



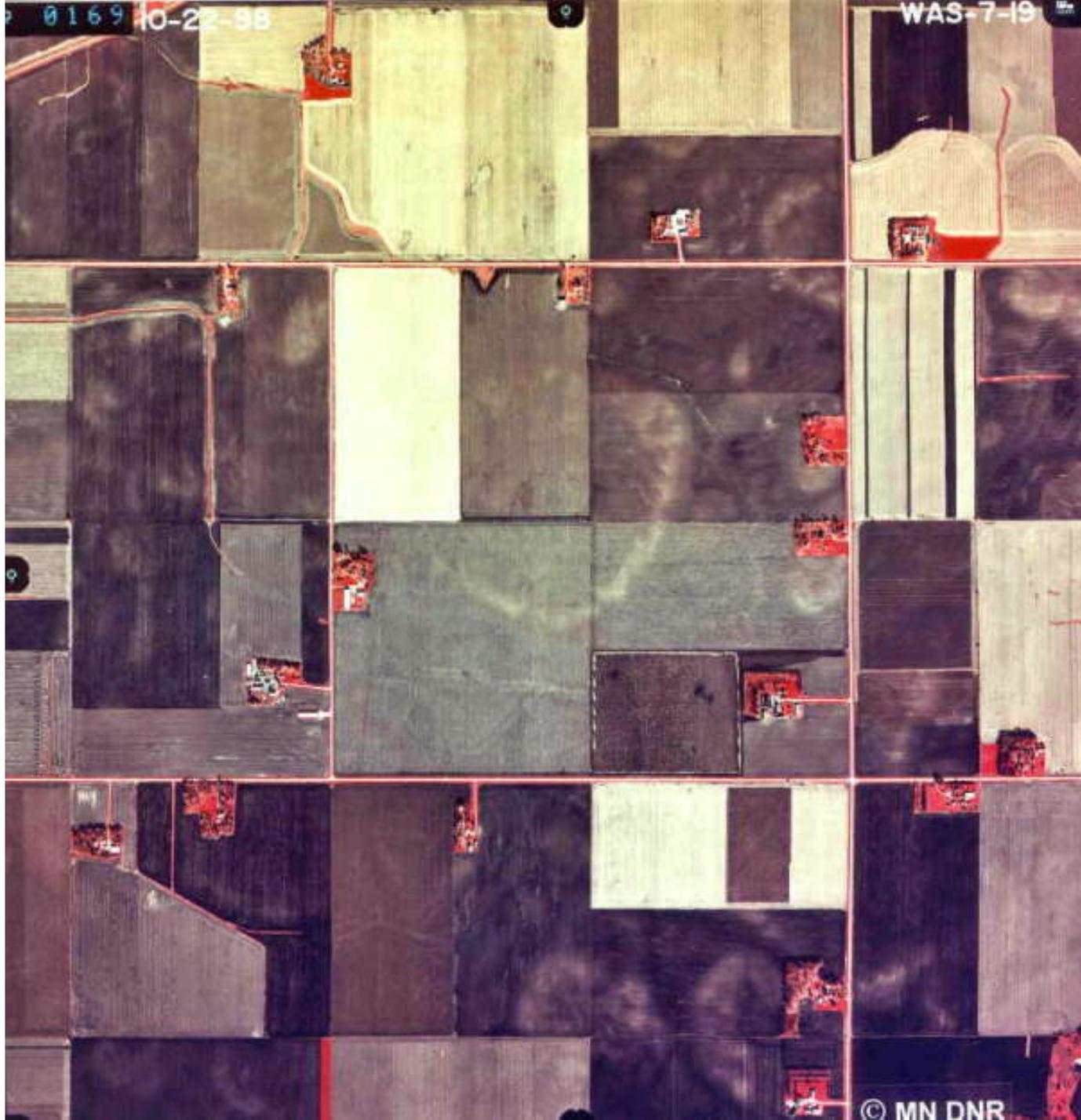
MODERN CROP FIELDS



AGST-18160



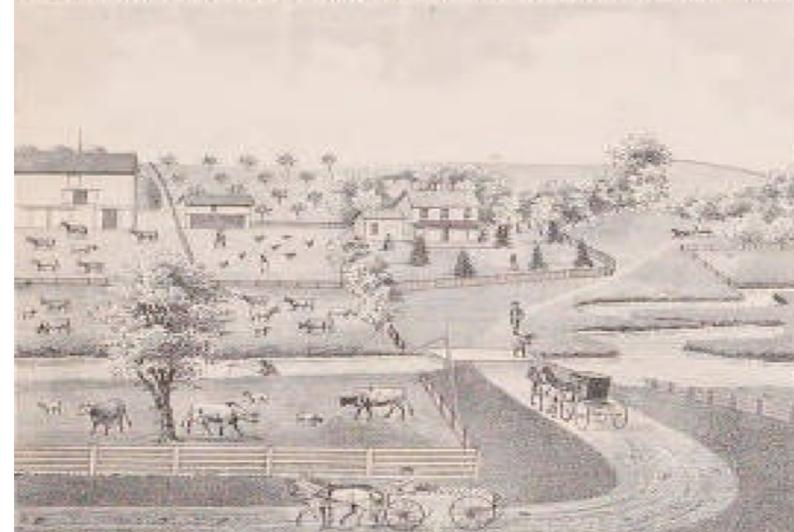
HISTORIC CROP ROTATION



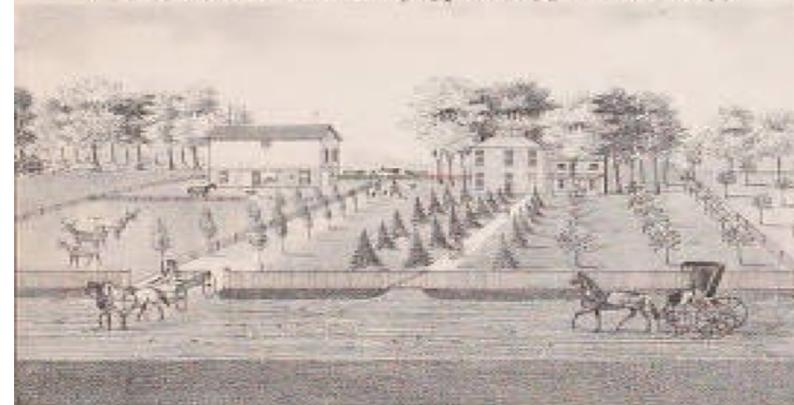
HISTORIC CROP ROTATION Settlement to WW1



RESIDENCE OF BENJAMIN ELLSWORTH, UTICA STATION, UTICA TWP. WINONA CO. MINN.



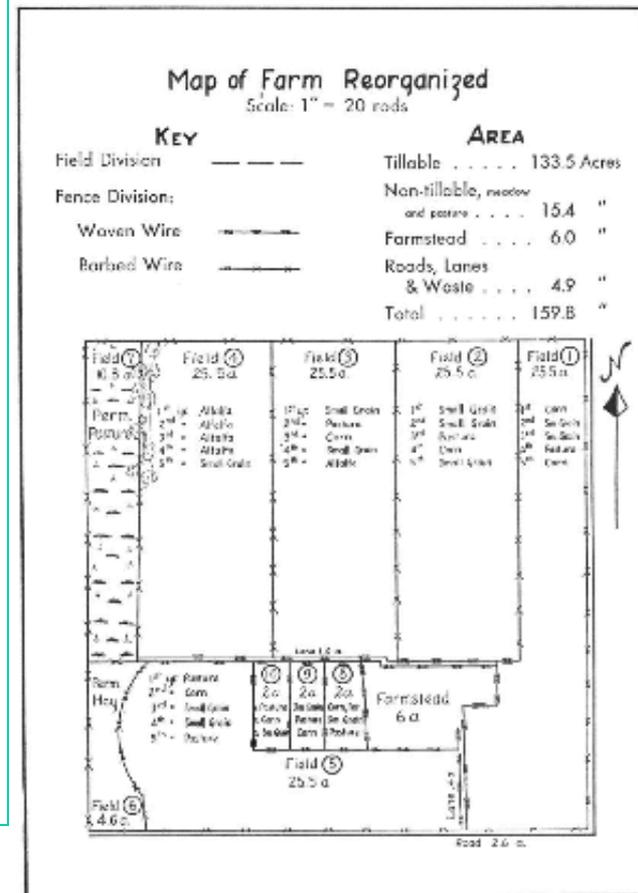
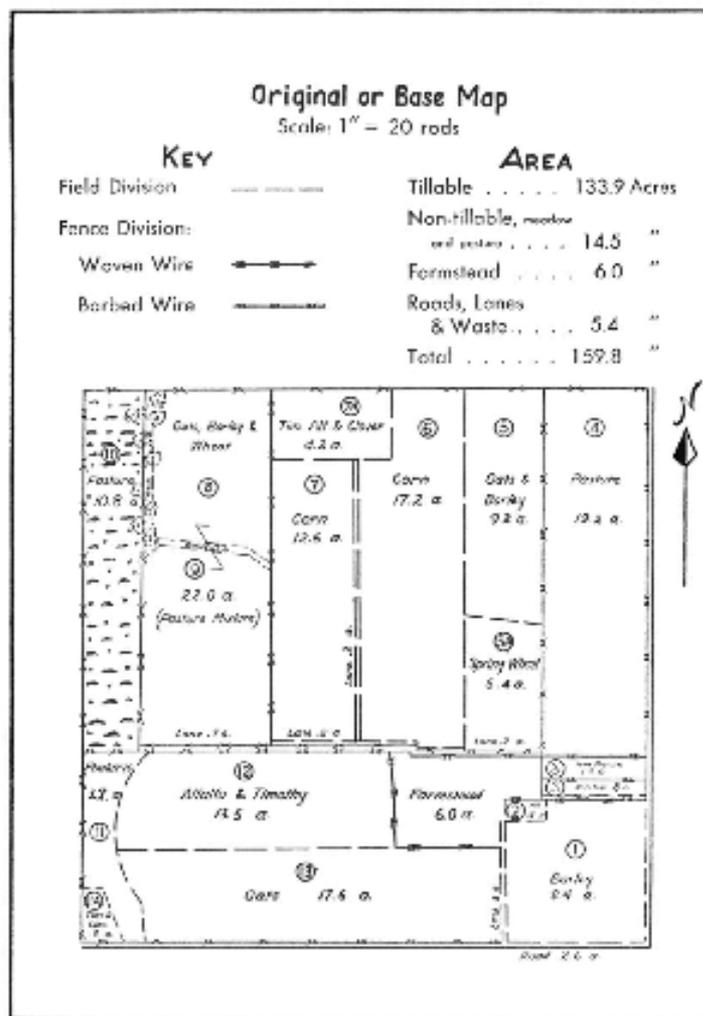
RESIDENCE OF MARK CAMPBELL, ESQ. SARATOGA TWP. WINONA CO.



RESIDENCE OF HENRY J. MOORE, UTICA TWP. WINONA CO. MINN.

Farms in Nicolle County in 1916. The farms depicted on this atlas range in size from about 80 to 240 acres (Hixson 1916). Judging by the surnames of land owners, extended family members (perhaps siblings) were farming adjacent land.

HISTORIC CROP ROTATION ROTATION Post WWII



Layout of a "southeastern Minnesota dairy farm" circa 1950. The farm's 134 acres are comprised of tillable land, nontillable land, a six-acre farmstead, and roads and lanes. From Boss and Pond's *Modern Farm Management* (1951).

Recommendations for reorganization of the circa 1950 southeastern Minnesota dairy farm depicted in the previous illustration. Fields are divided into larger and more even parcel sizes for more effective crop rotation and use of larger machinery. From Boss and Pond's *Modern Farm Management* (1951).

Developmental Periods in Minnesota Agriculture

- | | | |
|---|--|-----------|
| 1 | Early Settlement | 1820-1870 |
| 2 | Development of a Wheat Monoculture | 1860-1885 |
| 3 | Diversification and the Rise of Dairying | 1875-1900 |
| 4 | Industrialization and Prosperity | 1900-1920 |
| 5 | Developing the Cutover | 1900-1940 |
| 6 | Development of Livestock Industries | 1900-1940 |
| 7 | Depression and the Interwar Period | 1920-1940 |
| 8 | World War II and the Postwar Period | 1940-1960 |



TYPICAL EARLY SETTLEMENT PERIOD FARMSTEAD ELEMENTS

Common features of farmsteads during the Early Settlement (1820-1870) period are:

- ✓ Situated near natural water sources
- ✓ Small farms with subsistence-level, diversified farming methods
- ✓ Dugouts, log structures, and sod houses;
- ✓ Small, simple outbuildings built with native materials; and/or
- ✓ Springhouses, root cellars, and icehouses.



TYPICAL WHEAT MONOCULTURE PERIOD FARMSTEAD ELEMENTS

Common features of farmsteads during the Development of a Wheat Monoculture (1860-1885) period are:

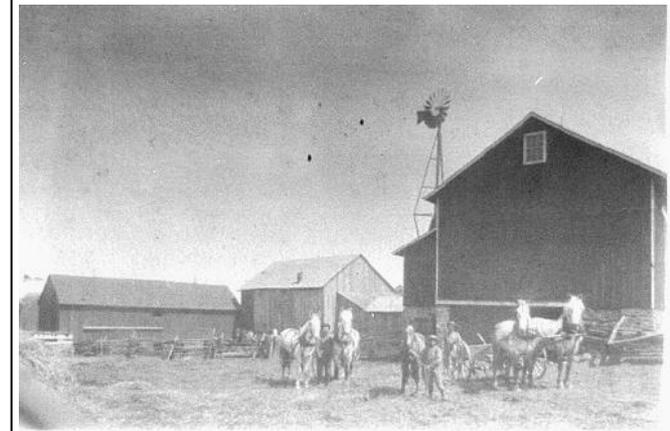
- ✓ During the first phase in the southeast, buildings were timber-framed or constructed of log or stone;
- ✓ During the early part of the second phase of wheat, dugouts, and sod houses were present, but frame houses became increasingly common in the later part of the period;
- ✓ Outbuildings with stone foundations and timber framing;
- ✓ Few buildings for animal housing;
- ✓ Sackhouses, granaries, and threshing barns, and/or
- ✓ Windbreaks, woodlots, and shelterbelts in the prairie areas.



TYPICAL DIVERSIFICATION PERIOD FARMSTEAD ELEMENTS

Common features of farmsteads during the Diversification and the Rise of Dairying (1875-1900) period are:

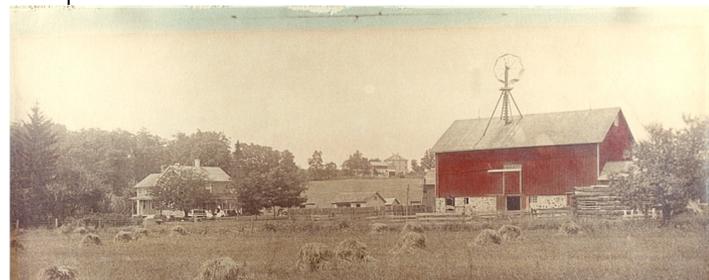
- ✓ Larger and more substantial farmhouses;
- ✓ Large, two-story, timber-framed, general-purpose barns with windows;
- ✓ Hay carriers, hay mows, and stanchions;
- ✓ Silos, granaries, and corncribs;
- ✓ Springhouses, icehouses, and milk houses;
- ✓ Poultry houses and hog barns;
- ✓ Increased use of dimensional lumber; and/or
- ✓ Increased fencing and introduction of barbed wire.



TYPICAL INDUSTRIALIZATION AND PROSPERITY PERIOD FARMSTEAD ELEMENTS

Common features of farmsteads during the Industrialization and Prosperity (1900-1920) period are:

- ✓ Larger and more substantial farmhouses;
- ✓ Silos and corn cribs;
- ✓ Milk houses;
- ✓ Hog housing;
- ✓ Concrete foundations and manufactured building materials;
- ✓ Field drainage systems;
- ✓ Septic and pressurized water systems; and/or
- ✓ Windmills.



TYPICAL DEVELOPING THE CUTOVER FARMSTEAD ELEMENTS

Common features of farmsteads during the Developing the Cutover (1900-1940) period are:

- ✓ Log Cabins with root cellars;
- ✓ Small, cheaply constructed barns, or sheds - also often of log or sided with tarpaper;
- ✓ Saunas and sugarhouses;
- ✓ Numerous sheds and outbuildings widely spaced to keep fires from spreading readily;
- ✓ Irregularly shaped fields, and/or
- ✓ Drainage systems.



MINISO OUR SESQUICENTENNIAL

The "Soddy" was the ubiquitous dwelling on the prairie, but logs were the natural building material in the North Woods of Minnesota. Horace Kimball, his wife, Katherine, and their children posed outside the family cabin south of Akeley in about 1905. Horace's grandson, certified master logger Kelly Kimball, still pursues the profession of his grandfathers and father, who had not been born at the time of this photo. "We have our family traced back to 1634, when they came from England to Massachusetts," Kimball said. "It appears the first one to come over was also a logger." The family moved from Massachusetts to Maine, then to Wisconsin, where Horace was born. "They seem to have been following the timber," said Kimball.

WE WANT YOUR HISTORIC PHOTOS

The Star Tribune will publish photos from Minnesota's past every Sunday on Page B3 during the sesquicentennial year. E-mail photos to Millionsyears@startribune.com or mail them to Peter Rodman, director of photography, Star Tribune, 425 Portland Av. S., Minneapolis, MN 55488. All photos will be returned. Please include a phone number.



Photo courtesy of Kelly and Mia

TYPICAL DEVELOPMENT OF LIVESTOCK INDUSTRIES PERIOD FARMSTEAD ELEMENTS

Common features of farmsteads during the Development of Livestock Industries (1900-1940) period are:

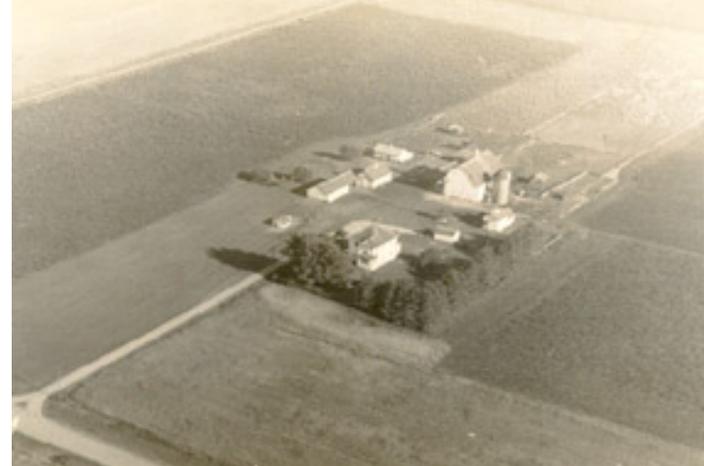
- ✓ Large, well-built dairy barns with tie stalls with stanchions, box stall space for calves, and large hay lofts;
- ✓ Pole buildings for beef cattle;
- ✓ On-farm stockyards, stock chutes, and stock tanks;
- ✓ Hog barns with concrete floors and yards or colonies of hog cots;
- ✓ Sheep barns and poultry housing;
- ✓ The use of concrete and tile in construction;
- ✓ Corn cribs, grain bins, and round silos; and/or
- ✓ Early garages.



TYPICAL DEPRESSION AND INTERWAR PERIOD FARMSTEAD ELEMENTS

Common features of farmsteads during the Depression and Interwar Period (1920-1940) period are:

- ✓ Rural electrification;
- ✓ Tractors and other mechanized farm machinery;
- ✓ Implement sheds for machinery;
- ✓ Larger fields to accommodate new machinery;
- ✓ Grain bins;
- ✓ Shelterbelts and soil conservation methods such as contour plowing and terracing;
- ✓ Single-story dairy barns with separate milking parlors; and/or
- ✓ Remodeled and reused farm buildings as opposed to new construction.



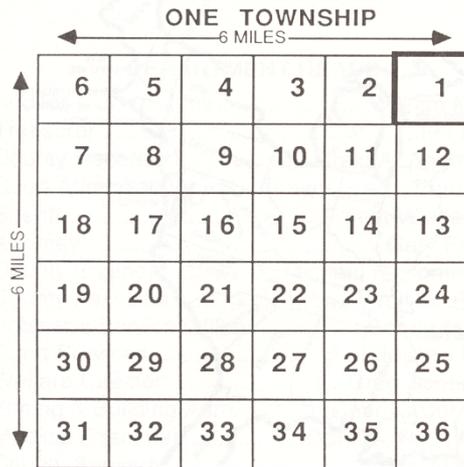
TYPICAL WORLD WAR II AND POSTWAR PERIOD FARMSTEAD ELEMENTS

Common features of farmsteads during the World War II and the Postwar Period (1940-1960) are:

- ✓ Era of new building construction;
- ✓ Less diverse collection of structures per farm;
- ✓ Feedlots and climate-controlled buildings for hogs and poultry;
- ✓ Grain self-feeders, hay feeding racks, and other labor saving devices;
- ✓ Prefabricated buildings, such as pole-framed and Quonset-type buildings;
- ✓ Use of alternative materials like hollow tile brick and concrete during war;
- ✓ Post-war use of steel, aluminum, and fiberglass sheeting and aluminum tubing;
- ✓ Cylindrical, corrugated metal grain bins and Harvestor Silos;
- ✓ Grain dryers; and/or
- ✓ Large fields without fences.



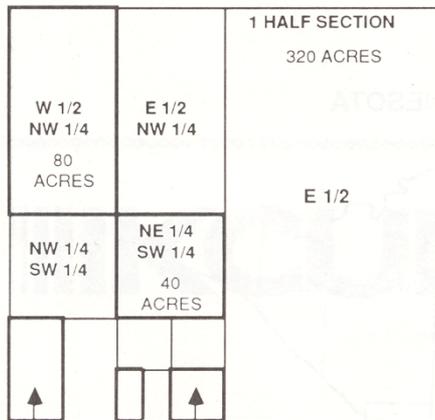
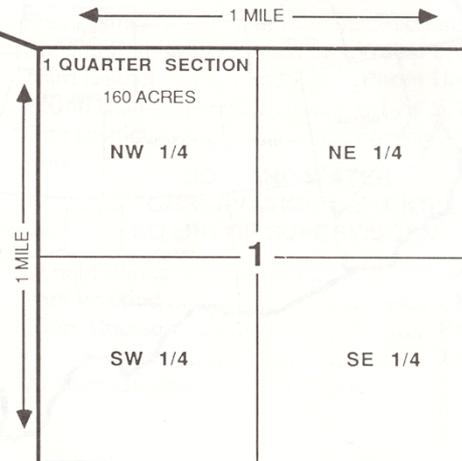
LAND DESCRIPTION



ONE SECTION

640 ACRES

1 MILE = 320 Rods, 5280 Feet, 80 Chains



METES & BOUNDS is a method of describing land which identifies a parcel of land by its shapes and boundaries. Permanent markers placed in one corner of a parcel are used as starting points. The land is described in terms of distance and direction from this point. Distances are measured in feet, direction is shown in degrees, minutes & seconds. Each circle is 360 degrees, 60 minutes (') in each degree and 60 seconds (") in each minute.

Another method of land description is the **RECTANGULAR SURVEY SYSTEM**. This method does not use physical markers. Instead it is based on imaginary lines --**LATITUDE LINES** are the east-west lines and **LONGITUDE LINES** are the north-south lines. Certain longitude lines are known as **PRINCIPAL MERIDIANS**. For each of these there is an intercepting latitude line known as a **BASELINE**. In the U.S. Survey System, there are 36 principal meridians with their intersecting base lines. **RANGE LINES** are longitude lines lying every 6 miles east and west of each principal meridian and are consecutively numbered east and west of each principal meridian and are consecutively numbered east or west of the principal meridian. **TOWNSHIP LINES** intersect with the range lines and run every six miles north or south of a baseline. Thus each 6 by 6-mile imaginary square is called a township. Each 36 square mile township is divided into 36 one-square mile units called **SECTIONS**. Each section contains 640 acres and each acre is 43,560 square feet. 1/4 sections contain 160 acres and dividing that quarter section into another quarter results in four 40-acre parcels. i.e. the NE 1/4 of the NE 1/4 contains 40 acres. Sections are numbered 1 through 36 starting in the upper right hand corner of a township.

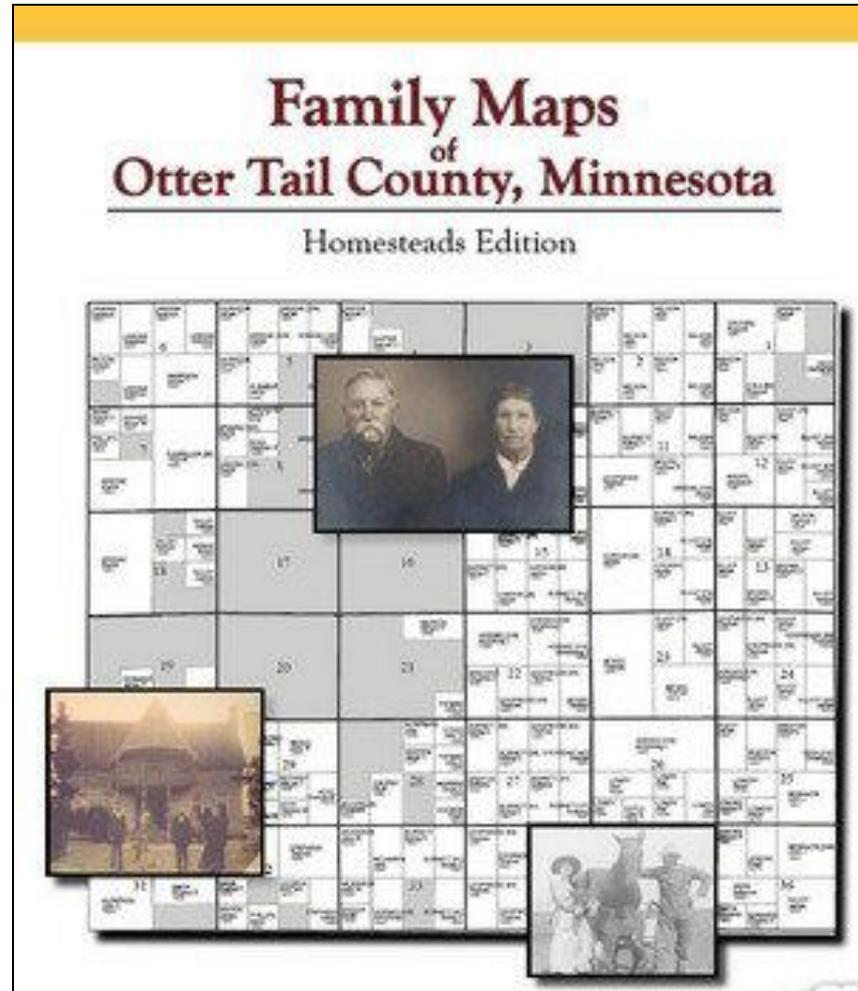
MEANDERED LAKE OR STREAM - Meandered water is generally known as public water, meaning the land owner pays the taxes on the land only and not the land under the water. The land is divided into divisions known as government lots which is the legal land description for that piece of land. If there are government lots adjoining the body of water it is meandered, otherwise it is privately owned land and the owner is paying taxes on the land under the water as well as adjoining the water. The landowner also owns fishing, hunting, etc., rights on that piece of land within the regulations of the federal and state governments except when the water is navigable.

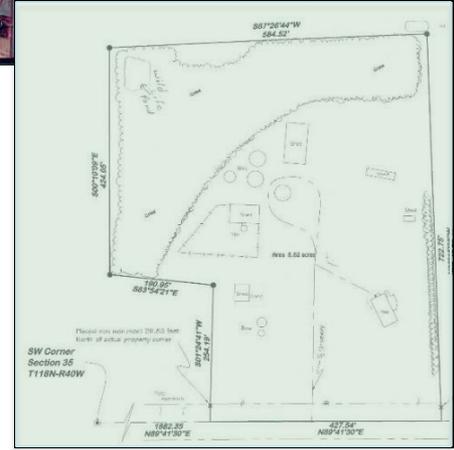
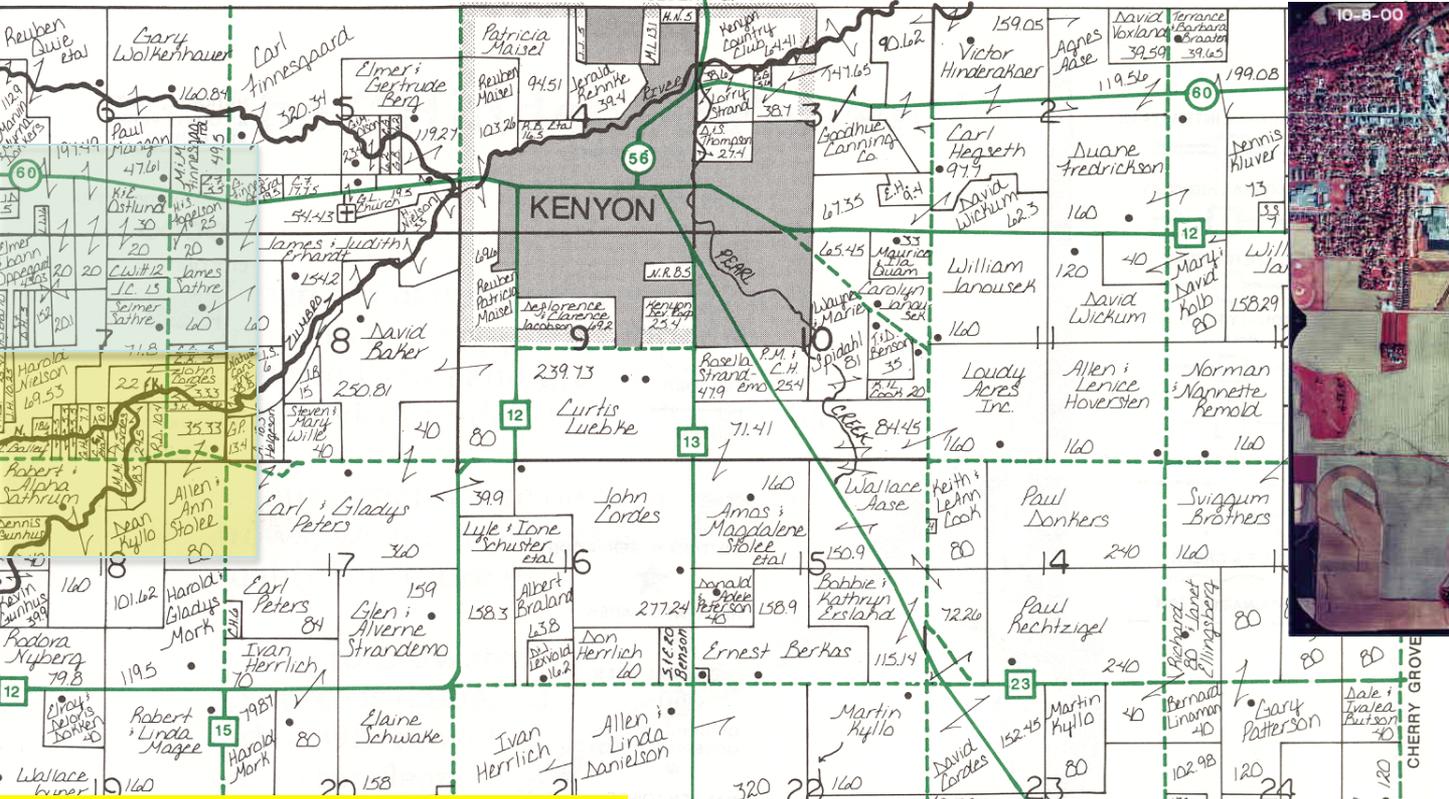
SQUARE MEASURE		LINEAR MEASURE	
144 sq. in	1 sq. ft.	7.92 in	1 link
9 sq. ft.	1 sq. yd.	66 ft.	1 chain
30 1/2 sq. yds.	1 sq. rd.	80 chains	1 mile
16 sq. rds.	1 sq. chain	320 rds.	1 mile
1 sq. rd.	272 1/4 sq. ft.	8,000 links	1 mile
1 sq. chain	4,356 sq. ft.	100 links	1 chain
10 sq. chains	1 acre	5 1/2 yds.	1 rd.
		1,760 yds.	1 mile
160 sq. rds.	1 acre	4 rds.	100 links
4,840 sq. yds.	1 acre		
43,560 sq. ft.	1 acre		
640 acres	1 sq. mile		
1 sq. mile	1 section		
36 sq. miles	1 township		
6 miles sq.	1 township		

**TO DESCRIBE:
GO SMALLEST TO LARGEST**

**TO LOCATE:
READ BACKWARDS
FROM LARGEST TO SMALLEST**

LAND OWNERSHIP





BUYING AND SELLING LAND

Farm and Home Realty

fax # 507.533.3112
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160 acres of prime farm land with tillable CER of 86.8, 147.1 tillable acres. Could be sold with or without the building site
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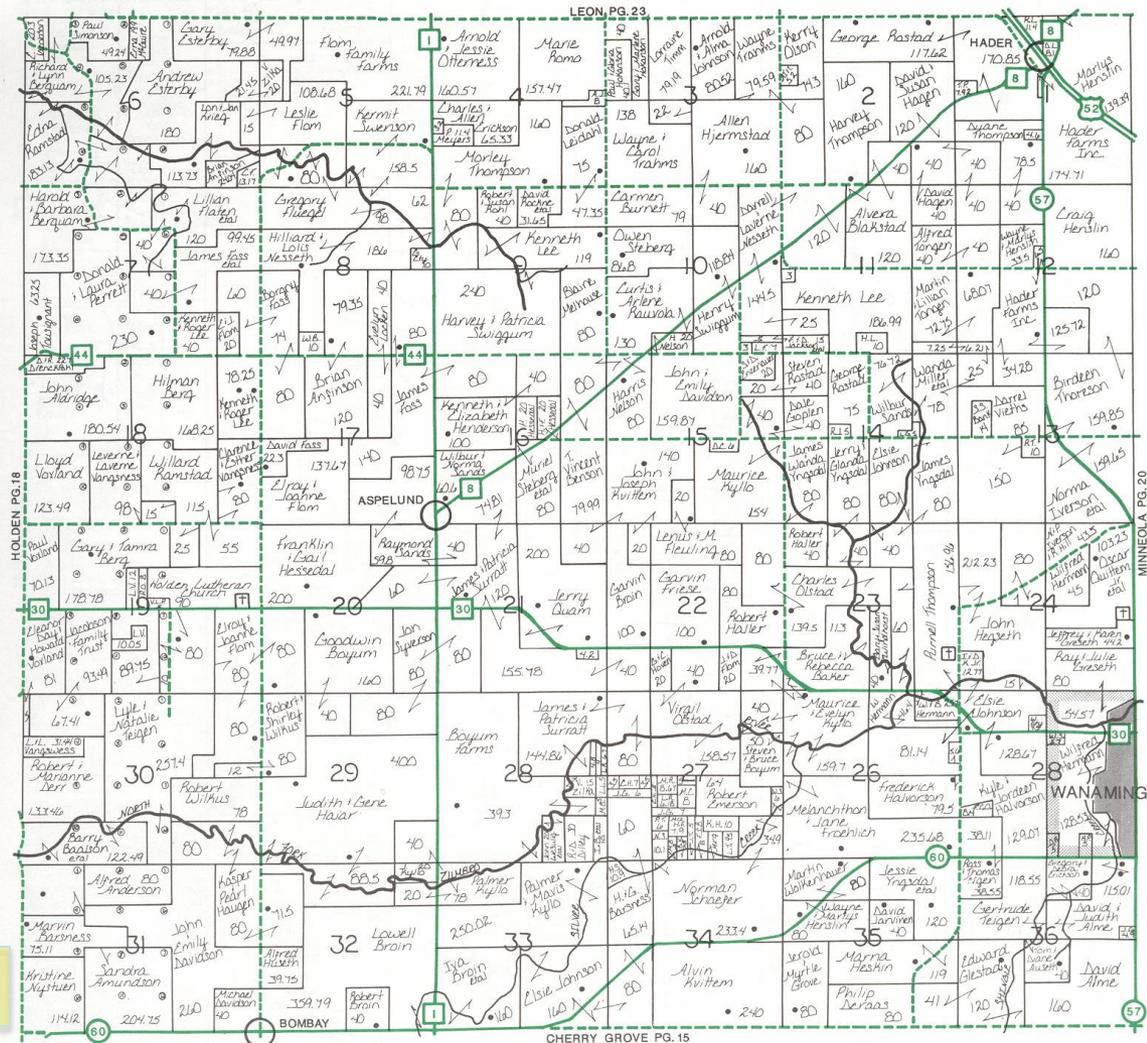
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NE 1/4 Section 30
Mansfield Township

148 acres, 83.91 CER, corn base combined, yield base of 123, tillable FSA acres
97% , real estate taxes for 2002 are \$1948

Asking Price: \$310,800

Agricultural Land
Acreage
Development
Woodlots



LAND OWNERSHIP IN WANAMINGO TOWNSHIP

Sections 20 & 28 The name "Boyum is registered as the land owner.

What is the difference between the two owners?

Section 9 Who owns the land in the S 1/2 of the NE 1/4?

Section 19, E 1/2 of the SW 1/4

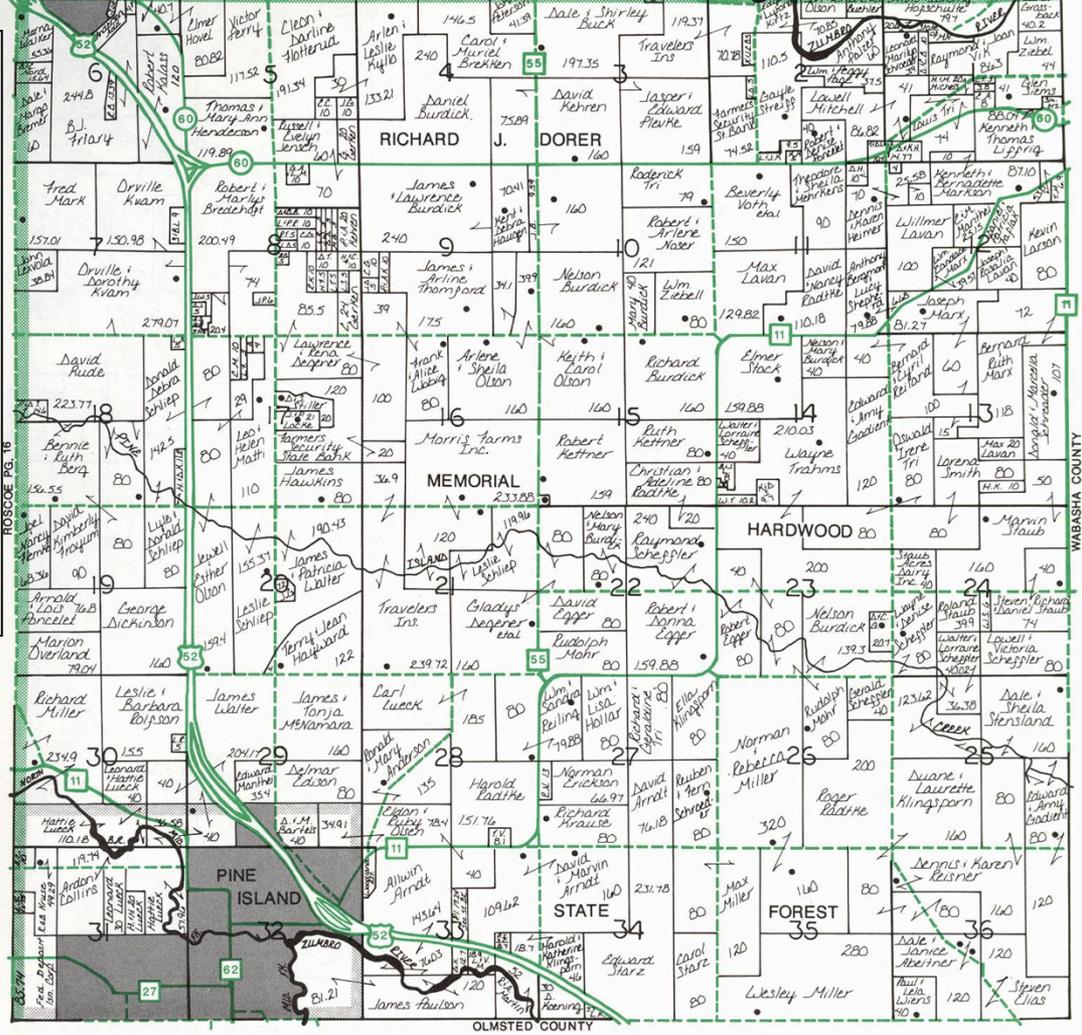
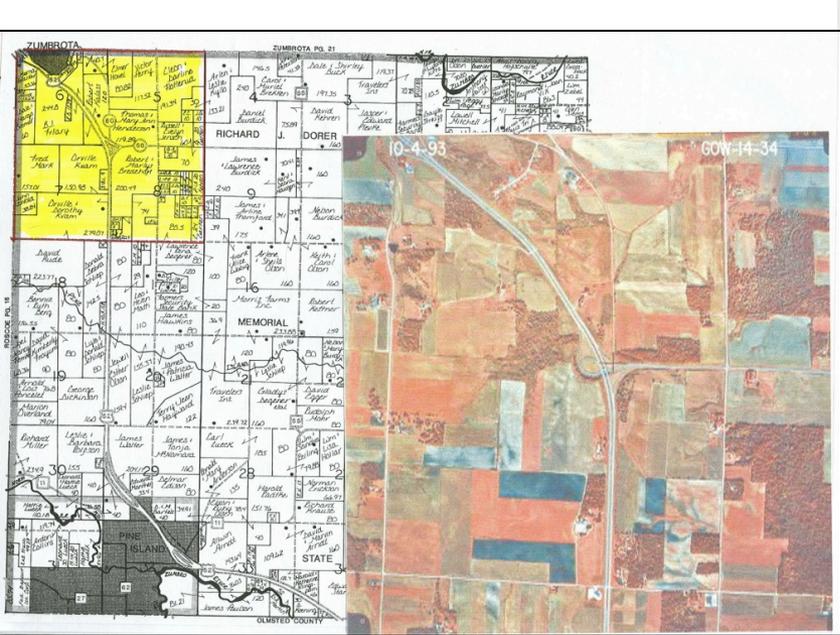
What is going on with the Jacobsom Farm?

Section 33 What does the abbreviation after Iva Brown mean?

Section 14, SW 1/4 (Two parties with the last name own land side by side.)

What could have happened to create these small farms?

Section 12, E 1/2 of the SW 1/4 How is this farm registered for ownership



SELLING LAND IN PINE ISLAND TOWNSHIP

Section 8, S1/2 of the NE 1/4

Why are the land tracts so small? (also look at the photo of the area)

Section 8 Why aren't there a lot of small tracts of land sold along highway 52? (also look at the photo of the area)

Section 28, SE 1/4 (This is owned by two people)

Why is one so large and one so small? Give a legal description for another similar tract of land.

Locate the City of Pine Island. The developed portion of Pine Island is in solid gray. The city limits extend to the shaded gray line.

How many acres are developed?

How many acres are not developed yet?

Why would a city annex so much undeveloped land?

Sections 5,6,7,8.....Highways 60 and 52 meet. This is only half of a normal "cloverleaf" associated with on and off ramps.

How much land can be taken up by a full sized cloverleaf?



Draw a simple farm building layout and features associated with farms in Minnesota. Put on the back of the answer sheet or another piece of paper. Be sure to label each building and feature. You only need the farmstead, not the whole farm.