OF MAN IN SEARCH OF BETTER WAYS

From our farm the young folks have always gone to be educated. Our family had this idea very deep: education for all. I know that many in our neighborhood didn't think a farmer needed to have any learning from books . . . he had enough from the folkways, and what he learned on the land. But our folks insisted on all of us having education. We were here, after all, when they started the University of Wisconsin. Great-uncle Tom was one of the earliest to graduate. Great-grandmother had the first school anywhere around here in her cabin one winter. And her daughter-in-law, grandpa's wife, worked hard for the education of women and girls.

Under the Morrill Act of 1862, the state was granted federal lands to establish agricultural and mechanical colleges. For four years nothing was done with the Wisconsin lands. Ripon College carried on a strong campaign to obtain them and to establish the new agricultural college there, but in 1866 the state legislature awarded the lands to the University of Wisconsin. Dane County furnished the money for an experimental farm.

Because it was still in its formative years, the new agricultural college did not graduate its first student until 1878. William W. Daniells of Michigan became the first professor of agriculture after John W. Hoyt, editor of the *Wisconsin Farmer,* turned down the job. In 1880, William A. Henry was elected to the chair of agriculture. He immediately began to effect the relationships with farmers that made the college a vital institution. Henry became the agricultural dean in 1888.

New York State men in Wisconsin were often the dynamic leaders who headed local movements for organizing the dairy industry. One of them was Hiram Smith of Sheboygan County, a chief supporter of the college for whom the first dairy building at the college was named.

EDUCATION FOR FARMERS

The success of the Wisconsin College of Agriculture depended upon close association with actual working farmers. It had to be a "team" operation. To get new kinds of scientific information out to the farmers, a series of Farmers' Institutes was established in 1886 by the Wisconsin College of Agriculture. Sometimes an entire train would leave Madison loaded with exhibits and specialists to help farmers in their own territory. There were many new scientific discoveries. The Wisconsin farm was on the verge of an era of true self-realization.

Early in Wisconsin educational history, President Thomas Chamberlain of the university said: "A new ideal is rising—namely, that it is also the function of a university to seek an all-pervasive influence upon its patron community. Our Farmers' Institutes are a more striking and effective instance than even the English movement."

E. L. Luther told the story of the Farmers' Institutes in *Wisconsin Magazine of History:*

The year 1848 was a notable one in Wisconsin. [Beyond statehood], it is a matter of record that the Wisconsin Legislature that year established the University of Wisconsin. [Instruction did not begin until 1849.]

In 1862, the Morrill Act was passed by Congress and signed by Lincoln. Dane County gave the University a farm in 1866. William W. Daniells, a chemist, was made director of the farm in 1868. In 1872 a group of dairymen, who were cheesemakers, organized the Wisconsin Dairymen's Association, which developed into one of the greatest boosts to agriculture, as we shall see. Then in 1878 Hiram Smith . . . became the first farmer to be appointed to the University Board of Regents, and was promptly made chairman of the agricultural committee which looked after the farm. Things then began to pop.

In 1880 the regents brought William A. Henry, botanist, to the faculty and made him director of the farm and three years later, in 1883 Governor Jerry Rusk, Hiram Smith, and

William A. Henry prevailed upon the legislature to set up the Wisconsin Agricultural Experiment Station, the first of its kind in America, and agricultural education went from theory to truth. Hiram Smith led the way. He organized an agricultural group, among whom was a professor of agriculture, and held meetings for farmers about the State. At a fair arranged by businessmen in Manitowoc, Smith was present and was entertaining a considerable group of farm visitors. A lawyer by the name of Charles E. Estabrook listened with deep interest to Smith's discussion and wondered why it would not be a good thing if such discussions could be carried on regularly throughout the State. With collaboration from Smith a bill was prepared. Estabrook ran for the Assembly, was elected, and introduced and carried the bill through the legislature, with the loyal assistance of Smith, who was a former assemblyman and knew his way around in legislative matters.

The following historic statute set up in the University of Wisconsin the Department of Farmers' Institutes by which adult farmers could become students of the University in their own communities.

"An Act to provide for the holding of agricultural institutes. *The people of the State of Wisconsin, represented in senate and assembly, do enact as follows:*

"Section 1. The board of regents of the state university is hereby authorized to hold institutes for the instruction of citizens of this state in the various branches of agriculture. Such institutes shall be held at such times in the months of November, December, January, February, March and April in each year, and at such places as said board may direct. The said board shall make such rules and regulations as it may deem proper for organizing and conducting such institutes, and may employ an agent or agents to perform such work in connection therewith as they deem best. The courses of instruction at such Institutes shall be so arranged as to present to those in attendance the results of the most recent investigations in theoretical and practical agriculture.

"Section 2. For the purposes mentioned in the preceding section, the said board may use such sum as it may deem proper, not exceeding the sum of five thousand dollars in any one year, from the general fund, and such amount is hereby annually appropriated for that purpose.

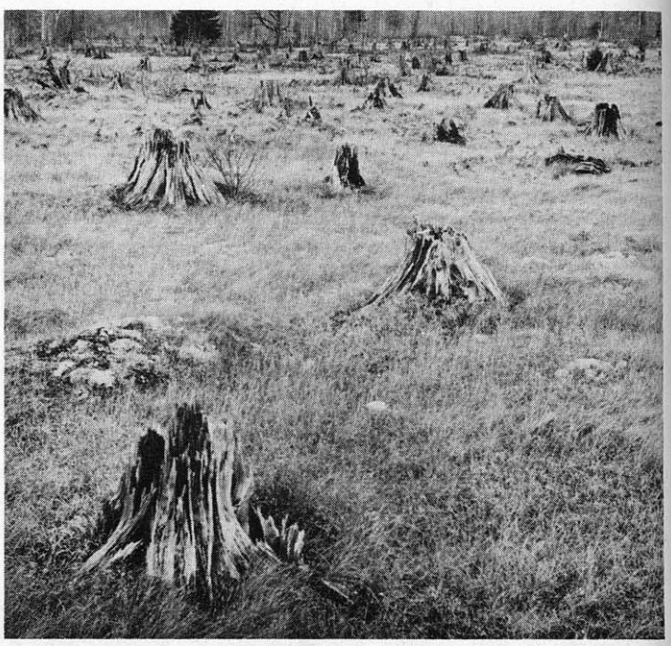
"Section 3. This act shall be in force from and after its passage and publication."

Approved, February 19, 1885.

The new College of Agriculture had a very limited faculty, and only now and then could it secure professors for the institute programs. Consequently, it relied heavily on men in the Dairymen's Association. This gave dairy color to the institute programs, and eventually resulted in making Wisconsin the leading dairy state.

The first institute was held at Hudson on November 24-25, 1885. Thirty institutes were held that year, and an average of seventy per year for nine years. These were farmers' institutes indeed, conducted by farmers with almost all discussions based upon the experience of successful farmers.

As a rule, new extension specialists started their work by being brought into institute programs. For several years these specialists were loaned by the Agricultural Extension Office, and at times they supplied half of the workers in the institutes.



Like pale ghosts, the old stumps haunted the fields.

The Depression killed the institutes. The state administration and the legislature of 1933 discontinued the appropriation for the Department of Farmers' Institutes, which had become a valuable adult educational activity for the farm folk of Wisconsin.

Many farmers in the state in the early days doubted that the agricultural college would really train farmers. The Farmers' Institutes did much to bring college and farm together. There was, however, great suspicion of the college until Dean Henry established the agricultural Short Course in 1887. It was the first school of its kind in America.

In the 1880s, farm people of foreign birth and, indeed, the general run of earlier farmers with a tradition of hard work and with land to clear provided few educational opportunities for their children. Many farm boys and girls, in fact, were able to write and speak well only in a foreign language: German, perhaps, or Norwegian, Bohemian, or Polish. Often they were forced to leave school at age twelve or fourteen or even younger. Relatively few attended high school. To help overcome this lack of continued schooling, the Short Course in agriculture was established.

"I got to the fifth grade," said a farmer in Jackson County, "and that was the end of school for me. I had to help my dad in the fields. When we got the crops in I went back to school. I was the oldest child. Dad wanted me to go to school but only after the

work was done, so finally it just got too much work. I had to stop school. But I made up my mind right then if I ever had children of my own I'd put them at least through high school. And I have. All eleven of them."

The rural schools were the cultural centers of the farming community. The teachers set the literary tastes and often provided music and entertainments.

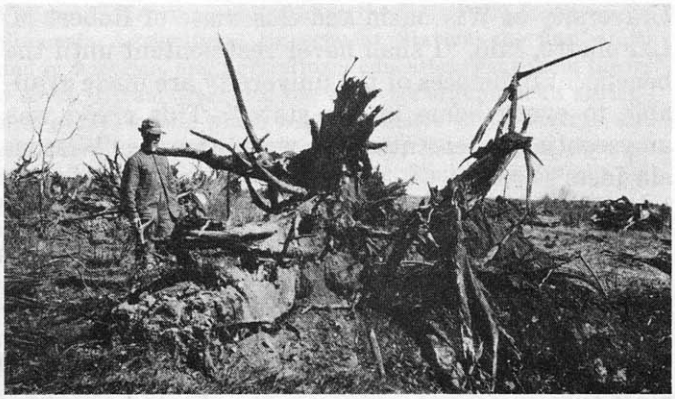
"There were fourteen kids in our family," said a Portage County farmer, "and I was the oldest. We all worked. Hard. And we never got away much, and didn't get to any parties or such. But we were happy. My folks went to a dance once in a while in the neighborhood, but we kids didn't get to go. I started to milk cows when I was seven years old, milked right out in the cow yard. I was kicked plenty of times, and you had to watch out for the cow's tail, in bur time, and in the fields I drove the team and picked up stones. Then when the day's work was done I had to go in the house and work. I used to have to haul the milk two miles to the creamery, and then drive the team back and put them in the barn and then walk back the two miles to school. I sure did want an education; the Short Course at the agriculture college, available to boys like me, opened up my whole life for me."

Charles R. Van Hise, a great president of the University of Wisconsin and classmate of Robert M. LaFollette, said, "I shall never rest content until the beneficent influences of the university are made available to every home in the state." This credo was an essential statement of the world-famous "Wisconsin Idea."

"For some years past," stated a university publication of the 1880s, "the University has offered an extended course in agricultural science, embracing, also, long courses in the closely related sciences. If the opportunities thus afforded had been embraced and industriously followed up, it would have proved a most wise choice to a score or more of talented young farmers' sons. There is just now, probably, a greater demand for thoroughly educated talent in agricultural science than in any other branch of learning. The rapid development of agricultural experiment stations throughout the country creates an exceptional call for ability and skill in that line, and if a few dozen Wisconsin boys who had the native talent had embraced the opportunity, they might now be putting shekels in their pockets and doing the world good and their State honor, at the same time. This course has been reconstructed during the past year, and is now offered with increased and constantly increasing facilities. How long shall it wait for due appreciation?"

To meet an entirely different educational need,

They got the stumps out any way they could.



Disposing of the stumps was very hard, too. They were burned, or sometimes "stump fences" were made. A few still exist.

In Florence County a homesteader gets a start.

a Short Course in agriculture was offered, designed to give thorough training in agriculture, in the briefest time and at the smallest expense.

In the Short Course established by the College of Agriculture in 1885, young farm men could come for three months of agricultural education at very low cost. More than any other program, the Short Course established favorable relations between the university and state farmers.

The objective of the Short Course was to train young men who would go back to the farm and there apply the results of scientific study to farm production.

It was feared that exposure to the university would wean young men and women away from the farm, but most of the students returned to their family farms.

The young farm students in the Short Course had the top professors of the College of Agriculture. They were often instructed by noted bacteriologists, chemists, dairy professors, and agronomists. Later the boys had exposure to the liberal arts and social sciences. Girls, too, attended short courses at the college, led by home economists.

"My father," stated a successful Rock County farmer, "attended two winters of Short Course; in 1910, my father-in-law also attended the Short Course. They both had instruction by the top researchers in the field of agriculture. The Short Course in Wisconsin is the only one in the whole country where they have kept the top echelon of their staff directly related to these farm youth. It's no wonder we have the best educated group of young scientific farmers in the country."

CONTRIBUTIONS FROM SCIENCE

Under Dean Henry, the Wisconsin College of Agriculture began to assume leadership in Wisconsin agriculture and dairying.

Dean Henry wrote "Feeds and Feeding," which presented new information on the scientific care of farm animals; his successor, Dean Harry Russell, later introduced bacteriological tests for infectious diseases, especially tuberculosis.

The tuberculin test, indicating infection of an animal by tuberculosis, was announced in 1890. This eventually led to the testing of Wisconsin dairy cattle. About 2 percent of all Wisconsin cows were found to be infected. Herds had to be destroyed, often in the face of angry and sometimes violent farmers who could not understand why their animals had to be killed.

Dr. Stephen A. Babcock, a scientist whose major interest was in dairy husbandry, developed the milk tester in 1890. A number of testers to determine the amount of butterfat in whole milk had been invented, but none was completely satisfactory. At times tests were apt to be inaccurate. Dr. Babcock was the first to use sulphuric acid to separate fat. He would have been satisfied with an earlier test in which he used ether as the separating agent, but for a single cow named Sylvia. Her milk would not respond to the ether test. Babcock then developed the test using sulphuric acid. It is still the standard butterfat test.

Although Dr. Babcock's discovery could have made him wealthy, he refused income from it and shared the butterfat test with the dairy industry and the farmers of the nation.

Farmers in the 1890s found the butterfat test very much in their interests. A speaker addressing the Dairymen's Association made it plain:

"Mr. Everett—Mr. President, I am unable to estimate the value of the Babcock test on the farm. The value is certainly very great to us as farmers. It determines for us accurately in a short time the value of our cows. It finds the per cent. of butterfat in the milk that they give and that is what we are

anxious to know, what we must know if we would be successful dairymen. We have been getting along a great many years—altogether too long—ignorant on this point of the butter value of milk, and there is no better way to determine it than by the thorough use of the Babcock test. Men often say to me, 'Why not test the cow with the churn? Weigh the milk, churn it, and weigh the butter?' That was once a very good way and the only way that we had, although not reliable for the simple reason that we have never known what was in that milk. We can only find out by chemical analysis; for instance, to make it more plain, I have got a cow and I want to know how good she is. I weigh the milk and I churn it and weigh the butter. I get from 100 pounds of milk four pounds of butter. Well, I consider the cow is a fairly good cow, a little better perhaps than the average. Someone comes along and sells me the Babcock test and I go to work and test that cow and I find out that she is giving milk that ought to yield five pounds of butter to the 100 pounds of milk. When I tested it by the churn I was very well satisfied to get my four pounds of butter in that 100 pounds of milk, but the chemical analysis shows that I was losing about a pound of butter in that 100 pounds of milk in the manner of making or something else. Now, apply the test a little further, and I find out where this one pound is gone. It is in the buttermilk, or in the skim milk. I was not getting the cream all out of the milk, or was losing a lot of it in the buttermilk, perhaps a lot of it was going to the hogs. In this way you find out the leaks. You find out how much there is actually in the milk, and you must get it out if you would make a profit in your business."

"I remember Dr. Babcock very well," said youth specialist Wakelin McNeel. "What an interesting personality he was, and what a wide range of interests he had. Among other things he loved were hollyhocks. He cultivated a whole yard full of the most gorgeous hollyhocks. That was in his yard on Lake Street in Madison. I guess you know that after his death the 4-H Club kids distributed those hollyhock seeds. Babcock hollyhocks are growing in many, many parts of Wisconsin. That sure would have pleased the old man."

Wisconsin farmers have benefited enormously from the great research programs conducted by the college in the areas of agronomy, horticulture, soils, engineering, animal husbandry, and insect control. Through college research, alfalfa became a chief hay crop; Wisconsin became a leading corn state; potatoes and soy beans came into their own.

In addition to Stephen A. Babcock and Harry Russell, the college has had Dr. Harry Steenbock, who

Stones were piled like ceremonial heaps among old stumps.

"trapped the sun" by discovering vitamin D in 1924. After sixteen years of tests with thousands of rats in his laboratory in the biochemistry building, he discovered that food could obtain growth-promoting power from ultraviolet light. He exposed hot millet, on which rats will not grow, to the rays of a sunlamp. Rats eating the irradiated grain soon doubled or tripled their weight. Steenbock was able to apply his ultraviolet-ray process to basic foods. Hundreds of licenses were granted to manufacturers who wished to add the bone-building vitamin to milk, cereals, flour, bread, health foods, and animal feeds. Steenbock's royalties have largely gone to further research. He helped to establish the Wisconsin Alumni Research Foundation, and royalties from the vitamin patents have established the University of Wisconsin as one of the world's greatest research centers.

The College (now known as the Wisconsin College of Agricultural and Life Sciences) produced two more famous scientists, Karl Paul Link and Conrad Elvehjem.

One Christmas morning in the early years of the Depression, a dirt farmer from upstate came to the university looking for help. Many of his best cows had died. Of the mysterious disease he only knew that it had some connection with sweet clover. The cows ate clover hay, got sick, could not get up, and died. Bringing with him a milk can containing blood from one of the animals, he wanted the university to do something about his dead cows.

By sheer luck he bumped into the one man who might be able to do something. Karl Paul Link, a young biochemist already becoming well known, was around the biochem building that morning, and a watchman, not knowing what else to do with the visiting farmer, took him to Link. Link immediately recognized the symptoms of the dead cows as the sweet clover disease, caused by eating spoiled clover hay. He explained to the farmer that sweet clover apparently contained a substance that weakened the animals. Stricken cattle, he continued, often bruised themselves when they lay down, causing the rupture of small blood vessels and the formation of a hema-

toma under the skin. Blood collected, and the animal became so weak that it died.

The farmer wasn't greatly comforted by the explanation. He wanted action, and relief. This, Link could not promise him, but the farmer's visit started a line of inquiry that did lead to extremely important discoveries. Cattle that had eaten spoiled sweet clover hay over a period of time had blood that slowly lost its clotting power. The scientists found that sweet clover hay, when it was "put up" or stacked, developed, if it spoiled to any degree, some change that caused cattle to become weak if they ate the spoiled hay for from twenty to fifty days. At about the same time, Dr. R. A. Brink in plant genetics suspected a connection between cumaron, the sweet-smelling substance that makes a clover field so appealing, and the sickness of cattle. Brink requested that the biochemists assist in testing this theory.

Finding that there was a definite connection, Link and his associates isolated the anticoagulant blood factor dicumarol. Their achievement became extremely important to the medical profession in preventing blood clots in humans. For about ten years after the farmer visited Link's lab that Christmas morning in 1933, the scientist and his associates were busy perfecting compounds somewhat like dicumarol. One of these compounds became the basis for the famous rat killer Warfarin. Developed in Link's laboratory at the college, the Warfarin compound also was found valuable as a new anticoagulant now widely used in medicine, and superior to dicumarol.

Conrad Elvehjem, thirteenth president of the university and on the faculty of the college, was one of the really great research scientists in the country. His name will be known wherever nutrition and the problems of diet are discussed. Possibly Elvehjem's greatest scientific work was in connection with the vitamin B complex.

Among other achievements, he is credited with contributing a major effort to the cure of pellagra. Experimenting with nicotinic acid, he had in his laboratory at the biochemistry department a collie named Whitey, a dog of which he was very fond. In the course of experiments, certain kinds of nutritious food were withheld and Whitey developed black tongue (the tongue darkens and develops a red band), a disease somewhat similar to pellagra in humans. Elvehjem cured Whitey almost immediately with doses of nicotinic acid.

As soon as Elvehjem reported his success (*Collier's* magazine published a picture of Whitey), experiments were conducted on persons in jails who had pellagra. They called the pellagra disease the three "d's"—dementia, diarrhea, and dermatitis. The patient could become almost a raving maniac, with red splotches on his neck and chest. After taking nicotinic acid tablets, he would become normal, almost miraculously, in a short time.

The university and the College of Agriculture were very interested in the development of the silo. In *Wisconsin Magazine of History,* N. S. Fish related the events that finally led to Wisconsin as a leading silo state.

One-fifth of the entire silo-using population of the United States is in Wisconsin. . . .

At the time of the advent of the silo in this state, land was increasing in value and feed was becoming high-priced. Under these conditions many farmers were unwilling to carry a herd of cows through the winter, finding it was not profitable to do so. Many would sell in the fall and buy again in the spring, thus being able to pasture the herd and throwing the wintering losses on others. The silo greatly reduced the cost of wintering cows and thereby introduced a fundamental improvement in the business of dairying.

The word "silo" comes from the Latin word *sirus,* or *silus,* meaning cellar. The history of the silo as a storage place dates back to the earliest times of which we have any record. The practice of burying grain in underground pits to save it for future use and to protect it from invading enemies is mentioned by ancient writers. But the use of the silo as we now understand it appears to have been commenced in 1861 by A. Reihlen, of Stuttgart, Germany, who probably stored the first green maize in pits. He had lived in the United States a number of years and on his return to Germany began the cultivation of large dent corn. A quantity of his corn was injured by frost, which made it unfit for soiling purposes. Wishing to preserve it, he dug trenches in which he stored the maize; when he opened these a few months later, he found the corn well preserved and discovered that his cattle would eat it readily.

The chief credit for what may be termed the practical modernizing of ensilage undoubtedly belongs to M. Goffart, of France. Goffart began as early as 1852 to study the preservation of forage. In 1877 he published a book on ensilage which laid the foundation of all modern practice. This book was translated and published in the winter of 1878-79 in New York, by J. B. Brown of the New York Plow Company.

. . . The first silo in Wisconsin was built in 1877 by Levi P. Gilbert, of Fort Atkinson. Mr. Gilbert conceived the idea from reading in 1876 a government report on the making of ensilage in European countries. He decided to try the venture, and during the summer of 1877 he dug a trench six feet wide, six feet deep, and thirty feet long. For a time it was thought that this was the first silo in America. . . .

The first above-ground silo to be built in the state was erected in the summer of 1880 by Dr. L. W. Weeks, of Oconomowoc. Weeks got from the French his idea relative to silos. He was a man of means and could well afford to experiment on this new venture. Only two of his silos were original constructions. These were built of stone and cement twelve by thirty by twelve feet deep, and had a wooden superstructure double-boarded on the inside, bringing the entire depth to about twenty feet. . . .

The farm of Dr. Weeks (which consisted of forty-eight acres) was not considered by his neighbors to be much of a farm. Previous to 1880 Weeks operated the farm at a loss, keeping only a half-dozen cows. In an attempt to make the

Memories of virgin white pine — timber one hundred feet or more high.

farm pay he made fine butter, adopting the Danish system of cold setting milk, of which he had learned something during his wanderings in Europe. He increased his herd to twelve cows, purchasing hay and grain for winter feed. Finding this did not make the farm pay, he was about ready to quit farming when he obtained a copy of Goffart's treatise on ensilage. He decided as a last resort to try this new venture and built two silos, putting up one hundred tons of fodder corn the first year. He was able to increase his herd to nineteen head that year, and the year following to forty-two head. In a letter to Dean W. A. Henry he stated that before he commenced using ensilage his farm paid a yearly loss, but since then it had given a liberal profit.

Dr. Weeks experimented to see how much of this ensilage a cow could eat. He took a cow and kept increasing her feed until he fed her ninety pounds per day, but she could not digest that and lost her appetite. He then put her on marsh hay and in three days she began to bellow for regular food, so he put her back on it. It may be interesting to know that Dr. Weeks supplied the Plankinton House at Milwaukee with cream from his ensilage-fed cows.

The third silo to be erected in Wisconsin was built by John Steele, of Alderly, Dodge County. . . . Government reports gave Steele the idea of making ensilage. Weeks and Steele built their silos at practically the same time, neither knowing about the other's plan. While Steele was in Oconomowoc buying some cement preparatory to fixing his silo, the dealer told him that Weeks was that day filling his silo. Steele drove over to the Weeks farm to see the process. This was about the middle of August. It was the latter part of August, 1880, when Steele filled his experimental silo, which was originally a root cellar holding about twenty-five tons. Steele stated he then thought it was too late, but got help and filled it in one day, working until eleven o'clock at night. Although in after years he had poor silage, due to cutting too early, he stated to the writer that there was never better ensilage made than that of his first year, although he did not know it at that time.

In 1881 Steele extended the walls of the root cellar up into the haymow, bringing the top of it even with the eaves. This made the size of the silo fifteen by sixteen by twenty-three feet deep, twelve feet above the ground and eleven feet below. This silo was of stone construction, double-boarded with building paper between, to serve as an insulation against cold. . . . Steele states he has never had a bit of frozen silage in this silo. He met with such success that other dairy farmers built silos soon after. Steele probably did more to popularize the silo in the early days than any other man in this state. He gave instructions to farmers in the vicinity as well as to the institute men who came to see his silo.

Steele also built a round silo before this type of construction became popular. His father at the time they were making maple sugar had a large tub to hold maple sap, and it was from this he conceived the idea of making a round silo. In 1888 he built the round silo which was eighteen feet in diameter and thirty feet high. It was built of two-by-six staves and lasted twenty-seven years. [It was not copied at that time.]

In 1881 [Professor] Henry . . . built a silo twenty-seven by twelve by fifteen feet deep. The walls were of rubble sand-

stone eighteen inches thick, the inside being smooth with cement. This silo was not a complete success on account of the porosity of the walls. When ready to fill this silo, . . . Henry thought the event of such importance as to warrant putting notices in the city papers and sending out postal cards inviting prominent farmers from different parts of the state to witness the work, which was to start on August 5, 1881. This silo was opened November 29, 1881. Upon being offered the ensilage, three out of twelve farm cows refused to eat it. Those that ate seemed puzzled over it, and showed plainly by their cautious mincing manner that they could not quite understand what it was. Those that refused it entirely at first, soon fell to tasting it, and after four or five feeds they all ate it as naturally as hay. The first experiment performed was a feeding trial between meadow hay and ensilage. The result was in favor of the ensilage. . . .

With our present knowledge of construction, it is surprising that the square and rectangular silos continued to be built as long as they did. The United States Department of Agriculture, in a report published in 1882, made mention of the merits of the round silos, but farmers did not build them. One reason that might be advanced is that many of the square and rectangular silos were built in barns because farmers thought that was the proper place for a silo. The early silos were of stone, and for this reason it seemed to many that all silos had to be built of stone. In some localities stone was not to be had except at considerable expense. From 1885 the building of silos from lumber, in the corner of the barn, gradually took the place of the stone silos. This type of construction continued until in 1891 Professor F. H. King, of the Wisconsin Agricultural Experiment Station, introduced the round silo.

Previous to 1891 Professor King had made a special study of the different types of silos then in use. He journeyed throughout Wisconsin, Michigan, Ohio, and Illinois in quest of information. It was from these investigations that he brought forth a new type of silo which became known as the King silo. King observed that many farmers were having trouble with ensilage spoiling in the corners of the square and rectangular silos, and decided in favor of the round silo as a type which would be free from that objection. Round silos had been advocated before [by John Steele], but farmers did not build them. Professor King had more to do with developing and advocating the round silo and making it a success than any other man.

REVIVING THE CUTOVER LANDS

The college also took a deep interest in the northern agricultural lands. When the great and romantic "lumberjack era" in Wisconsin ended in the early nineteenth century, northern Wisconsin was left a kind of wasteland of stumps and burned-over lands, apparently good for little. But Dean Henry took a personal interest in these lands.

Northern Wisconsin was not considered farming country, but as lumbering developed in the pineries, a market for farm produce developed also. Flour, pork, beef, potatoes, hay, corn, and oats to

Professor Henry of the College of Agriculture took pictures of large vegetables grown in the north. He exhibited the photos with pride.

feed the livestock used in the lumber camps were salable there. When oxen were required for work in the woods, farmers owning oxen and farmhands could work in the timber camps in the winter. Farming in the areas of large lumber operations had advantages.

A writer commented in the Barron County history that:

With the coming of winter, the men-folk, even those who eventually intended to make a living by farming, made for the woods, with the oldest boys. Those who had horses, or mules, or oxen, were fortunate, for these they could also take into the woods as a source of profit.

Dreary indeed was the lot of the devoted mothers left with the children in the lonely cabins. Wild beasts ranged the woods, Indians were sometimes in the neighborhood, neighbors were far away, letters and reading matter were a rare treat. There were chores to do, the animals to look after, the household tasks to perform. Often provisions ran low, sometimes illness and even death stalked across the humble threshold.

In addition to the other duties, many of the women, especially those from the European countries, spent their extra time in carding, spinning and knitting. The cherished possession of many such families is now a spinning wheel brought far across the seas, and upon which some devoted mother spun as she dreamed dreams of a future in which she and the husband should have attained prosperity and comfort, and when the children should have grown to adult years, an honor and comfort to their parents, and happy in the possession of the comforts and opportunities of which she and her husband were denying themselves. The yarn being spun, it was knit into mittens, socks and even jackets to supplement the meagre supply of clothing.

In some of the neighborhoods there were schools which the children could attend part of the year. They were of the crudest kind, usually with hand-hewed benches. But for a number of years the more isolated children received only such instruction as their mothers could give them.

Happy indeed were the mothers, when some traveling minister or priest came along, held a meeting or mass at their home, baptized the children, and gave them Bible or catechism instruction. Some of the pleasantest memories of many of the older people now in the county is that the first meetings of the congregation in their neighborhood were held in their humble cabins.

For a number of years but little was raised on the little clearings except the food needed by the family. This was supplemented by wild game and such staple provisions as could be purchased at the far away stores out of the slender family funds. Wheat and corn were taken to distant mills and ground into flour. Meat was dried and cured in the back yards, or hung up preserved by the intense cold.

As acreage of the clearings was increased, a little surplus, especially of rutabagas, hay, oats and meat could be sold to the lumber company.

There was but little cash in all the country. The lumber companies paid for the most part in script and orders good at a company store.

Expansion of business and industry and just the basic needs of housing all the newcomers to the Mississippi Basin caused a lumber boom. After the Civil War the great white pines of northern Wisconsin brought premium prices. Logging camps mushroomed throughout the forest country. Wisconsin became the leading lumber state in the nation. Into the "cutover frontier" Wisconsin's farms gradually crept northward.

True enough, sometimes the vegetables were larger than life.

It took thirty years for the counties in the middle north to convert to agriculture. It took much longer for the counties in the far north. The great stands of white pine had been largely exhausted by 1915. For more than seventy-five years Wisconsin furnished white pine for the new dwellings and towns of the new western country.

Dean Henry wrote and published a pamphlet in 1896, "Northern Wisconsin, a Handbook for the Homeseeker." He personally led a commission through the north, and he had much influence in the settlement and making of farms in northern Wisconsin.

By 1900 a land settlement for northern Wisconsin got into gear, with speculators and land agents promoting cheap cutover land for farms. The agents promised rose-garden dreams of cheap land and crops of plenty.

Early lumbermen in northern Wisconsin were actually often reluctant to sell their cutover lands. "So long as we have outstanding pine in any considerable quantities in a county," said one lumber king, "we want the settler to keep out, for as soon as the farmer appears he wants schools, roads, and other improvements for which we, the owners, must pay increased taxes."

Timber companies that logged off the forest lands of Wisconsin thought so little of the land itself that they often did not retain title after taking the

As in the south, farming in the cutover was a family operation.

timber. The land returned to the counties for unpaid taxes. Later the companies did pay the taxes, received tax titles to the lands, and gave such titles to settlers who bought the cutover.

"If you mean a land," shouted the speculators, "where trout streams murmur and broad rivers gleam through walls of cedar, and the gold of buttercups is mingled with the white bloom of clover, then I have seen the fair land of which you dream, a country gentle, undulating, like the billows of the sea, fruitful and rich in all the grasses that a shepherd loves."

A company in Sawyer offered lands at one dollar an acre and seven years to pay. The North American Land Company, composed of American and German officials of the North German Lloyds Steamship Company, arranged with a Sheboygan land dealer to bring German settlers to northern Wisconsin.

The Wisconsin legislature through special incentives stimulated settlement of farms in northern Wisconsin, which had been shunned by settlers who thought the land-clearing problems too difficult. From 1900 to 1920 agriculture in the north increased rapidly. It was tough going, clearing stumps and rocks. Walter Rowlands of the Agricultural Experiment Station showed northern farmers how to blast stumps with dynamite. They called Rowlands "Pyrotol Pete."

"Rocks, rocks, rocks, some round and some were flat enough to sit on." Cried one settler, "Oh, what a back-breaking job we had picking rocks off of the farm. The old hand plow was pretty good at digging them up. We had to pile them on the flat stoneboat and they were hauled to the edge of the field. We piled them up for a stone fence. I always thought that grandpa had planted those rocks so that they were forever coming to the surface. Our neighbors never seemed to have as many rocks on their farms. We sure wished that we could do something wonderful with all those rocks. One day when we were going to visit some cousins we saw a house made of small stones. Well, we thought we were going to be rich selling rocks to folks to make those cobblestone houses. Anyway, we never did, but we sure didn't need any spring tonic. Rocks were our tonic all year round."

Speculation in cutover lands is best described by Lucile Kane in *Wisconsin Magazine of History*. From the offices of the dealers, she writes, went agents armed with optimism and the vision of a 5 percent commission. The agents were supported by a tide of literature booming the cutovers. Viewed as a body, this advertising matter was gaudy, simple, and sentimental. Most of it, naturally, stressed the advantages of the area and played down the disadvantages. It was fairly explicit about transportation facilities, markets, crops, and plans for financing the purchase. The prevailing theme, expressed in prose and verse, was that every man should have a home of his own. In this respect the advertisements were no different from those booming the Wisconsin lands in the 1840s in southern Wisconsin.

An avid promoter, the Soo Line Railroad issued a pamphlet that carried this verse:

He who owns a home of his own,
If only a cottage with vines o'ergrown,
Of the pleasures of life, gets a greater per cent
Than his haughtiest neighbor who has to pay rent.

The pamphlet explains that it is written for the man who is hungry—hungry for a home of his own. It is for the man who has an unsatisfied appetite that gnaws away at his very being, making him crave his own farm or a piece of land he can develop into one.

The speculating companies searched for potential settlers among tenant farmers and wage earners in the large cities. They flooded possible interested groups with pamphlets, letters, and circulars that extolled the advantages of rural life and explained the terms on which a farm might be had. Poetry (of a sort) was a chief method of approach:

Come to Sunny, Southern Sawyer
There's a future here for you.
Mother Nature's always smiling
And the skies are rarest blue.
Where the crops are always "bumper"
And the taxes always paid
Where you've got a dollar waiting
When you've got a dollar made.

But in cold fact, making a living on the cutover land was hard going for man, woman, and beast. Many settlers, responding to the publicity, failed to wrest a living from the cutovers. Some who had expended years in a futile effort to survive turned

bitter. They accused land companies of breaking promises of roads, schools, and tax reduction. The American aphorism that "farms follow forests" had a bitter test in the cutovers of northern Wisconsin.

Some ethnic groups, such as the Finns, were successful in transforming some of the most undesirable land into farms. They seemed to find northern Wisconsin cutover similar to the old country. Speculators made a particular effort to dispose of land to the Finns.

A certain "Kapten Keyl" of Helsinki was one of the most extravagant promoters. He circulated flyers stating that "each buyer will get a big house from the company immediately. Until the building of the houses the buyer can stay in the big camp of the company where everybody can get two rooms. Everybody can buy land ready for the plow. Who intends to buy land can get work right away, especially in . . . the sugar factories which the company establishes everywhere, or by the building of houses, or roads, or railroads. . . . New farmers are leaving each week from Helsingfors for Wisconsin. Nobody will have any other expenses while on the road. . . . $10.00 have to be shown at the ports of entry to the American officials. Anybody who has not this amount will get it from the company."

What a surprise the arriving Finn got when he found there was no building on the land and no ten dollars. There were plenty of mosquitoes and work without end. But generally the Finns, who were expert axmen, built cabins and stayed. Many became prosperous.

The story, however, isn't all bad. It was hard work, but gradually some settlers conquered the land. Professor Henry, who was untiring in efforts to advise and assist, recommended hardwood lands to settlers who were willing to combine farming with woods work. Farmers who cut trees, sold the logs, and then made cleared lands of the timber areas were the most successful. Thousands of Scandinavians and Germans, along with other ethnic groups, changed their condition from hired labor to farm owners by such combination. The hardwood stumps disappeared in about twenty years. Pine stumps, which take about a hundred years to rot away, were dealt with by the stump puller and dynamite.

Burned-over lands were usually costly to clear; however, when a "double-burn" occurred—burned lands that again caught fire—the task became easier and more profitable. Such land was next to prairie land in crop production.

And in many areas vegetable harvests were bountiful. Soils conducive to potato production led to a large potato industry. In all of this the college

The families gathered in wild blueberry barrens. The blueberry crop was salable in the cities. Sometimes trains loaded with wild blueberries rolled out of the north.

took part, and despite problems galore northern Wisconsin was creative and forward-looking. In 1912 Oneida County established the first publicly supported county agricultural office in the United States. In Oneida County, too, Agricultural Agent L. G. Sorden and others established the first national experiments with rural land zoning. As agriculture moved north, the problems of rural living became acute. Schools and roads often cost more than the new communities could afford. Land was reclassified and arrangements were made in the 1930s to resettle hundreds of northern Wisconsin farm families.

Nowadays the emphasis on northern Wisconsin is as a vacationland. And perhaps the areas of the north, unsuited for farming, have finally come into their own.

WOMEN, YOUTH, AND THE ARTS

While initial efforts of the college focused on scientific agriculture, agricultural economics, and actual working conditions of the farmer, later work has shown concern for youth, cultural arts, and homemakers. Agricultural agents, youth agents, resource agents, and home agents reside in each Wisconsin county under a system of "Cooperative Extension." Work with women has been a highlight of this farm-related program.

With the passage of the Smith-Lever Act (1914), the University of Wisconsin was able to help and encourage farm women to help themselves. The act marked the first time that the U.S. government had recognized the heavy burdens of farm women and shown a willingness to help ease the load.

A New York State economist, Martha Van Rensaelaer, had, some time before 1914, caused a pedometer to be affixed to the leg of a farm wife. She was shown to have walked more than twenty miles around the farm and the house in a single day just

Mechanical pickers have helped the cranberry industry to grow in Wisconsin.

carrying out her daily duties. The experiment attracted national attention. Much of the struggle to maintain the farm and home since settlement days had depended on the farm wife. Now, through university specialists, her plight was to become easier.

At the time of the passage of the Smith-Lever Act, farm women were showing a desire to improve their condition: to wear better and more attractive clothing, to have more convenient and attractive homes, to be able to express themselves through music and the other arts, and to feed their families more nourishing foods.

The specialists of the Agricultural Extension Service aided the farm women by meeting with them on their home ground. No matter what the weather, the specialists were there when needed. Nellie Kedzie Jones, Abby Marlett, and others of the original group set the spirit and the tone that continue to this day. There are thousands of farm women, as well as urban women, associated as Homemaker Clubs, and all their activity is devoted to a more enriched family and community life. Over the years, Wisconsin has developed more community homemaker choruses and has produced more rural-life plays than any other state.

An average Wisconsin farm woman today is said to be worth a wage of at least $20,000 per year, even at minimum rates. Her hours of effort are practically endless. To help her every county in the state now has its "home agent."

The 4-H Club movement in Wisconsin has shown the state's concern for its rural youth. Adults have provided leadership for young people in projects concerning agriculture, the home, the environment, and arts and crafts. Thousands of 4-H plays have been produced, gardens made, sewing projects developed, canning and animal husbandry programs stimulated. The history of youth work in Wisconsin is inspiring and has nearly always been a major aspect of the college and its extension service. The first 4-H meeting was held on a farm in Rock County in 1914. Nowadays, of course, urban young people and rural mix in total youth emphasis.

NOTEWORTHY DATES IN WISCONSIN 4-H HISTORY

1904: First county-wide roundup corn show by R. A. Moore for boys and girls at Richland County fair, Richland Center

1909: First boys' corn growing scholarships given for a one-week course at the College of Agriculture during Farmers' Course

1914: T. L. Bewick named first state leader of boys' and girls' club work in Wisconsin
First local club organized under the Smith-Lever Act at Zenda, near Lake Geneva, Walworth County

1916: First definite and recognized 4-H state fair department set up in tent camp. First Junior Livestock Exposition by Wisconsin Live Stock Breeders' Association in stock pavilion

1918: First 4-H camp held at College of Agriculture

1919: First 4-H leaders handbook issued; and U. S. Garden Army for Wisconsin organized for the production of food for defense

1920: Club motto changed to "Make the Best Better"

1922: First National 4-H Club Congress held at Chicago

1924: First home economics judging team sent to National Club Congress

1925: First county 4-H club camps established in Wisconsin in Shawano and Rusk Counties

In the transition of the family from old to new, the dairy remained of ultimate importance.

1927: First full-time county 4-H club leaders appointed: C. J. McAleavy, Marathon; Bruce Cartter, Marinette, and Ben Hauser, Milwaukee

1928: First three school forests dedicated in Forest County

1929: Wakelin McNeel and V. V. Varney inaugurated first series of weekly radio sketches over University Station WHA

First home talent tournament, with 40 plays in 9 counties, won by Marinette County

1930: Club work now included in every county agent's program for the first time

Professor R. A. Moore made honorary member at a ceremony dedicating the 4-H club knoll

1932: More than 4,000 members went to 16 4-H camps

1933: "Afield with Ranger Mac" weekly feature for schools began over Station WHA

1938: First recreational laboratory was started at Phantom Lake, Waukesha County

1941: Upham Woods deeded to the University by the Upham heirs

1942: For wartime service and victory projects members collected 5,616,000 pounds of scrap metal and 559,000 pounds of paper and rags for salvage uses

1947: County club agents in 30 counties, or 11 more than in 1945

First state 4-H health camp at Green Lake

1948: Achievement day at state fair observed in the Wisconsin State Centennial

1950: Clover leaf pins and certificates awarded to Wisconsin pioneer club leaders according to years of service

1951: Wisconsin joined the IFYE program

1952: Wisconsin State 4-H Leaders Council formed

1953: The Wisconsin 4-H Club Foundation was organized and approved

1955: State Junior Leader Council formed

1957: The University of Wisconsin was host to 176 IFYE's from 40 counties at their midpoint meeting

1959: A Wisconsin room in the National 4-H Club Center in Washington, D.C., was furnished in memory of T. L. Bewick, Wakelin McNeel, and J. H. Craig

1964: First Statewide 4-H Dog Obedience Show

1965: First Statewide 4-H Pleasure Horse Show

1970: First Reach-out group formed to provide programs for State 4-H Congress

1971: Total 4-H members from non-farm exceeds 50% for first time (50.4%)

1975: 4-H Enrollment exceeds 80,000 for first time

1975: Adult leaders exceed 20,000 for first time

1975: First Youth Livestock Days held in four locations in state

Through the women's and youth movement the state abounds in rural artists and poets who are

More and more the Wisconsin dairy became a family project.

striving to carry out the hope of a mighty dean of the Wisconsin College of Agriculture, Chris Christensen, that someday "art and poetry might be as important in Wisconsin as dairying."

Dean Christensen, trained in the Danish Folk Schools, believed that rural life could not be complete without the arts. He brought the first artist-in-residence to the university—John Steuart Curry, who became a member of the college staff and worked with rural artists. Corresponding work in drama, music, and creative writing has made the college unique in America.

LESS SCIENTIFIC APPROACHES

But before the enlightenment brought about by college courses and science, the rural Wisconsin people were guided by folk wisdom:

If you rock an empty chair, it means bad luck.

If you sing before breakfast, you'll weep before night.

If a bird taps on the window with his bill, it means someone will die in that house within a year. (This is also interpreted to mean merely that something unusual will happen.)

If you are weaning babies, calves, little pigs, the signs of the zodiac must be in the feet. If weaned while the signs are in the head, the young will never forget the nursing habit. You must wait until the signs have moved down to the feet or any future weakness will settle in the breast, bowels, or arms.

If meat pops in the skillet when you are frying, it means that the animal was killed in the wrong time of the moon.

If cream is churned for a long while and doesn't make butter, it should be stirred with a twig of mountain ash and the cow should be beat with another twig of mountain ash. This will break the spell.

If you kill a wren, you will break a bone before the year is out.

If you kill a robin, there will be no spring.

If two friends, when walking along together, come to a pole or other object and one goes on one side and one on the other, they must say "bread and butter" or they will soon quarrel.

If you happen to put some garment on wrong side out, leave it that way or bad luck will be the result. Another says it may be turned right side out if it is first spit upon.

Comb your hair after dark, comb sorrow to your heart.

If your right ear burns, someone is talking good about you. If your left ear burns, someone is talking bad about you.

See a pin and pick it up, all the day you'll have good luck. See a pin and let it lie, all the day you'll sit and cry. If you find a straight pin with the head pointing toward you and pick it up, you will have your luck blunted for the day. If point is toward you, good luck will follow.

One must not rock an empty rocking chair or cradle, or the owner will get sick.

Don't start any work on Friday, thirteenth or otherwise, or you'll have bad luck with it.

If a black cat crosses your path, turn back or you'll have bad luck.

If you forget something when going out, don't go back to the house or bad luck will follow you.

One must not walk under a ladder, or one will have bad luck.

One's first glimpse of the new moon must be over one's right shoulder in order to have good luck.

Dropping a butter knife or spreader means that the visitor will be a little boy. In addition, the direction in which these implements fall will determine the direction from which the company will appear.

Perhaps the worst catastrophe that can befall a busy family is to spill the toothpicks. That means company coming, and the number of toothpicks spilled means the number of visitors that may be expected.

If a rooster crowed on the doorstep to predict company, the housewives in early-day Wisconsin immediately killed and cooked the rooster and made a pie just to be on the safe side.

When sweeping in the evening it was necessary to sweep the dirt back of the door. If the dirt was swept outdoors, it was the same as sweeping out the company that was coming.

Company on Monday, company all the week, goes an old Wisconsin saying, and if you sneeze before breakfast that's a certain sign, but those of a more scientific turn of mind had a better method of prophecy. The scientists would lay a tea leaf from their teacup on the upper high part of the thumb, and with the other thumb would pound the tea leaf. At the same time they would count the days beginning with the present day. When the leaf stuck to the pounding thumb, that was the day company would arrive.

If you saw a cat washing herself in a doorway it was a sign that the minister was coming to call. The German grandfather might say: "Preaster kimps." Speaking of doorways, if a mop or broom falls across a doorway you better clean up and prepare!

Good luck omens, death omens, or just omens in general seemed to play a big part in the lives of many Wisconsin folk. Mrs. Belle Miller out in the Kickapoo Valley wrote about crowing hens:

"You questioned whether a hen ever crows.

There were good memories of the old days and the old family.

Once in a while you'll find one that makes a real attempt to. They stretch their necks way out the way a rooster does, but the sound is awful—never musical like a rooster's crow. That didn't happen often in our small flock of chickens, but when it did, my mother got that worried look on her face, sure that something desperate was going to happen.

"Once or twice during my childhood, before 1900, I remember finding a small, round egg when gathering the eggs. As we had no pullets at that time it was very unusual. Mother always said that somebody was going to die in the relations. It seems to me that once when I found a small egg, my grandmother died. Mother said, 'I told you so.'

"And white horses are good for an omen anywhere, and Wisconsin isn't any exception. There are mystic Wisconsin rites concerning white horses. The record of the number a girl sees must be kept in this way: kiss the two first fingers of your right hand; imprint that kiss on the inner palm part of your left thumb with three good knocks of the right fist. When sufficient white horses have been counted and recorded, something wonderful will happen to the counter, probably not in the distant future but in the immediate present."

The end of the Edwin Bottomley story follows. In a sense it is the beginning of the end of this book for, without the Edwin Bottomleys and prototypes from many different nations, this book could have neither begun nor ended.

Rochester Racine Coty Octr 6th 1850

Mr Thos Bottomley

Sir: It is with feelings and emotions of a very painful character that I communicate to you, (at the request of your son Edwin) the mournful intelligence, that Edwin and family are at present "wading through the deep waters of affliction." The family is afflicted with the desease here termed "Typhoid fever." . . . In a large family, when both the heads are laid low by desease, and incapacitated from attending to their duties, the result cannot be otherwise than distressing in the extreme. Be assured Sir that it is not my design to give additional & unnecessary pain by representing things worse than they really are.

Written by a Neighbor.

The following month he wrote:

I do assure you that it is with feelings of the Keenest anguish that I report the painful fact of the decease of your son Edwin. Edwin was reduced by the first attack to a mere skeleton, & his nervous system was completely shaken; and hence the vital principal was too enfeabled to sustain successfully a Second attack. After this relapse he gradually sunk under the power of the fever. For the last week every day was expected to be

the last. I believe he Suffered little or no pain, for when asked how he felt his invariable reply was "first rate." During the latter part of his sickness he wandered considerable. He often immagined that you were present.

Although Edwin Bottomley died a young man, his influence, like that of other courageous pioneers, lingers on. The English Settlement still exists by name in a beautiful part of the state in Racine County, as do the church that he helped to build and the brick house that he built for his family. Edwin had many descendants; his father, Thomas Bottomley, came to America after his son's death, died at the Settlement, and is buried in the old churchyard.

The Edwin Bottomley story exemplifies the many health hazards of pioneer life. For the most part, the settlers had to be their own doctors and find their own "cures."

Residents of earlier-day Wisconsin had a number of famous cure-alls, some of them mysterious.

Madstones: Madstones were used by pioneers in the 1830s to cure dog and snake bites. They were gray-brown, about the size of marbles. The stone was applied to the wound to which it adhered tightly until supposedly full of poison, when it would drop off. Then it was soaked in warm fresh milk or lukewarm water until poison came to the top in little bubbles. The madstone was applied repeatedly to the wound until no poison was left. When the wound was thoroughly cleansed, the stone dropped away. An early settler, Wash Ellis, had a madstone, charged twenty-five dollars a treatment, and did a thriving business. People came from miles around; Ellis kept more than busy. (A madstone is a ball taken from the stomach of an animal. Deer madstones are best.)

"Old Yeller": This was a powerful physic, prepared and given in the 1860s by Dr. D. W. Carley of Boscobel. It was justly celebrated.

"Cure-All": A doctor concocted a cure-all preparation, heavy on calomel and a very strong physic.

And of hand tools and hand plantings.

He advertised it and sold it with the phrase: "It'll neither cure ye nor kill ye."

"That damn stuff": A local doctor concocted a cure-all that had an unpronounceable medical name. It remained for the customers to simplify the name. Even today, in a local Platteville drugstore, one may get the article simply by asking at the counter for a bottle of "that damn stuff."

"A Sure Cure for Hoss Colic": Pound into powder three or four old tobacco pipes and put it into three pints of water. Boil it down to about half, and give it to the horse cool. For this use, then, lay up your old pipes.

Alice Baker of southern Wisconsin remarks that "modern-day doctors deprive themselves of many useful remedies. I am sure they do not know the value of oat tea to bring out the pox of either chicken pox or measles. They also do not know that good blood-filled sheep-ticks are good as a last resort for TB sufferers."

Hops had to be picked and dried, a pillow made and stuffed with them, to be used by a restless one to induce sleep. There must be enough hops dried and stored to use in treating future colds. A generous amount of them would be steeped in vinegar and used as a poultice, or laid over an aching ear.

Linden flowers and leaves were gathered and dried, to be made into a tea to relieve coughs resulting from colds. The tea was used also to induce perspiration.

The inner bark of a wild cherry tree was used too, to make a tea to allay a bad cough.

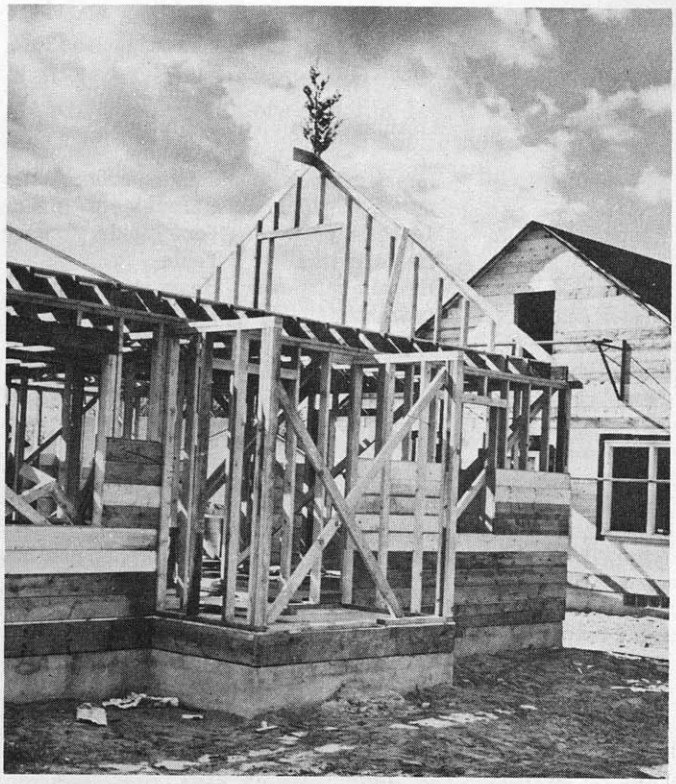
Spikenard tea was an old stand-by given to relieve coughs caused by colds.

Peppermint was gathered in September and carefully dried and packed in bags, to be later used as tea to treat colic and diarrhea.

A tea was made of red clover blossoms. This was drunk to purify the blood, and to also relieve rheumatism.

If one had what they termed kidney trouble, namely, burning and scalding urine, one simply dug horseradish roots, made a tea from them, and drank that for relief. The roots of the wild blackberry bush were used in the same way for a diarrhea prevalent among infants, termed Cholera Morbus. Another old stand-by for the treatment of Cholera Morbus was equal parts of peppermint leaves and rhubarb root steeped together, with a teaspoon of soda added when the tea was cold. This infusion was to be taken a teaspoon or two at a time.

If Johnnie was thought to have worms, grandma had a remedy for that. A slippery elm tree was found, the outer bark was peeled away, and generous strips of the inner bark were given to Johnnie to chew.



Even today a bit of ethnic folklore may be seen when a new house is built.

Sores and bruises were thought to heal much faster when bathed generously with an infusion made of cheese-plant.

Cornsilks were gathered and dried, and a tea made of them was drunk when the kidneys were thought to be not active enough.

Mullein was very extensively used in bygone days. If grandfather had asthma, he smoked nothing but mullein and inhaled the smoke. These herbs were also used by the settlers and many of them were used by the Indians before the white man came. The Indians used to chew the ginseng root and also dried some for winter use.

Name of Plant	*Latin Term*	*Uses*
Ginseng	Panax	Tonic and stimulant
Elderberry	Sambucus	Colds and fever, kidneys
Plantain	Plantago	Kidneys, poultice
Wintergreen	Gaultheria	Tonic and stomach
Touch-Me-Not	Impatiens	Skin
Dogwood	Cornus circinata	General tonic and liver
Wild onion	Allium cernuum	Sinus inflammation
Skunk cabbage	Symplocarpus	Asthma
Violet	Viola oderata	Earache, intestinal parasites

May apple	Podophyllum	Liver and constipation
Belladonna	Atropa	High fever and convulsions
Burdock	Arctium lappa	Falling hair, skin trouble
Yellow dock	Rumex crispus	Coughs, bronchial trouble
Peppermint	Mentha piperita	Tonic, colds, stomach
Iris	Iris florentina	Tonic
Foxglove	Digitalis purpurea	Heart stimulant
Golden seal	Hydrastis canadensis	Tonic
Black-eyed Susan	Rudbeckia	Locally for pain
Monk's hood	Aconite	Fever, colds, and inflammatory pain
Chamomile	Anthemis	Sedative, tonic, eyewash
Juniper berry	Juniperus	Kidneys, diabetes
Mullein	Verbascum	Earache
Slippery elm bark	Ulmus fulva	Tonic, colds, poultice

HOME REMEDIES MORE COMMONLY USED

Bear fat	To massage sore muscles and soften callouses on feet and hands. Also to soften leather.
Blackberry juice	To drink for blood building and tonic.
Wild grape juice	To drink for blood building and tonic.
Squash and pumpkin seeds	Dried and ground, were believed to cure stomach worms.
Butter, sugar, and ginger	Mixed together, for children's coughs.
Lemon juice, honey, and glycerin	Mixed together, for cough syrup.
Skunk oil	Believed to make hair grow on a bald head.
Goose grease and mustard	Mixed to rub on chest for chest colds, and also for aching back.
Flax seed	Cooked to take for laxative.

Very often the pioneer families in Wisconsin had to be their own doctors. The women, especially, became very proficient in treating wounds and common illnesses, and displayed a brand of heroism only conjectured about in our day. The pioneer mother was always available for help when needed by a neighbor, and the beautiful saying about the pioneer mother of Wisconsin, that the trails from her cabin led in every direction, is one of the most cherished of Wisconsin pioneer traditions.

Nina O. Peterson wrote a special tribute to her mother, who was one of these early-day heroines:

"She was a gracious lady, my mother. She was the symbol of hundreds like her who followed the dim lantern over paths, across fields and through woods on missions of mercy. She was not a nurse but a pioneer woman who knew what to do and never ceased doing what she could for others. Her old satchel was ever in readiness, her first-aid kit fitted

The family still works together.

with such articles that she thought might be needed. Her drugs were limited, a bottle of carbolic acid, a can of epsom salts, camphorated oil, and clean white rags and the box of mustard.

"Nursing was not a job or a position to her. There never was any money involved, for her remuneration was greater than gold or silver. It was the firm handshake, the grateful voice of thanks, the deep relief in eyes, and the knowledge that baby and mother were doing as well as could be expected or that the fever had broken and all would be well.

"I recall on one cold rainy evening, we heard father say 'Whoa,' at our kitchen door. We ran out. Mother said, 'Children, go back inside. Don't get all wet.' We obeyed but did not understand why she did not come in.

" 'Bring me a full change of clothing,' she called.

"Father was getting kerosene, kindling, and a lamp. He went out to the summer kitchen, which was in a shanty near the house. This kitchen was used during the warm summer months instead of the kitchen in the house. He carried in pails of water and the tub. He gathered the carbolic acid bottle, soap and towels, and going outside, he helped Mother from the buggy. Then he drove out to the barn and unhitched the horse. Mother went directly into the shanty.

"In about one hour she came into the house. She had washed her head, bathed, and changed clothes.

" 'Aggie, did you burn your clothes?' Father asked her when he came into the house.

" 'Oh, yes, of course. We can't have them around and take any more chances,' she informed him.

"This time she had been gone from home for

three days. She had been up night and day helping nurse a small boy who had been very ill from scarlet fever. She was not afraid for herself, but from her continual asking day after day, 'Is your throat sore? Do you feel all right?' we knew that she was worrying about us.

"When we were awakened by a knock on the door during the night and heard Mother hurrying about, then footsteps on the stairs, we knew that she was going out in the dark again to help someone. How brave she was, and how much energy she must have had.

"The only doctors in those days were many miles away and could only be contacted by driving with horses those many miles. Those neighbors in trouble would send someone for Mother while another of the family would harness their horses and drive quickly for the doctor. By the time the doctor had his horses in harness and had reached the bedside of the patient, hours had passed.

"On one of these occasions a child had pneumonia. My mother was called. She followed the lantern light cross-country for about two and a half miles. When she arrived she knew at first glance at the child that she had work to do, and fast work. The room was hot and stuffy. She gave orders. When she opened the window the child's mother remonstrated. A towel was placed on the window to prevent direct draft. An old-fashioned bread and milk poultice was made and the child bathed to reduce his fever. I know Mother did not forget to pray along with her work that night. By the time the doctor arrived the child was breathing easier, and his fever was down. He told them that if Mother had not acted quickly as she did the child would not have lived. What greater pay could one receive for a night's work?

"Insanity, also, was one of her problems. She knew how to handle a demented person. The daughter of a family living nearby was insane. Most people were afraid of her whenever she had a bad spell. Her parents could not handle her but ran after Mother to calm her down. The daughter evidently liked the way Mother talked to her, or it could have been the tact my Mother used.

"The poor were her concern, too. I have trudged beside her, helping carry a gunny sack full of outgrown clothes for miles along a pasture fence to aid a needy family.

"There were many children in one of these homes. The outside spelled poverty, but the inside of the cabin was rich in love and cleanliness. The house was immaculate. The wide rough boards of the floor were scrubbed white. I recall how much happiness the old clothes gave this family. The only remark I ever heard my mother make regarding them was when we were on our way home. 'I hope that we will never be that poor,' she said, and sighed. 'Winter will soon be here. I think I will make them a quilt.' "

Remember the affection of the past.