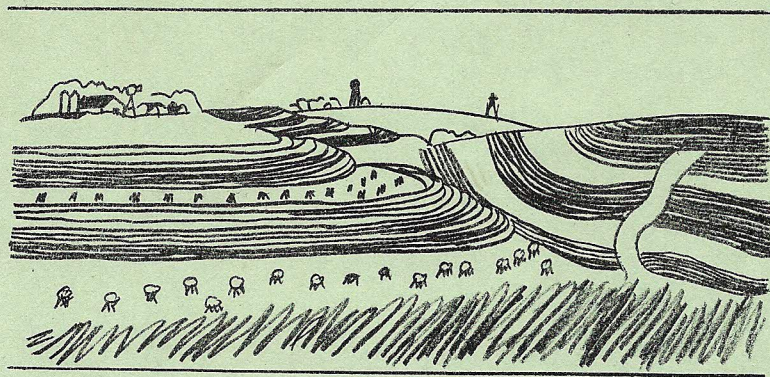


WELCOME
TO
LITTLE TRAPPE FARM IMPROVEMENT
AREA

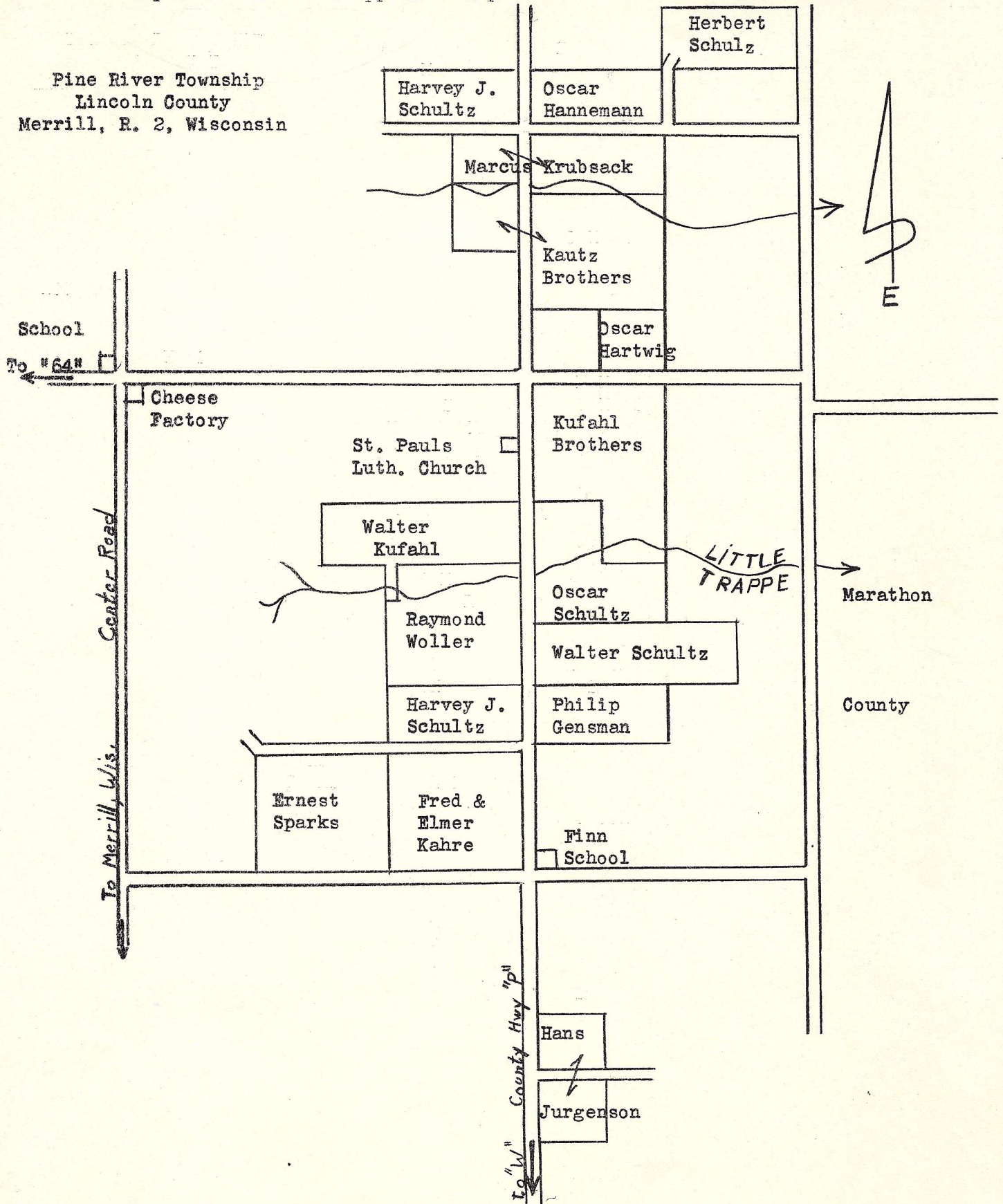


SOIL IS OUR STRENGTH
LETS WORK TO CONSERVE IT

"BETTER FARMING THROUGH UNITED EFFORT"

Map of the Little Trappe Farm Improvement Association Members Farms

Pine River Township
Lincoln County
Merrill, R. 2, Wisconsin



HISTORY OF THE LITTLE TRAPPE FARM IMPROVEMENT ASSOCIATION

On February 22, 1945, the Little Trappe Farm Improvement Association was organized in the Town of Pine River, Lincoln County, by a group of farmers interested in soil conservation and other farm improvement activities.

These men chose as their motto "Better Farming Through United Effort," and designated that their purpose was "to promote good soil management practices and a permanent agriculture in their community."

The organization meets once a month to study and discuss mutual farm problems. Technical assistance on their farms and at educational meetings is received from representatives of the Merrill Vocational School, the U. S. Soil Conservation Service, or the Agricultural Extension Office and the University of Wisconsin cooperating.

Through test plots of grains and grasses, varieties that are most adaptable to the community are selected. Various rates and methods of applying different kinds of fertilizer and liming materials are being tried to determine which gives the most profitable yields.

Soil conservation practices established on these farms include: terraces, strip cropping, bedding, contouring, waterways, outlets, diversion ditching, open drains, land clearing, windbreaks, reforestation and pasture renovation.

The organization requires that all regular members must operate their farms under a soil conservation plan. Interested farmers and others are included in the organization as associate members and 4-H and F. F. A. Club members engaged in soil conservation or crop projects can apply for junior memberships.

MAJOR PRACTICES ESTABLISHED IN THE LITTLE TRAPPE AREA

Strip cropping is limited in the area because the soils are generally poorly drained. Strips that have been established vary from 75 to 100 feet in width, it has been found that strips with terraces are much more satisfactory on longer slopes.

Open drains which intercept water from dead furrows have proven satisfactory in speeding surface drainage in flat areas. The open drains have been made very wide and can be crossed with ordinary farm machinery, spoil banks have been spread for a distance of 35 to 60 feet on each side of the ditch.

Bedding established with regular plowing or with motor patrol graders to drain especially flat or problem areas has proven of value.

Diversions Permanent sod ditches or terraces usually constructed above buildings or on the upper sides of fields to divert excess surface water.

Waterways to provide outlets for terraces and drainage ditches have been put in which are also kept in permanent sod. These outlets usually have flat bottoms with at least 4 : 1 side slopes.

Terraces have been constructed for both drainage and erosion control. Grades have been slightly greater than those used on better drained soils which speeds the removal of water. Terraces have been widened to make them easier to work and to increase the capacity. Average capacity is 10 sq. feet or better with a depth of about eight inches.

In addition to the practices described above considerable work has been done on pasture renovation, tree planting, woodland management, land clearing, farm drainage and contouring.

The total amount of major soil conserving practices established (terraces, diversions, open drains and constructed waterways) by members of the Little Trappe Group is 206,600 feet.

SOIL PROBLEMS OF THE LITTLE TRAPPE AREA

Soil Types - The soil types most common to the area are imperfectly drained forest soils. These soils are shallow and underlain with an almost impermeable layer of silt pan over an equally impermeable parent material. There are smaller areas of well drained soils which are generally not quite as shallow as the poorer drained soils. The limitations of these soils for maximum crop production are discussed in the following paragraphs.

Soil Losses - Loss of topsoil does not usually exceed more than 4 to 8 inches which is from $1/3$ to $2/3$ of the original depth. When we consider that the average depth of topsoil is only 12 to 16 inches these losses are significant and must be stopped if possible.

Seepage Areas - Crop yields have been reduced on some farms as the result of excessive moisture in small areas where seepages from upper slopes breaks to the surface.

Drainage - Excessive surface water is a definite problem and its removal is necessary for maximum crop yields.

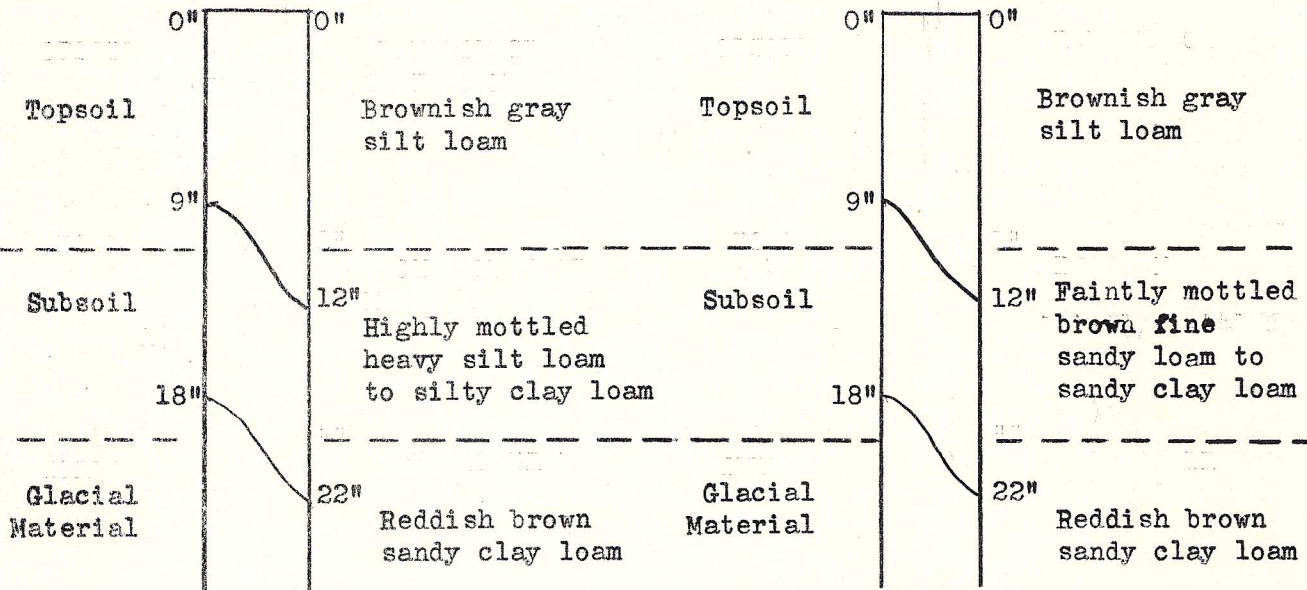
Slope - Long rather flat slopes of 1 to 10% are characteristic of the entire Little Trappe area. Sheet erosion is most common on these slopes except on the well drained soil areas where some gullying has taken place. Slopes remain wet late in spring unless surface water is removed, with terraces and open drains; contouring also has a tendency to hold surface water to an extent that is detrimental to crop yields.

Soil Fertility - Acidity which is characteristic of most forest soils, must be corrected for good crop production. Commercial fertilizers containing nitrogen, phosphorus and potash are necessary to improve fertility. Large applications of barnyard manure and also the turning under of green manure is beneficial in improving humus content, aeration, and water holding capacity. An average Virgin soil fertility analysis is pH. 5.3 - P.10 - K.160

SOIL PROFILES

Glandon or Freer Silt Loam

Trappe or Freon Silt Loam



Descriptions of soils most common to the area.

- 44 - Cable Silt Loam (Dark gray to bluish gray)
Dark waterlogged upland swales and drainageways underlain by heavy glacial clay, 7 to 11 inches of topsoil.
- 51 - Auburndale Silt Loam (Mottled light brownish to gray)
Gray upland flats w/heavy cold subsoil over acid clay loam, fairly productive if drained, 8 to 10 inches of topsoil.
- 63 - Brokaw Silt Loam (Dark brown to light brown)
Productive rolling uplands, fairly deep to heavy acid sandy clay material. Stone Hazard before cultivation.
- 64 - Brokaw Gravelly Loam (Light brownish gray)
Productive (slightly drouthy) cobbly uplands, shallow to heavy, cobbly sandy clay loam.
- 632 - Freer Silt Loam or Glandon Silt Loam (Brownish gray to weak yellow)
Productive broad gentle uplands w/heavy, slowly drained subsoils over acid sandy clay loams, stony before cultivation. 6-12 inches of topsoil.
- 633 - Freon Silt Loam or Trappe Silt Loam (Brownish gray)
Productive slightly wet gentle sloping uplands fairly deep to acid sandy clay loam till. Stony before cultivation. 10 to 14 inches of topsoil.

INFORMATION FROM FIELD TRIALS

I Complete pasture renovation with check strips on fertilizer and seeding mixture

Results obtained:

21 days of pasture for 23 milk cows and 2 - 2 year old heifers.

II Effects of various depths of topsoil on crop yields:

<u>Topsoil depth</u> <u>inches</u>	<u>Yield of oats</u> <u>bu.</u>	<u>Yield per inch</u> <u>of topsoil</u>	<u>Hay yield</u> <u>lbs.</u>	<u>Yield per inch</u> <u>of topsoil</u>
12	79.5	6.6	5972	497
9	55.1	6.1	4304	478
6	30.0	5.0	2704	450

III Rainfall which caused erosion damage in area.

1 inch of rain in less than 2 hours with soil in saturated condition

1.9 inches of rain in less than 1 hour with soil normal

IV Results of Nitrogen fertilization.

Nitrogen applied at the rate of 150 lbs. per acre on third year hay, cost \$6.00 per acre. Increased yield over check strip 1 Ton per acre.

V Results of fertilizer applications on 106 grain plots over last 5 years.

Applications ranged from 150# of 2-12-6 per acre to 1600# of 0-20-20 per acre.

Average application on 106 plots 314 lbs. per acre.

Average analysis of fertilizer applied .4% N - 18.2% P₂O₅ - 18.0% K₂O

Average increase in yield of grain from 46.5 bu. per acre to 76.2 bu. per acre.

Average increase in yield of Hay on treated fields from 3588# per acre to 6768# per acre.

VI Cost of construction of terraces, diversion ditches, open drains and terrace and drainage outlets from two farms with Soil Conservation plans completely established.

Total amount of practices established 62,478 ft.

Total cost \$802.78.

Average cost per 100 ft \$1.28 or \$4.98 per acre.

Note - Greater part of construction work done with a motor patrol grader. The remainder done with the moldboard plow.

VII Field trials on different varieties of oats.

<u>Oat variety</u>	<u>No. of fields</u>	<u>Yield per acre</u>
Bond Cross	5	87.5
Clinton	11	84.9
Forvic	17	68.8
Vicland	50	64.5

OBSERVATIONAL AND FIELD TESTS FOR 1950

- 1 - Corn variety plots - Wisconsin College of Agriculture, cooperating.
- 2 - Trace Mineral plots.
- 3 - Top dressing with fertilizers (test plots)
- 4 - Fertilizing peas and variety test plots.
- 5 - Pasture Fertilization - Wisconsin College of Agriculture, cooperating.
- 6 - Channel vs. Ridge type terrace - Wis. College of Agriculture, coop.
- 7 - Tobacco stem fertilizers.
- 8 - Pasture grass varieties.
- 9 - Living fence (Multiflora Rose) - U.S. Soil Conservation Service, coop.
- 10 - Pasture renovations tests. (Methods)
- 11 - Moldboard plow vs. Field Cultivator.
- 12 - Texas (Graham-Hoeme) plow vs. Moldboard plow.
- 13 - Texas (Graham-Hoeme) plow vs. Quack digger.
- 14 - Terraced vs. unterraced field.
- 15 - Effects of topsoil losses.
- 16 - Effects of turning down green manure crops on crop production.
- 17 - Fertilizer application with attachment for field cultivator.

The Little Trappe Farm Improvement Association wishes to acknowledge the cooperation and assistance recieved from the following:

Merrill Vocational School.

Agricultural Dept. of the Merrill High School.

Lincoln County Agricultural Agent.

University of Wisconsin, College of Agriculture.

U.S. Soil Conservation Service.

Lincoln County Soil Conservation District.

LITTLE TRAPPE FARM IMPROVEMENT ASSOCIATION

Organized February 22, 1945
Town of Pine River, Lincoln County

MERRILL, WISCONSIN

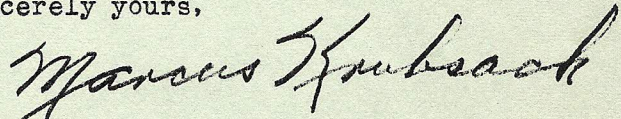
May we take this opportunity to thank you for visiting us in the Little Trappe Area. It has been a pleasure for us to show you some of the work that has been done on our farms.

Soil conservation, we know, is good farm management. A conservation farm plan along with improved farming methods provides a guide to efficient farming with a minimum of effort and expense.

We believe this way of farming will provide security in our community, state, and nation not only for farmers and others in this generation, but also for generations to come.

If through this tour you have become more conscious of the need for soil conservation and improved farming methods, we believe our time and yours has been well spent.

Sincerely yours,



Marcus Krubsack, President
Little Trappe Farm Improvement Association

We wish to thank the following for the assistance in the preparation of this tour guide:

Lincoln County Soil Conservation District Supervisors
Lincoln County Agricultural Committee
County Agricultural Extension Office
U.S. Soil Conservation Service

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