ORGANIZATION:

The Land Use Planning project was started in Marinette County in February, 1939, when the Agricultural Committee of the Marinette County Board of Supervisors met and appointed a county advisory land use planning committee, on which were appointed representatives of the various agencies, groups, organizations, and associations of the county. The county committee appointed are as follows:

Henry Strehlau, Peshtigo, Wisconsin  
Charles Wunderlich, Beaver, Wisconsin  
Earl Petraw, Goodman, Wisconsin  
Jens P. Jensen, Athelstone, Wisconsin  
Christine Christensen, Marinette, Wis.  
Louis E. Ness, Crivitz, Wisconsin  
Clarence E. Rowe, Porterfield, Wis.  
James Hovind, Wausaukee, Wisconsin  
S. T. French, Marinette, Wisconsin  
Neal Peck, Peshtigo, Wisconsin  
Roy Rabe, Peshtigo, Wis.  
Richard Deerwater, Crivitz, Wis.  
Mrs. John Ramsay, Peshtigo, Wis.  
Mrs. Herman Giese, Coleman, Wisconsin  
John Nettleton, Marinette, Wisconsin  
Fred Smith, Dunbar, Wisconsin  
Robert M. Patton, McAllister, Wisconsin  
Fred B. Hoffman, Pound, Wisconsin  
Amos Grundahl, Wausaukee, Wisconsin  
Wayne Nettleton, Marinette, Wisconsin  
Charles B. Drewry, Marinette, Wisconsin  
Chm. Agricultural Committee  
Member, Agricultural Comm.  
Member, Agricultural Comm.  
Member, Agricultural Comm.  
Member, Agricultural Comm.  
Land and Conservation Comm.  
Agricultural Conservation  
Area Forester  
Fed. Farm Loan Assn.  
Farm Organization  
County Bankers' Assn.  
County Sportsmen's Assn.  
Homemakers' Clubs  
County P.T.A.  
Farm Security Admin.  
Farmer  
Farmer  
Farmer  
Smith-Hughes  
Ass't. County Agent  
County Agricultural Agent, Sec.

The County Committee, at their organization meeting in March, decided to divide the county into six areas because of size and similarity of agricultural and land use conditions.

One meeting was held in each area with as many of the county committee attending as possible, to acquaint the people of the county with the land use project and to get their suggestions and recommendations as well as their opinions on determining areas. These meetings and committees that assisted in mapping are as follows:

Pembine ...................... William Dixon  
                      Max Groy  
                      Oscar Reed  
                      Alex Cretton
Amberg .................. Lewis S. Holmes
      Dewey Beyless
      William Petryk
      James Flaws, Jr.

Crivitz .................. Charles R. Gorman
      Roberto W. Fairchild
      Joe Kahles

Schneider's Grove........ August Neshek
      Beaver
      Phillips Augustine
      Claude Kelsey
      Aristide Gibeault

Peshtigo .................. Oscar Dahl
      Ralph Steudennaier
      Fred Sweningson

Walsh ..................... Clarence E. Rowe
      Finnian D. McElroy
      Herman Behrens

All meetings were well attended with a good deal of interest and discussion taking place. All recommendations were written into the community reports and were later discussed by the county committee. Township plats on a scale of two inches to the mile were colored by the county agent according to the best knowledge of the committees. Later these township plats were transposed to a county map one inch to the mile, and from this map, together with all other information, the county committee determined the areas according to work outline No. 1. The County Committee held five meetings with the final meeting in August to complete this report.

MARINETTE COUNTY – IT’S LOCATION, PEOPLE, DEVELOPMENT AND SOILS

Marinette County, located in northeastern Wisconsin, has an area of 905,360 acres and is the third largest county in the state. The population of the county, according to the 1930 census, is 33,530 people with the largest concentration in the city of Marinette, the county seat, of 13,734 people. The county population shows a steady increase until 1900 and since then has remained fairly constant. The rural population of the county is 14,868 and the balance of the people live in villages and cities. In the past thirty years the population has decreased in the cities and villages and increased in the rural areas, due to development of farms and reduction of manufacturing in the cities.

Marinette County was originally covered with a very productive growth of timber, most of which was white and Norway pine, with some northern hardwoods and swamp timber. Because of the location of Marinette on the Menominee River and Green Bay, it logically became the scene of an extensive lumbering industry. From 1880 to 1900
Marinette and Peshtigo were famed for the sawmills and lumber industries, but since that date there has been a gradual decline until today there are no sawmills left in Marinette or Peshtigo, but in their place are paper mills and box factories employing only a fraction of the men that the old sawmills employed. One sawmill remains in the county at Goodman, which is now operating on a selective logging basis.

As a natural sequence the plow followed the ax and as lands were cleared of timber the farmers followed to clear the lands. Early settlements were made in the south and eastern part of the county, and later spread to the north and westward. Land clearing was slow and a tedious job among the pine stumps, but as long as there was a job in a nearby mill or forest, the early farmer made a living and cleared up his farm. During the decade of 1910 to 1920 the biggest influx of settlers was made. This was the period when land prices in Iowa and Illinois soared to high levels, and settlement was prompted by aggressive land colonization companies. It was also a period of high prices for farm products. U. S. figures of census, regarding number of farms are as follows:

<table>
<thead>
<tr>
<th>YEAR</th>
<th>NO. OF FARMS</th>
<th>SIZE OF FARMS</th>
<th>PERCENT OF LAND IN FARMS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1880</td>
<td>293</td>
<td>105 Acres</td>
<td>3.4</td>
</tr>
<tr>
<td>1890</td>
<td>614</td>
<td>95 &quot;</td>
<td>6.5</td>
</tr>
<tr>
<td>1900</td>
<td>1300</td>
<td>97.1 &quot;</td>
<td>13.9</td>
</tr>
<tr>
<td>1910</td>
<td>1919</td>
<td>114 &quot;</td>
<td>24.2</td>
</tr>
<tr>
<td>1920</td>
<td>2531</td>
<td>108.9 &quot;</td>
<td>30.5</td>
</tr>
<tr>
<td>1930</td>
<td>2307</td>
<td>112.9 &quot;</td>
<td>28.8</td>
</tr>
</tbody>
</table>

According to our 1939 Agricultural Conservation listing sheets, there are now 2758 farms in the county, which comprise about 32 percent of the total land area of the county.

Following the decline of farm prices after 1920 together with high land clearing costs, many families were forced to abandon their farms and return to their former home. However, in later years, more came back and with increased clearings the total crop land in the county has increased. However, demand for cut-over lands declined and as the result land owners quit paying taxes and large acreages of land reverted to the county through tax delinquency. Marinette County has taken tax deeds to over 350,000 acres of land in the past 15 years of which 200,000 acres have been entered under the State Forest Crop Law and in established county forests. A total of 85,000 acres are now scattered throughout the county outside of county forests and the balance has been sold by the county to new land owners.
Soils in Marinette County vary widely, from heavy loams in the south and northwest to a very light sandy soil through the central part of the county. The predominating soil is sandy loam varying in productivity depending upon subsoil and water holding capacity. This area extends through the central and northern portions of the county. These soils are fairly well adapted to northern Wisconsin general dairy farming, provided soil fertility is maintained or improved.

The loam soils are in the southern third of the county and are the most productive of any soils. About 75 percent of the soils will grow alfalfa or sweet clover, but the addition of phosphate fertilizers is usually a paying proposition. This is the oldest settled area of the county, farms have the high cleared acreage per farm, from 40 to 50 acres, and all are general dairy farms with potatoes as the main cash crop.

Marinette County is faced with a distinct land and local government problem because of the large area of tax delinquent lands which comprise one-fourth of the area of the county. In addition, new farming areas are facing adjustments due to changing conditions, and the older areas are faced with depletion of soil fertility, lower yields, and need for crop adjustments.

These problems have been carefully considered and discussed by the community and county committees and are discussed according to the areas where the problems are present.

**AREAS IN FARMS NOT SUITABLE TO ARABLE FARMING**

**CLASS A. AREA:**

Marinette County, through its active land committee of the county board of supervisors, has in the past five years carried out a carefully planned program of purchasing isolated farms on cut-over lands. In all cases the lands purchased have been those which represent the most pressing cases of isolation, high governmental costs and low farm income. In addition the county has purchased and exchanged scattered blocks of undeveloped land to consolidate with the present county forests to prevent future sale and unwise agricultural development. Accordingly, there no longer remains in the county any areas of land now in farms, which should not be in farms. However, there are scattered isolated farms in the forest area which should be purchased either through county forest funds or through the Federal Settler Relocation Project. Practically all of these farms have very low incomes, due to small acreage of cultivated lands, poor soil and long distances from markets. There are usually high governmental costs here because of long mileages of roads to maintain in summer and to plow...
snow in the winter. In many cases there is also the necessity of either providing a school or transportation for children. Most of the farmers involved realize their difficulties and are anxious to move to more desirable locations where they can support themselves. With but a few exceptions, the settlers on these lands have already requested that their lands be purchased.

When such lands are purchased they will be included in the present county forests and if necessary, be replanted to provide a future forest growth. As most of these lands are of low fertility they can only be replanted to jack and Norway pine.

**AREAS NOT NOW IN FARMS AND WHICH SHOULD NOT BE USED FOR FARMS**

**CLASS B AREA:**

A study of the Class B area in Marinette County will show that the greater part of this area is in the northern and western part of the county; lands which have been most recently cut over for timber, and which are remote as far as marketing facilities are concerned; that is, absence of good roads and railroads. The soils are predominately sandy, although in the western and northern portions some good loam soils are prevalent in small areas. As far as stoniness is concerned the land varies all the way from no stoniness to a high degree of stoniness with distinct rock outcroppings in other portions. This land originally has all grown a good crop of timber, which with but one exception, has been harvested and is now in all degrees of forest regeneration. In some areas successive forest fires has reduced most of seed trees and young growth. In these areas future plantings will have to be made.

The entire forestry area is drained through the Menominee or Peshtigo river basins on which both rivers' dams are located for the generation of electric power. Future development and conservation of forest growth in here will be a distinct help to the future generation of power. Scattered throughout the area, primarily as the result of logging operations, are isolated farmers, some of whom made some attempt towards farming and others have been content to do outside work to make a living. Road and school facilities are poor due to the number of settlers and the expense of providing governmental services. In most of the forestry areas, the high taxes, together with the impossibilities of land sales has caused a high rate of tax delinquency. In other words, land owners no longer see an opportunity to get their money out of the land and have ceased to pay taxes. Accordingly, as increasing numbers of land descriptions become delinquent, the county, in order to protect itself, has taken tax deeds on these properties and later entered them under the state forest crop law. As a result of this policy there are in Marinette County today approximately 200,000 acres of county-owned land entered under the Forest Crop Law. These entries are fairly well distributed over most of the areas designated as Class B.
Marinette County has also felt the need and necessity of reducing high governmental costs for isolated settlers and since 1936 the county has been working on a plan of purchase through the use of forest crop funds in forest crop areas—the lands of settlers that are most isolated and present the highest governmental cost. The Teyler Rapids settlement in Town 35 North, Range 17 East was the first large purchase in which an entire community was bought out, a school district dissolved and other governmental costs reduced accordingly.

In the fall of 1933 the Settler relocation project of the Soil Conservation Service optioned a number of farms south and west of Dumbar on which, no doubt, purchase will be completed within a short time. The county has also been interested in buying other lands to block with their holdings where it is possible.

The people of Marinette County are fully in accord with the Isolated Settler Relocation Project and farmers present at all of the meetings recommended a continuation of the policy. The question of retaining the lands of isolated settlers for forestry purposes as far as the state is concerned will be governed by several important policies which already have been put in force by the county. When land is once entered under the Forest Crop Law a contract with the state is entered into for a fifty-year term, or until a forest is grown and this definitely places the land in the forestry class.

In addition, a large part of the forest area was zoned in 1934 to prohibit future agricultural development and settlement. As a result of the community meetings it is interesting to note that increases were recommended in a number of towns by community committees. In no case was there a definite request to change the boundary lines of present zoned areas to allow some of the land to be used for agricultural purposes. As increasing work will be done in the future in these forestry lands, and as increasing tree growth makes the land more valuable, there will be less demand in the future for the land to be returned to agricultural purposes, than there has been in the past.

In addition to the forest development the county has also several areas that are highly developed for recreational purposes. These are large clubs or resorts. Several have large holdings as far as land is concerned and practically all of them have high investments in buildings and improvements. As these clubs continue to improve and to enlarge their properties for recreational purposes, any likelihood of their developing a part of their land for agricultural purposes will be greatly reduced.

The people of Marinette County every year are becoming more publicly minded as far as conservation and preservation of wild life is concerned. There is in the county, a very active sportsmen’s organization which is doing a great work in formulating people's opinions
towards the preservation of wild life and wild life areas throughout the county. To better understand the picture of Marinette County forest areas, they have been subdivided into several groups or classes according to present and future uses.

B-1  GOODMAN TIMBER AREA:

This area comprises the only large area of commercial timber left in the county. It is owned by the Goodman Lumber Company and is adjacent to their mill on the north at Goodman. This area is well covered with an excellent growth of northern hardwood and hemlock which were selectively logged about 10 years ago, and which is being retained by the Goodman Lumber Company to be logged successively as growth and maturity of the forest demands. Soil is a fertile loam well adapted for the growing of hardwood and in an area which is rolling and rather easy to log. If the present plans of the Goodman Lumber Company materialize this area will continue as a potential supply of logs for the maintenance of the mill at Goodman.

B-2  COLEMAN LAKE RECREATIONAL AREA:

Coleman Lake is practically all owned by the Coleman Lake Club, an old organization of sportsmen who have developed on their property a large resort, together with numerous cabins and summer homes for their members. They also have a fish hatchery in the northern part of their property, hatching the fish for stocking the streams within their property.

The taxes paid by this recreation property is a distinct help to the town in which it is located. Because of the high values that have already been placed on this property, there is very little question whether any other use besides forestry and recreation will ever be practiced. The club has been active in improving their lands by planting trees to increase good timber growth; likewise they have been very careful about the cutting of any timber or allowing forest fires to burn within their properties. Practically all of this land has sandy soil, parts of which are very rough and rolling.

B-3  NORTHERN FOREST AREA:

The northern forest area is primarily covered with a fair to good second growth of small hardwoods and pine; soil is sandy to fairly good loam although rock and rock outcroppings are rather prevalent throughout the area. It is practically unfit for farming, although one or two small farms are located on the boundary. Little of the land is open and very little will be needed to be planted providing forest fires do not destroy the present growth. Some of the present growth is of such size that within a few years pulpwood, boxwood, excelsior wood and the like can be cut. Most of this area is inaccessible to good roads. A large part of it is county owned land and is now entered under the State Forest Crop Law.
CENTRAL SAND AREA:

This large area extends through practically the entire length of the central part of the county from the southern boundary of the northern area just described, to the county line in the southern part of the county. Generally the area is composed of sandy soil, most of which is too poor to support agriculture successfully. The region is remote from good roads and markets. Numerous attempts have been made to farm parts of it, but as the original soil fertility was exhausted the farms were abandoned and today there remain very few farms, probably less than two percent of the area is now in farms. None of the farms can be considered economical units of operation, nor do they supply sufficient income to maintain the families in livable conditions. Parts of the central sand area have been burnt so badly that tree planting will be necessary. Planting was started here several years ago by the Dunbar C.C.C. camp and this spring with W.P.A. crew. This year Marinette County will plant in this area practically three million trees.

PESHTIGO RIVER RECREATIONAL AREA:

The Peshtigo River has for a long time, enjoyed a reputation as being one of the famous trout streams of the United States. In order to perpetuate the value of the stream for recreation use the county has been active in promoting a recreational park area along the river, primarily in the area which is owned by the county. In Town 37N, Range 17 E the county owns all the river frontage with the exception of about one-half a mile. It has already developed Strong Falls, Goodman Park and McClintock Park.

The Goodman Park was developed by the Dunbar C.C.C. Camp and on it's location is a large log Recreational building, together with another smaller lodge, a caretakers house, fire places and all other facilities for handling large groups of people. It is open to the public at all times at no charge.

The McClintock Park area has located on it, numerous small cottages of the open shelter type and also has facilities of fire places, tables, toilets, etc. Further down on the Peshtigo are located commercial resorts with the greatest intensification in the High Falls area which will be treated as a separate area.

SILVER CLIFF AREA:

This area differs from the central sand area in that the soil is predominately loam and the growth is mostly hardwood instead of pine. The northern portion has been burned so often that the present growth is small and parts of it have been replanted to spruce. The southern portion is very well covered with an excellent stand of hardwood, some of which is of sufficient size to be ready to cut. This vicinity was the scene of a large cattle ranch operation which was unsuccessful after a year or two of operation. The land will support and grow excellent grass, but the problem of keeping the brush cut and cleared for ranching purposes is prohibitive.
ATHELSTANE PRISON CAMP AREA:

This smaller area consists of about 3880 acres of state-owned land on which is located a state prison camp. The men in the camp devote their full time to developing forests on this land. They are also available for fighting fires in the vicinity in case of severe danger. The soil here is primarily sand with a fair cover of jack and Norway pine, although some planting has been done in the open areas. The entire 3880 acres is established as a state game refuge. A state transplant nursery is maintained by the camp with a capacity of about 500,000 trees, most of which will be available for planting in the county.

HIGH FALLS, THUNDER MOUNTAIN AREA:

In this area is located two power dams, Caldron Falls and High Falls, both of which have large bodies of water that provide a recreational base for a large number of people. A county park is located at Twin Falls above High Falls and there are numerous other commercial resorts on the reservoirs and in the immediate territory adjacent to other lakes and streams.

Within this area is also located Thunder Mountain, a scenic spot which is one of the highest points in the state. The Thunder Mountain Ranch, a privately-owned recreational enterprise is located at the foot of Thunder Mountain. The soil here is primarily sand and although there are a few farms, most of the owners are dependent upon resorts and their summer guests for additional income to provide a livelihood.

LAKE NOCQUEPAY AREA:

Lake Nocquebay with Lake Mary and Lake Julia are fairly well developed resorts, summer homes, and cabins. These lakes have an excellent reputation for being good fishing lakes and the resort owners, although some have farms, get their largest share of their income from recreational services which they offer to the public.

NOCQUEBAY FOREST AREA:

The Nocquebay Forest is adjacent to Lake Nocquebay and fulfills a good purpose of a forest adjacent to a well developed recreational area. Parts of it are rather swampy, but several spots support good swamp timber. The balance shows an excellent growth of aspen, pine and some hardwoods. Soil is primarily loam. There are only one or two farms in this entire forest.

ISLAND LAKE AREA:

Island Lake is primarily the property of Dr. Rich who is developing Island Lake and the surrounding territory as a summer resort mainly for himself and his guests. The land is very rough; the soil a sandy loam and with considerable stone. There are no farms in the area and practically all lands are owned by Dr. Rich, except for a few descriptions now owned by the county.
WHITE RAPIDS FOREST AREA:

The White Rapids Forest consists of almost all county owned forest crop lands. They are now covered with a fair to good second growth of hardwoods and pine. Some of the soil is sandy and the balance is fair to good loam with some rock outcroppings. The area is remotely located. This isolation together with the rough topography and poor soil indicates that it will probably never be used for agricultural purposes.

BEECHER–AMBERG FOREST AREA:

This area is mainly forest land most of which is now owned by the county, and most is also entered under the forest crop law. Soil is fair to good loam and supports a good second growth of hardwood with some pine and hemlock scattered throughout. Some of the timber is of sufficient size now to warrant improvement cutting in the stands. With a W.P.A. project this last year considerable work has been done followed by some spot planting of spruce in the best areas. Because of its fairly close proximity to settled areas, the land here is easily worked and the by-products in the future will have an excellent market. There are many rock outcroppings and swamps which will prevent any future agricultural development. Less than one percent of the land is in farms.

PEMBINE–NIAGARA FORESTRY AREA:

This northern-most area is primarily county forest land, scattered over several survey townships. It varies in topography and soils. The western part is so rough and rocky that tree growth is the only use that the land can ever be put to. The eastern part is so sandy that it will not support agriculture, though at one time numerous farms started to operate but later all were abandoned. Tree growth varies from jack pine, Norway and white pine to hardwoods in the western part where soils are somewhat heavier. Less than one percent of the area is in farm lands. Because of soil topography and inaccessibility, most of it will never be used for agricultural purposes. In the eastern part of this area at Kremlin a roofing company has recently started mining operations for trap rock and has now let contracts for constructing a $260,000 plan which when it gets into operation, will be a distinct help in providing work for residents in the northern part of the county.

SOUTH PESHTIGO–CEDAR SCHOOL AREA:

This is a small area on the edge of Green Bay which is flat and poorly drained. The soil is primarily muck, supports a fair to good stand of wood such as aspen, maple, but will never support a good forest growth because of high water table and poor soil. Agricultural development possibilities are very poor with only a farm or two in the area and the owners of these are not making a decent living.
B-16 GREEN BAY RECREATIONAL AREA:

This area, south of Marinette along Green Bay, is highly developed for recreational purposes with summer homes, cabins, resorts and a golf course. The close proximity to Marinette makes it valuable for recreational purposes and will continue to be used as such.

B-17 WAUSAUKEE CLUB RECREATIONAL AREA:

The Wausaukee Club has made extensive improvements on their properties of summer homes, hotel resort, golf course, etc. The club also owns some property on several rivers for trout fishing. It provides seasonal employment to local people as well as being an important factor in local tax assessments.

B-18 CHALK HILLS–WHITE RAPIDS RECREATIONAL AREA:

This area is adjacent to the White Rapids and Chalk Hills power dams on the Menominee River. Development of land for recreational purposes has been included in the power company's plans and some extensive work has been done in building roads, trails and a few cabins. The Four Seasons Club, a private club located on the north end of the Chalk Hills Reservoir has extensive buildings, a golf course and many other recreational facilities and improvements.

In recommending the developing of as large an area to forestry, recreation and allied industries the Marinette County Land Use Committee realizes that the future of these lands is uncertain, but as long as they cannot be used, or should not be used for agricultural development, the only other possible use is that of forestry, recreation and the development of water power.

Therefore, we feel that it is important that there be a proper understanding by all citizens in Marinette County towards forestry, conservation, recreation and fire prevention as the only salvation for this part of Marinette County. Increased production of other products at some time in the future may mean the introduction of new industries in the county, but for the time being or for the next twenty or thirty years, the production of wood products in the county will tend to keep in operation the sawmill located at Goodman, the Niagara Paper mills located at Niagara, Marinette and Peshtigo, the box factory located at Marinette, the Excelsior Factory located at Marinette and the present local saw outfits, shingle mills, etc.

The future supply of wood products for those industries means that the cities and villages of Marinette County will benefit along with the people out in the county. As far as the development and introduction of other industries are concerned, this will depend primarily upon timber growth, quantities and future market trends, although when
there becomes a large enough supply of raw materials to attract industries there is no question but that industries will take advantage of the opportunity of large supplies of readily available wood products of good quality.

The continued development of the county forests will provide an opportunity for some employment in tree planting, timber stand improvement, work on selective logging and other types of forestry work such as construction of fire lanes, roads, etc. These, for the time being, will not be large but as the forests increase in productivity there will be an increasing amount of employment available to the people adjacent to the timber.

The future continuation of the Civilian Conservation Corps, providing they continue in promoting forestry work as they have done in the past, will be a great help towards the development of forestry and recreation within Marinette County.

The W.P.A. program will also be of aid in a smaller way on specific jobs such as tree planting, timber stand improvement work and the like.

AREAS NOW IN FARMS AND WHICH ARE QUESTIONABLY SUITTED FOR ARABLE FARMING

C-1 LIGHT SANDY AREA:

Scattered throughout Marinette County, but following fairly closely the light sandy soils, are cut-over lands which are questionable for use as farm lands. These light sandy areas, C-1 on the map, have never been high in soil fertility, and after the original humus was taken from the soil through cropping, the water holding capacity was reduced accordingly. With a combination of low fertility and low moisture holding capacity, the farmers who continued to crop these lands extensively simply had to quit farming or else find some other source of income.

These marginal sandy lands were cleared and farms started usually because land clearing was easy, quick and inexpensive. Under these conditions it did not take long for a man to have a sufficient acreage under cultivation to make a farm. However, in the process of land clearing, the first cleared lands were so heavily cropped to soil depleting crops to provide an income for the farm family, that the lands were worn out by the time the entire farm was cleared.

In practically all these areas at some time or other, large scale potato farms were started. The first crops were usually good and if prices were fair some profits were made, but as successive crops were planted, yields were reduced because of low fertility and many failures resulted.
Crop acreage per farm varies on the average of ten to twenty-five acres per farm by towns. However, in each of the various towns some of the farms are large having a hundred or more crop acres. The majority of farms that are well managed seem to return sufficient income to afford a good income for a farm family. The application of lime to correct soil acidity and the application of super-phosphate to establish good stands of alfalfa and clover are absolutely necessary on these marginal lands. Dairy farming with at least 60 percent of the crop land in legume hay and pasture and with at least 100 acres of crop land under cultivation are recommended for self-supporting family farms in these areas.

C-2 STONY AREA:

Besides the sand areas, there are several large areas with rock outcroppings that tend to classify them as marginal. These are shown on the map as C-2. These lands are most prevalent in the towns of Amberg and Pembine. Soil here is usually a good sandy loam, but the large amount of field stone and rock outcroppings makes the cultivation of farm lands a very difficult problem. In addition, farms are usually some distance apart, fields are small and very irregular, and land clearing exceptionally costly.

Crop acres per farm averages less than 20 acres per farm and unless the farmer can get outside employment, farm income is very low. The quarries in the vicinity of Amberg provide employment to a number of farmers in that vicinity as well as the paper mill at Niagara. A few farmers have intensified their operations by growing raspberries and strawberries and if these can be sold to good advantage, a fair farm income can be maintained. Several years ago, poultry was extensively tried to increase farm income, but lack of a good market for poultry products together with high feed cost discouraged poultry raising as a specialty.

Due to the fact that land clearing is expensive and in many places cannot be done at all due to rock outcroppings, increasing crop lands to make an economical farm unit is almost an impossibility. Therefore, unless outside employment can be secured, the farmers and settlers in this region must depend on relief or W.P.A. to provide much of their income.

C-3 LOWLAND AREA

Lying between Marinette and Peshtigo and extending north and south is a combination of lowland muck, sand and some loam soils, which are marginal lands most of the time. Lands in this area vary from poorly drained marshes that can only be used for pasture in dry seasons, to sand ridges that are too light for any possible farming purpose. About one-fourth of the area was drained about twenty-five
years ago by an open ditch drainage system and parts of this area are well
developed for dairy and truck farms. However, wet springs tend to seriously
retard planting in the spring, and early frosts in the fall are always a problem.

The better sandy loam soils and well drained mucks are
well adapted for strawberry growing and in the past few years a big in-
crease in acreage has resulted. These strawberries come into the markets
into and since a cooperative shipping association was organized several
years ago, the market for strawberries has been good because shipments
are made to large metropolitan centers either by car lot or truck ship-
ments. Strawberry acreage can be increased provided the growers produce
only good quality strawberries. Thus far the shipping association had
no trouble in selling strawberries at a good price provided they can
deliver in car lot quantities.

Most of the farms in this territory are dairy farms and
being close to Peshtigo and Marinette, some of the farmers sell their
milk direct on a city milk route while others sell direct to the city
dairies thus realizing more for their product. The introduction and
growing of canary grass on the low lands has been a distinct help in
getting these lands into profitable crops. Truck crops are also grown,
and possibly could be expanded if an outside market could be developed.

About one-third of the area is in farms, with an average
of about thirty acres of cropland per farm. Some additional croplands
can be added to individual farms but there is not much opportunity for
increasing the number of farms. Because of nearness to Marinette and
Peshtigo the opportunity to secure additional employment is the best in
the county.

Because of favorable moisture conditions for tree growth,
control of fires, some remarkable second growth of pines and softwood
have been made in the vicinity of the Peshtigo River. In the course
of a few years this forest growth will provide revenue and employment for
the farmers in the winter. Many farmers can market their wood products
in Marinette or Peshtigo at the Paper Mills, Box Factories, etc. If
fires can be controlled practically all lands not now in farms will grow
a good second growth of pines and softwoods and this should be encouraged
by land owners whenever possible.

C-4  SILVER CLIFF AREA:

Silver Cliff is remote from markets and is an expensive
region for local government to service with roads, schools, relief and
public health services. Farms have a very small amount of crop land and
soil ranges from light sand to loam with rather rough topography. Unless
additional outside work can be secured the most of these farmers will be
dependent upon governmental aid for some time in the future.
AREAS NOT NOW IN FARMS BUT WHICH ARE SUITABLE FOR DEVELOPMENT INTO PART-TIME OR FULL-TIME FARMS

CLASS "D" AREA

Scattered throughout Marinette County are areas of cut-over land on which farms are being developed. These farms are now in all stages of development, from the new settler to highly developed dairy farms. However, adjoining these farms are cut-over lands, most of which are suitable for some type of agricultural development, and which, no doubt, will be developed in the future. These areas are well serviced with roads and schools and governmental costs are not excessive. Such undeveloped lands, in the opinion of the county committee, offer good possibilities for future agricultural development in Marinette County. As these areas vary rather widely, each will be discussed separately.

D-1 GOODMAN AREA:

This area joins the lumber mill at Goodman and is distinctly a part-time type of farming. This mill is on a selective logging basis and offers year round employment to those farmers who can work part-time, or to their sons who can work full time and assist in maintaining the household. Soil is an excellent sandy loam but inclined to be too stony in small areas to make land clearing feasible. Farms are usually small with about an average of 15 acres per farm of cropland. These farms are gradually being increased in size by clearing more cut-over lands and evidently should be independent farming units. For the next fifteen or twenty-five years, it is expected that most of the farmers will be dependent upon the lumber mill for part-time employment.

D-2 NIAGARA AREA:

This area presents the two extremes of agricultural development. Three or four sections along the main highways and near Niagara have very well developed dairy farms and joining are farms in all stages of development. Neatness to Niagara and Iron Mountain provides a good market for milk and other farm products, and also a source of employment to those farmers who are just starting. Farms average about 30 acres of cropland, and soil ranges from sandy loam to loam. Most of the farms can raise alfalfa and sweet clover without liming. Dairy farming is well established with several good herds which provide a source of well bred cattle for the community. Some milk is sold for fluid milk to the Iron Mountain market which provides additional income. A few farmers have well developed truck farms, but future developments can only be made as markets develop.

D-3 DUNBAR AREA:

This area might possibly be questioned to be included in this classification, but most of the farms in the area has sufficient cleared land to be self-supporting, and in addition are near enough to
markets and have good road and school facilities. Soils range from light sandy loam to loam, but most of the land is fairly level. A few rock-cut cropings are present but are not large enough to be serious. Dairy farming is the principal source of income with potatoes the major cash crop. Because of the nature of the soil and past cropping history, serious consideration must be given to building up soil fertility through liming and fertilization, and also by improving the humus content by plowing under green manuring crops.

D-4 WHITE RAPIDS AREA

This area has a fertile loam soil and is well adapted to general dairy or stock farming. There are a few rock outcrops in the area and some field stone but not enough to hinder development. Within the last twenty years considerable progress in settlement has been made; and with present improved methods of land clearing, namely the caterpillar bulldozer, additional lands can be cleared at a low cost. The White Rapids Community is well serviced with roads and schools. Future development will be encouraged especially if the Chalk Hills White Rapids recreational area is developed, since this will provide a market for farm produce during the summer season.

A number of farmers had good success in raising sheep. The soil promotes a good pasture growth and sheep have been effective as good brush killers. As farms are cleared of stumps increasing numbers of farmers will become independent and farming will continue to expand.

D-5 WAUSAUKEE-MIDDLE INLET AREA

This is the largest potential farming area in the county with farms in varying degrees of clearing. All of the land must be cleared of stumps before it can be farmed. Some farms have cleared up to 100 acres, others are just beginning with a few cleared acres. The average clearing is about 35-40 acres.

Soil is predominating sandy loam to loam, although there is considerable variation, some poor sandy soils can be found but they are in the minority and are surrounded by areas of good soil. These smaller acreages can be used for pasture or farm woodlots.

There are some fairly large swamp areas but these are being added to existing farms for woodlots. They are a source of employment and revenue for the individual farmers in that territory. The type of farming is mainly dairy farming with potatoes, canning beans, and cucumbers as the main cash crops. Within the last ten years the growing of canning beans has been enlarged considerably and it now provides a source of employment for all members of the family. This is especially true on some large acreages where a large income per acre can be realized with a maximum amount of human effort. This is also true of cucumbers although cucumbers are not as sure a crop nor are they contracted for every year. This territory is very well serviced with roads, schools, railroad facilities and other market outlets and without question will
continue to increase in importance as an agricultural area. More lands should be cleared per farm in order to increase the cash income.

D-6 **McALLISTER AREA:**

This area has good loam soils underlaid with limestone and most of it can grow alfalfa or sweet clover without liming quite successfully. Part of the farms have been settled for some time and are occupied by older people, who worked in the logging camps and settled along the river as the logging declined. As these farms are being taken over and operated by new owners or the younger generation the agriculture in this territory will be increased and more income will be realized from the farms. The territory is well serviced by roads and schools and because it is fairly close to Marinette, it is possible to sell some farm and wood products to Marinette from this territory. There might be a possibility of recreational development along the Menominee River, which will reflect upon this area and provide some markets during the summer time for farm products.

D-7 **KIRBY HILLS-REEDS HILL AREA:**

These two areas are treated as one as type of soil and farming is practically the same. Both areas are loam soils and with rather rough topography. A good part of it can be used for cultivated crops but a considerable part is too steep to cultivate and accordingly must be used for pasture or woodlot purposes. Some care must be taken to prevent soil erosion in this area by not keeping fields in cultivated crops too long. The soil is very well suited to general dairy farming and raises good quality potatoes. Most of the farmers in this area have sufficient land cleared and farms are of sufficient size so that they are independent in that they do not have to seek other income for a living.

D-8 **BANASZAK AREA:**

This area is somewhat similar to the Reeds Hill area except that land is more level and the soil is somewhat sandier. This is an older settlement. Farms are of good size, but within the area there is considerable land yet to be cleared, and it eventually will be cleared. In the past, this area has grown considerable quantities of cash crops, namely potatoes, grain and at present, canning beans, cucumbers and canning corn. There has been a tendency for farmers to deplete their soil of fertility as the ratio of soil depleting crops to soil conserving crops is rather high. Increased dairying, use of commercial fertilizer and lime should be practiced to increase the amount of legume crops and maintain the increased soil fertility.
AREAS NOW IN FARMS AND WHICH SHOULD REMAIN IN FARMS

CLASS "E" AREA

This area extends through the southern portion of the county and contains the best agricultural land in the county. There are some variations between communities, but as a whole the entire area is similar and will be treated as such although individual statistics will be given by towns.

Land clearing began here about 1870 and has continued up to date with the greatest activity from 1900 to 1920. The soil is primarily an excellent sandy loam although there are spots in it that are sandy and other portions that are low and on which nothing but swamp timber will grow. However, these areas are relatively small and are all being used for agricultural purposes such as farm woodlots, pasture land and swamp timber. The cleared crop land varies from fifty acres in the town of Grover to forty acres in the towns of Porterfield and Lake.

This low average crop acreage per farm can be accounted for by the fact that there are located in this area a fairly large number of forty acre farmers, which tends to pull down the average for the community. However, there are farms even in this locality which can still well afford to clear up good agricultural lands for farming purposes in order to make an efficient operating farm unit. Possibly farms should also be increased in size by combining several smaller farm units and in a few localities this has already been done. The farms are all primarily dairy farms with from nine to eleven head of milk cows per farm. This lower average can also be explained by the same explanation given for low crop acreage; and that is, a large number of small forty acre farmers.

There are at present too few dairy cows to make an efficient farming unit. The land use planning committee feels that a family sized farm in this area should at least have twelve to fifteen cows on the farm. Moreover, the number of cows need not materially be increased as the quality of the cattle can be improved. The butterfat average of the herds in this area is about 220 pounds per year, but with the introduction of more proved sires and with the wider use of dairy herd improvement facilities, the dairy cattle can be improved in quality and milk production to the point where they would be more economical to keep and more profitable to the individual farmer. It is also important that farmers of the county consider at an early date carrying through the area test for Bang's disease for the county. The T.B. test was made in the county some years ago and the county is now an accredited area. To complete the work of a health program, the area bangs test should be given consideration by the dairymen. Already about 35% of the herds are individually tested in the county, but the entire county should be tested as a whole in order to provide protection for all of the farmers.
It is also possible for farmers in this area, providing they have sufficient help to do so, to increase their farm income by diversifying their crops a little more. Introduction of such crops as canning corn, canning beans, cucumbers and strawberries would be good as a local market has now been established for these products. Within the area in the past few years these products have added materially to the farm income especially when the dairy prices were on the decline.

Some consideration has been given towards introduction of other livestock such as hogs, and sheep to supplement and replace the dairy income. Farmers agree that year in and year out the grain crops are not sure enough to promote good hog raising and pasture and dog problems have not encouraged sheep raising. A few farmers have some fair sized flocks of sheep, but for the general farmers to sell cows and replace them with sheep is a question which the committee does not feel that it wants to make any definite recommendations on.

In considering the percentage of present cultivated lands which should remain in farms, the committee is unanimous in stating that practically 100 percent of the land in this area already cultivated and in farms should continue to remain in farms. As has been stated previously there is some opportunity to increase the amount of cleared land in present farm holdings. It is possibly interesting to know that within the last two years the greatest amount of land clearing, that is, the total number of cleared acres was greater in this area than any other area of like size in the county.

Farmers have found that wild pasture among the stumps is not a reliable source of feed for the summer season, especially for dairy cows. They know that if the stumps are removed and the land broken and planted to tame pasture, they can increase the number of head of livestock on the farm. Moreover, these farms have sufficient income to go ahead with land clearing which is not always the case in the newer localities.

The committee recommends for this area that approximately twenty-five percent of the crop acres should be in intertilled crops. This might possibly vary from year to year as climatic and price conditions influence the planting of crops.

The committee also recommends that small grains should be grown on about thirty percent of the crop land. Small grains as a commercial crop are not especially profitable if sold; but if fed to livestock especially dairy cows, increased income is afforded the farmer. Small grains are also used to seed down hay crops such as alfalfa, clover, sweet clover and the like. The tendency has been to increase the value of and productivity of grain crops by using fertilizers and thus decrease the total number of acres in grain crops.

The committee recommends that forty-five percent of the cropland be in grasses, legumes and hay crops. In a system of dairy farming, the legume hay and legume pastures are a very necessary and
essential part of a feeding program. Farmers have been urged to increase
their legume crops to provide cheaper feed for dairy cattle and increased
profits for themselves. Through improved soil practices, alfalfa, sweet
clover and red clover or mixtures of same can be grown on most any farm
in this area. For that reason the committee feels that a large per-
centage of the land should be in legume hay or pasture.

With the introduction of hay silage, it is very likely
that the percentage of hay might even be increased and grains and inter-
tilled crops be decreased.

Potato raising is the most important single cash crop in
this area, but unfavorable weather, low prices and attitudes of farmers
have so materially lowered the quality of potatoes in the county that
it is doubtful if farmers can continue to stay in the potato game without
improving their potato raising methods. It is a well known fact that
unless the quality of the potatoes is improved through better seed,
better fertilization and better care, the farmers who only raise an
average crop of poor quality potatoes simply cannot continue in the
potato business. Marinette County in the past, has had a reputation for
good quality potatoes, and at one time shipped out many cars of certified
seed for seed purposes. However, they cannot boast of that honor today,
nor can the boast of high quality table stock. Unless the individual
farmers improve their methods the quality of Marinette County potatoes
will continue to decline. Farmers are urged to restrict potato acreage
to individual capacity. They should consider the introduction of new
varieties of potatoes to increase quality. Furthermore all potatoes
should be carefully graded and only U. S. No. 1 grade sold in normal
years.

The question of summer fallowing for the control of weeds
and moisture is not generally recommended for the county, nor is it
generally practiced. There are possibly a few exceptions where weed
infestations are very bad, where summer fallowing might be necessary;
but if good cultural practices are followed as a part of the general
farm program, it is not necessary to summer fallow.

In studying the soil conserving practices that should be
carried out in this agricultural area, the committee is very positive
in their recommendations that the original soil fertility of this
area has not been maintained. It is necessary in order to build up
the soils, that additional soil building practices be adopted. The
committee recommends that at least 50 or 60 percent of the farms in
this area will profit by the addition of ground limestone to improve
the quality of the legume hays and pastures now being raised on them.
Possibly some of these soils will not show material increases with the
application of ground limestone, but as a program for soil improvement,
the addition of ground limestone will do much to maintain and increase
the crops year in and year out.

The application of phosphate and particularly super-
phosphate is more generally needed throughout this area than even lime,
since many soils are potentially low in phosphate and between 80 and 90 percent of the farms will be materially benefited by the application of phosphates especially on the grain and hay crops. Fifteen years ago the extension service found that phosphate was the limiting factor in raising good legume hay and ever since have been advising the use of phosphates on new seedlings with fall applications. Use of phosphates at time of seeding grain increases the grain crop as well as insuring a good stand of seeding.

Problems of erosion do not apply to this territory except in very extreme heavy rainfalls. There is no general need for terracing or strip cropping. Special fertilization for individual crops such as potatoes, canning beans, canning corn, and the like are to be recommended where the maximum yield per acre and maximum quality is to be maintained. Most profitable use of commercial fertilizers can be made on these crops.

In considering the annual practices that might be followed to improve soil fertility or soil conservation, the growing of green manure crops to be plowed under is to be recommended especially for corn or potatoes. The usual practice is to plow under the second crop of clover or alfalfa late in the fall or a crop of sweet clover late in the spring and then plant it the same year to corn or potatoes. The addition of green manure improves the water holding capacity of the soil as well as increasing its fertility.

Possibly one of the most serious problems that must be considered in connection with soil fertility is the control of weeds, since the number, kind and variety of weeds seem to be steadily increasing. Farmers must be made aware of the fact that unless they follow systematic weed control year in and year out that weeds will tend to get the better of them. The majority of farmers are fully aware of this fact, but it seems that a few indifferent neighbors make ineffective the present weed laws.

To promote the most economical use of pasture lands they should be cleared of stumps and brush as soon as possible and be resowed to tame grasses, primarily legumes. Practically none of the pasture lands need to be reforested and after permanent pastures have been established and incorporated into the farm, successful fertilization through top dressing with manure and superphosphate will be necessary to maintain fertility.

The proper management of farm woodlots in this area is important. The committee feels that all woodlots should be fenced especially those that are primarily maintained for woodlot purposes, and in a combination of woodlot and pasture, cull trees, especially aspen and birch should be thinned out. In young hardwood woodlots improvement cuttings can be made when trees are of sufficient size to warrant it. Some late plantings might be made in hardwood areas where farmers desire to obtain some soft wood such as pine, although practically all of the land will reseed itself to hardwoods if livestock is kept out. Maple groves in a few areas provide an additional source of income through sale of maple syrup, although this is limited to a relatively few farms. There is very little mature maple suitable for making maple syrup in this area.
The committee has carefully considered recommendations of the various community committees regarding the ideal size of minimum family farm for the area. They feel that a minimum farm should consist of 80 to 120 acres with about 70 to 80 acres in crop land and the balance in native pasture and woodlot. The number of dairy cattle on the farm to be from 12 to 15 cattle (milk cows) and 6 to 8 head of young stock. Number of hogs about 1 sow to farrow to raise sufficient pork for the family and possibly sale of either a few young pigs or mature pigs depending upon conditions. Each farm should also have a flock of chickens varying from 100 to 200 laying hens to provide meat and eggs for the family and also some income from sale of eggs and sale of meat. All family farms should have a large garden producing fruits and vegetables sufficient for their needs.

RECOMMENDATIONS

The Marinette County Land Use Planning Committee recommends the following:

FORESTRY:

1. Those areas not now in county forest that contain over 50 percent of county-owned lands should be entered under the forest crop law, provided such areas are of sufficient size, and located near other forest lands so they can be properly administered.

2. Expand and promote through C.C.C., W.P.A., or any other agencies an active program of tree planting on all county lands where tree planting is essential to good forestry development.

3. Encourage and support a long-time forestry program by county, state and federal agencies whereby local people will be given a chance of employment, and potential forests be developed.

4. Retain and enlarge, if possible, the present activities of the Civilian Conservation Corps as it now applies to forestry development.

5. Improve present recreational areas, and promote new areas where advisable.

6. Refuse to sell to private individuals county-owned lands adjacent to streams, rivers and lakes.

7. Endorse the Isolated Settler Purchase project of the Soil Conservation Service and further purchases until all isolated farmers or individuals who are a financial burden to local government are removed from the forest areas.

8. Continue to purchase lands that block with present forest holdings, provided they can be purchased at a fair price.
9. Continue to refuse to sell any County lands within the present forest areas, or any other areas that might be included in a county forest in the future.

10. When timber is ready to be sold from county forest lands, it should be sold on bids, such bids approved by the county board, and cutting selectively be done under supervision of the District Forester of the Wisconsin Conservation Department.

11. Encourage both private and public interest in development of all recreational facilities with special emphasis on enlarging the tourist trade.

AGRICULTURAL CONSERVATION

1. That the soil building payments be increased and allotment payment decreased, thereby giving the small farmer a better chance to participate and receive a payment on the same scale as the larger farm.

2. No limit be placed on any farm for soil building practices. In other words, payment for all soil building practices that a farmer may perform.

3. That no payments be made to farmers in a zoned area, that is, an area restricted against Agricultural use.

4. That arrangements be completed whereby a farmer can borrow money for seed, lime and fertilizer, similar to the program in effect this spring.

FARM SECURITY

1. Endorse and encourage the present program of the Farm Security Administration in all class D and E lands.

2. Make no farm security loans to those farmers living in zoned areas.

3. Make no farm security grants to farmers in the zoned areas except when they will agree to resettlement when the opportunity is given them.

4. Recommend the extension of long-time credit of farm security clients who show ability to become farmers.

5. Encourage the employment of farm security clients in part-time work in order that they have sufficient income to properly support their families.
6. Give first consideration to those farmers who have lost or are about to lose their farms through mortgage foreclosure in making loans, in view of the fact that it is more practical to continue these farmers rather than to start a new man on the same property.

7. Hasten procedure to move isolated settlers by loaning them up to 75 percent of option.

8. That a foreclosed farmer be given first chance to redeem farm at sale price.

ZONING

1. That present zoning boundaries be extended to include lands recommended by community committees with the approval of town boards.

2. That individuals be encouraged to report any violation of present zoning ordinances to town and county officers.

AGRICULTURAL

1. That any further land settlement should take place in existing rural communities, which are now serviced by roads and schools, and on lands that will support agricultural development.

2. That farms should be increased in size until sufficient land is cleared to make them economical to operate and to support a farm family.

3. That farmers should study possibility of increasing farm income by diversifying crops and livestock.

4. That all farmers should plan to raise all the alfalfa or legume hay or pasture that they need. Every effort should be made to retain and improve soil fertility through liming, fertilizing, and green manure.

5. That the production of quality potatoes offers the best possibility for Marinette County farmers to stay in the potato raising game.

6. That rural electric lines be extended into territories not now serviced as fast as it is possible to do so.

7. That an area test for Bang's Disease be started as soon as feasible.

8. That dairymen be urged to test their herds for production through private test or joining a dairy herd improvement association in order to eliminate low producers, and to intelligently improve their herds by breeding better dairy cows.
9. That all farm families be urged to grow all vegetables, fruits, and meat sufficient to maintain the family.

10. That all W.P.A. employees living in the county be urged to grow a garden sufficiently large enough to provide all vegetables for home use.
<table>
<thead>
<tr>
<th>ITEMS</th>
<th>AREAS</th>
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<tr>
<td>Percentage of Present Cultivated Cropland to continue in cultivation</td>
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<td>Approximate number of acres of land in the row to be continued in cultivation</td>
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<td>Percentage of Recommended Cultivated acreage to be in:</td>
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<tr>
<td>1. Intertilled crops</td>
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<td>2. Small grains and other close cropped crops</td>
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<td>3. Grass and Hay crops</td>
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<td>Percentage of Recommended Cultivated Cropland Acreage needing Soil Conserving practices:</td>
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<td>2. Lime-phosphate application, or other fertilizer</td>
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<td>3. Terracing</td>
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<td>4. Winter cover crop for green manure</td>
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<td>5. Summer cover crop for green manure</td>
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<td>6. Contour cultivation</td>
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<td>7. Other</td>
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