - labor		132,512.63
Rio Ranch Supply Inc - sucker rod		12,599.22
Gorter's Clay & Dairy - curtains		41,222.06
Henning Construction - sitework		47,789.89
Cleveringa Construction		375,548.42
Rock Valley Precast - feed bunks		17,230.00
W&W Welding - steel/welding for gates		10,780.00
Orv's Plumbing & Heating		38,338.19
		<u>1,196,165.76</u>

# Manure Pits

Manure pits and appurtenances, which may include slatted floors and pipes, installed or operated in accordance with a permit, order, or certification of compliance issued by the Minnesota Pollution Control Agency (MPCA) are exempt. The exemption shall continue for as long as the permit, order, or certificate issued by the MPCA remains in effect. As always, the actual use of the property is necessary to determine exemption eligibility. The Department of Revenue has issued an opinion relating to a manure pit under a hog barn. The department determined that the hog barn was not exempt from property taxes, as the primary use of the property was still as a hog barn. The presence of the manure pit did not automatically allow for an exemption.

Primary Statutory References: 272.02, subd. 28

THE ASSESSMENT OF SLATTED FLOORS AND PITS  
AND OTHER POLLUTION CONTROL DEVICES

M.S. 272.02 provides that real and personal property used primarily for pollution control will be exempt from property taxes. Equipment and devices to be exempt must be installed pursuant to a Minnesota Pollution Control Agency Permit or order.

The types of things that are eligible for this tax exemption of real property include dikes, diversions, slatted floors and manure storage pits and settling ponds or detention ponds for collection of the run-off from open feedlots and yards.

Any taxpayer requesting exemption of all or a portion of any real property or any equipment or device, or part thereof, operated primarily for the control or abatement of air or water pollution must file an application with the County Assessor. The equipment or device must meet standards, regulations or criteria prescribed by the Minnesota Pollution Control Agency, and must be installed or operated in accordance with a permit or order issued by that agency. The equipment or device will continue to be exempt from taxation as long as the permit issued by the Minnesota Pollution Control Agency remains in effect.

To facilitate proper and speedy processing of such exemptions, the Township Assessor is requested to list the slats and pit value separate from the value for the remainder of the structure on the field card.

If any additional information is requested, the taxpayer should be directed to contact the County Assessor's office.



Values of pit walls per LINEAL foot:

	<u>DEPTH</u>		
Pit Wall	1'	\$11.25	
(Values per lineal	1.5'	\$12.50	
ft of pit wall)	2'	\$14.00	
	3'	\$17.00	
	4'	\$20.00	Variable % per year
	5'	\$25.75	
	6'	\$29.75	
	7'	\$35.50	
	8'	\$39.50	
	9'	\$45.00	
	10'	\$50.75	

ADD FOR:

Slatted Floor \$ 4.00  
 (Value per sq ft of slatted area)

Concrete Pit Floor (Value per sq. ft. of pit area) Variable % per year

Less than 6" and wire mesh \$3.50 per sq. ft.  
 6" and re-rod \$5.00 per sq. ft.

Concrete Pit Cover (Value per sq. ft. of pit area)

Less than 6" and wire mesh \$3.50 per sq. ft.  
 6" and re-rod \$5.00 per sq. ft.

# Feedlot Production

## Open

- Average Daily Gain =
  - Study 1 = 3.55 lbs
  - Study 2 = 3.4 lbs
- Feed:Gain =
  - Study 1 = 6.96 lbs
  - Study 2 = 7.11 lbs

## Confined-Bed pack

- Average Daily Gain =
  - Study 1 = 3.62 lbs
  - Study 2 = 3.53 lbs
- Feed:Gain =
  - Study 1 = 6.73 lbs
  - Study 2 = 6.76 lbs

Results from Dr. Ben Holland, SDSU, Opportunities Farms







# Monoslope Barn



# Monosloped Roofs

- Single-pitched monosloped (skillion) roofs over manure storage areas or feedlots intended to prevent runoff may be exempt. Only the roofs are eligible for exemption; sidewalls or other improvements do not qualify for exemption. To be eligible for exemption, the roof must prevent runoff.

- Primary Statutory References: 272.02, subd. 87

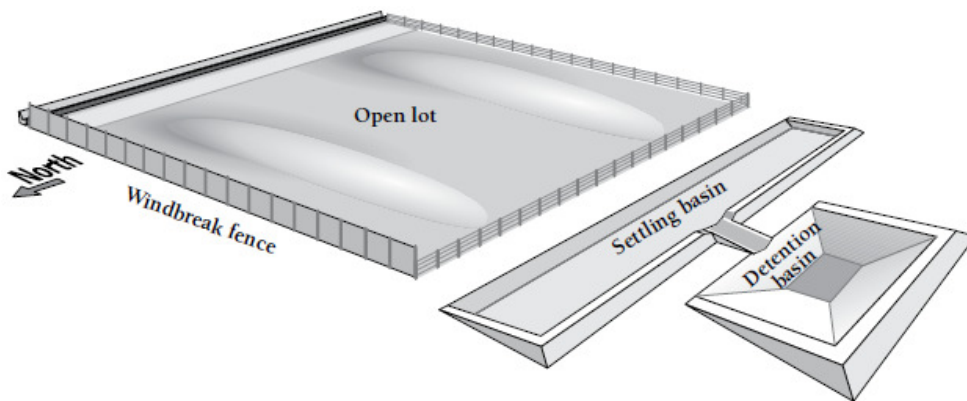




# Types of feedlots

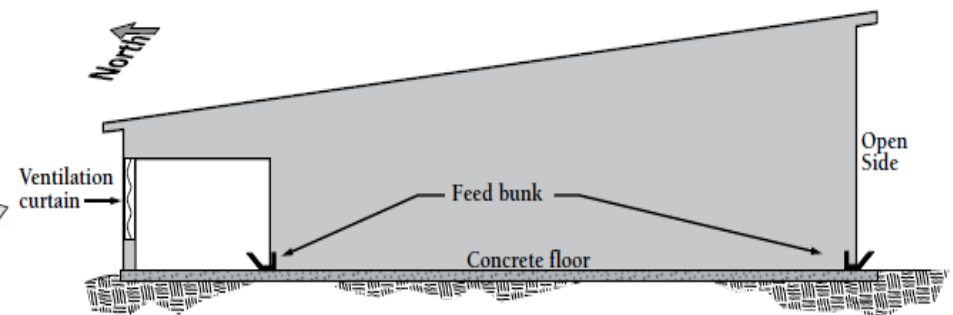
## Open with runoff control

- 6 acres for 1,000 head
- Small Investment ~\$300,000
- Lagoon for manure
- Reshape dirt & bed pack



## Confinement with bed pack

- 1 acre for 1,000 head
- Large investment ~\$700,000
- Scrape manure >weekly
- Maintain bed pack



<b>Ahrendt Brothers Partnership</b>		
<b>Monoslope Barn Summary of Costs - 2005</b>		
<b>100 X 360</b>		
<b>900 head capacity</b>		
Niemann Construction - steel		162,000.00
Entirely Seamless Inc - steel roof insulation		18,225.00
Land Management - permit		623.76
P&K Fabricating - gates		2,601.00
Remme Construction - cement & labor		126,150.20
McClure Electric		3,953.95
Gorter's Clay & Dairy - curtain		15,163.74
Reker Construction - site work		32,500.00
Overhead Door - doors		6,625.00
Adrian Tile - bunks		12,014.27
Rust Fencing - sucker rod		3,600.00
Pronk Ready Mix - gravel & rock for cement work		7,117.64
Orv's Plumbing & Heating		10,203.11
		<u>400,777.67</u>



## **Monosloped Roof Site Requirements**

The new language is clear in stating the exemption only applies to roofs over feedlots or manure storage areas. The Minnesota Pollution Control Agency (MPCA), or some delegated counties, maintains a list of registered feedlots. This information will be shared with each county assessor annually to aid in your identification of the feedlots.



## MONOSLOPE CONFINEMENT BUILDINGS

Cattle confinement building with steel framed construction over concrete pony walls typically built after 2000. The metal roof is single pitched (mono-sloped) with the eave height going from 14' to 20' or higher. Usually has colored metal siding on 3 sides of building, with the 4<sup>th</sup> side being open. **Floors are typically concrete.** The high side of the building is open, with the feed bunks located along this side. The low side usually has adjustable or removable panels (curtain side walls) for ventilation purposes. The roof is designed this way to divert rain water away from areas where manure runoff could be a pollution problem. The building may also be open sided with a mono-slope roof over a feeding floor.

40' to 80' wide	\$5.50 per sq ft	3% Depreciation per year
Greater than 80' wide	\$6.60 per sq ft	

### ADD FOR:

Pre-cast Concrete NON H-Style Feed Bunk	\$20.00 value per lineal foot of feed bunk
Pre-cast Concrete H-Style Feed Bunk	\$28.00 value per lineal foot of feed bunk

### Concrete Floor

Less than 6 " and wire mesh	\$3.50 per sq ft
6" and re-rod	\$5.00 per sq ft
4' Pony Concrete Wall	\$36.00 per lineal foot
6' Pony Concrete Wall	\$48.00 per lineal foot
8' Pony Concrete Wall	\$58.00 per lineal foot

### **IF MEETS EXEMPTION CRITERIA: See Department of Revenue memo dated 8-20-2008**

Width of building regardless	\$2.75 per sq ft
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### ADD FOR:

Pre-cast Concrete NON H-Style Feed Bunk	\$20.00 value per lineal foot of feed bunk
Pre-cast Concrete H-Style Feed Bunk	\$28.00 value per lineal foot of feed bunk

### Concrete Floor

Less than 6 " and wire mesh	\$3.50 per sq ft
6" and re-rod	\$5.00 per sq ft
4' Pony Concrete Wall	\$36.00 per lineal foot
6' Pony Concrete Wall	\$48.00 per lineal foot
8' Pony Concrete Wall	\$58.00 per lineal foot









# Small Town Commercial Sales

Luverne



## **Former Baptist Church**

Sold for \$81,000 June 2010. Now split class Res/Comm as owner lives in the upper level and rents out the 1<sup>st</sup> floor for used furniture sales..  
Not rented at time of picture.



## **Barbershop w/3 apts up next to the American Legion**

Sold for \$22,500 early 2011. Apt rents \$200-\$250 w/tenant paying utilities.



## **Skippers Pub-Coffee House-Tae Kwon Do & 3 Apts**

Sold for \$260,000 in April 2011. This has been remodeled and is in good condition. Sold CFD.



## **Latham Insurance Agency Building – 4 Sale**

Poor Condition – needs work. Can be bought for \$100,000



## **Retail Store -**

Sold for \$85,000 in April 2011 or \$10.22 psf



## **Magnolia Steakhouse Sale – near interstate I-90**

Bank Sale @ \$190,000 – attached to the super 8, but no access from motel. Previous sale \$550k+







## **Old Pizza Hut – 1.78 acre**

Sold for \$200,000 recent sale bought for new Grandstay Hotel.

\$2.58 psf – Building will be moved from site.

# Other Types of Confinement Facilities

## SWINE CONFINEMENT

### BASE BUILDING – TYPE 1

Wood framed or pole construction with concrete block or poured concrete foundation. The exterior is colored metal or weatherized plywood (both insulated) with an insulated roof consisting of colored metal clad ceiling sheets over truss rafters. The interior walls are covered with sheet metal, chipboard, plywood, or dimension lumber. The ceiling may not be of the same interior finish as that of the interior walls. Typical 1970's finishing barn.

These buildings have adequate wiring and plumbing. Adequate ventilation consists of exhaust fans, ridge vents and other ceiling ventilation units, hinged wall panels, or other climate control devices. Value **DOES NOT** include feeding systems, waterers, pens and gates, or concrete floor.

\$4.80 per sq. ft.

Variable % per year

#### ADD FOR:

Vented Stationary Furnace  
& Suspended Blower Units      \$ .65 per sq. ft.

Concrete Floor (of area covered)  
Less than 6" and wire mesh      \$3.50 per sq. ft.  
6" and re-rod      \$5.00 per sq. ft.

\*Unless floor is totally slatted there should always be an amount added.

#### DEDUCT FOR:

No Insulation      \$ 1.25 per sq. ft.

Galvanized Metal  
(instead of colored metal)      \$ .25 per sq. ft.

If slatted floor and storage pit are found, refer to section of manual dealing with assessment of slatted floors and pits and other pollution control devices.

\* \* \* \* \* IMPORTANT \* \* \* \* \*

For bulk feed storage used in conjunction with Swine Confinement facilities, see section covering "Bulk-O-Matics".

**BASE BUILDING – TYPE 2**

Polystyrene insulated panel construction with concrete block or poured concrete foundation. The exterior is weatherized plywood (with polystyrene insulation) with an insulated roof consisting of colored metal clad ceiling sheets or asphalt shingles over truss rafters. The interiors consist of laminated plywood or all-fiberglass liners. The ceiling will be of the same interior finish as that of the interior walls.

These buildings have adequate wiring, plumbing, and ventilation. Ventilation may consist of exhaust fans, ridge vents and other ceiling ventilation units, hinged wall panels, or other climate control devices. **Value DOES NOT include feeding systems, waterers, pens and gates or concrete floor.**

\$7.25 per sq. ft.

Variable % per year

**ADD FOR:**

Vented Stationary Furnace  
& Suspended Blower Units                   \$ .65 per sq. ft.

Concrete Floor (of area covered)  
Less than 6" and wire mesh               \$3.50 per sq. ft.  
6" and re-rod                                 \$5.00 per sq. ft.

\*Unless floor is totally slatted, there should be an amount added.

**DEDUCT FOR:**

No Insulation                                   \$ 1.25 per sq. ft.

Galvanized Metal  
(instead of colored metal)                 \$ .25 per sq. ft.

If slatted floor and storage pits are found, refer to section of manual dealing with assessment of slatted floors and pits and other pollution control devices.

\* \* \* \* \* IMPORTANT \* \* \* \* \*

For bulk feed storage used in conjunction with Swine Confinement facilities, see section covering "Bulk-O-Matics."

### **BASE BUILDING – TYPE 3**

1990's and newer style finishing barn. Typical building is 41' wide with metal exterior and roof but buildings built after 2000 may exceed 51' in width and upper level length of building may exceed 500'. Curtain wall ventilation system. **Typically has pit and slatted floor.** Often equipped with heating system that is only used in extreme weather or when building contains only small feeder pits.

\$11.35 per sq. ft.

Variable % per year

#### **ADD FOR:**

Concrete Floor (of area covered)

Less than 6" and wire mesh

\$3.50 per sq. ft.

6" and re-rod

\$5.00 per sq. ft.

Unless floor is totally slatted, there should always be an amount added.

Office/generator room is typical 2x4 frame construction and is usually located at one end of the building. Occasionally it may be situated in the middle.

\$23.00 per sq. ft.

2-1/2 % per year

### **BASE BUILDING – TYPE 4**

1990's and newer style large capacity, integrated breeding-gestation-farrowing facility. Typically, these facilities are constructed as multiple buildings connected by walkways. Each structure has a specific purpose and operates in conjunction with the balance of the facility. Breeding and gestation areas are usually large open structures with few interior partitions. Farrowing areas are usually multiple-roomed buildings with each room intended for all-in/all-out management. Heating, plumbing, ventilation, electrical, etc. vary based on the designated use of that portion of the facility and are included in the rates below. **These rates should be applied to the entire breeding-gestation-farrowing area and connecting walkways.**

Base rates **DO NOT INCLUDE** concrete floors, manure pits or slatted floors. These items should be valued separately.

\$14.50 per sq. ft.

Variable % per year

#### **ADD FOR:**

Concrete Floor (of area covered)

Less than 6" and wire mesh

\$3.50 per sq. ft.

6" and re-rod

\$5.00 per sq. ft.

Unless floor is totally slatted, there should always be an amount added.

Laboratory/office is typical 2x4 frame construction with all white non-maintenance surface, several Anderson style casement windows, sheetrocked ceiling and appropriate 2x4 support. Adequate electrical service and plumbing. Vapor barrier and R-40 blown insulation. There is usually one laboratory/office per farrowing and gestation specification and is usually connected by an enclosed walkway.

\$32.75 per sq. ft.

2-1/2 % per year

### **TUNNEL-STYLE HOG BUILDING**

Tunnel-style buildings are the newest style of large capacity hog buildings for wean to finish of swine. These buildings are double or triple buildings in one. Single buildings range from 41' to 51' wide. The size is doubled or tripled depending on how many units are put together. Buildings have masonry foundation and partial cement walls up to 8" thick by 36" – 48" in height. The remaining height of the wall is of 2" x 6" wood frame constructions. Curtain walls are on 2 or more of the exterior walls, as well as separating the "rooms". Each "room" is separated by a cement wall with a curtain above that can be open or closed as needed for ventilation. Each "room" is completely open. The building is insulated with R30 – or more insulation- in the ceilings. Ceilings are painted steel. Heating, plumbing, ventilation, electrical, etc. Are included in the rates below. Buildings may have climate control, alarm systems, pit fans, wall fans as well as sprinkler systems. A small portion of one of the "rooms" contains the office, control room, and shower in/shower out facilities.

Base rates DO NO INCLUDE concrete floors, manure pits or slatted floors, or office area. These items should be valued separately.

\$14.50 per sq. ft.

Variable % per year

## SLURRY STORE TANKS

Price includes tank, site preparation, and foundation.

<u>Size</u>	<u>Capacity (in gallons)</u>	
42' x 14'	147,000	4,600
42' x 19'	194,400	5,500
42' x 23'	241,800	6,700
62' x 14'	316,200	7,100
62' x 19'	418,200	8,600
62' x 23'	520,200	10,500
81' x 14'	549,400	10,100
81' x 19'	726,600	12,500
81' x 23'	903,900	15,400
101' x 14'	847,400	13,000
101' x 19'	1,120,500	16,600
101' x 23'	1,394,200	20,400

2.5% Depreciation per year



BUNKER SILOS: T & L PANEL CONSTRUCTION

Pre-cast or poured-in-place concrete – Value per LINEAL Foot of WALL.

WALL HEIGHT

5'	\$66.00
6'	\$88.00
8'	\$112.00
9'	\$121.00
10'	\$130.00
12'	\$135.00
16'	\$190.00

3.0 % depreciation per year

**ADD FOR:**

**Concrete Floor**

Less than 6" and wire mesh      \$3.50 per sq. ft.

6" and re-rod      \$5.00 per sq. ft.

Truss Raftered Roof      \$ 2.50 per sq ft

WOODEN AND CEMENT BLOCK BUNKER SILOS: To value bunker silos built of cement block or wood, the OBSERVED PHYSICAL CONDITION should be given prime consideration. If in new condition and of sufficient capacity to be of use in modern farming operation, the value MAY approach that of a concrete unit; however, in the majority of instances, the value should be considerably less. (USE YOUR JUDGEMENT.)

ADD FOR:

Concrete Floor

Less than 6" and wire mesh	\$3.50 per sq. ft.
6" and re-rod	\$5.00 per sq. ft.

EARTHEN PIT SILOS: Constructed solely by excavating a trench into the ground. Will carry a minimal value. However, if a concrete floor is present, add for it.

ADD FOR:

Concrete Floor

Less than 6" and wire mesh	\$3.50 per sq. ft.
6" and re-rod	\$5.00 per sq. ft.