done on the goat industry in northern Wisconsin. His system of fencing off small areas and having the goats clear it completely before giving them more, is by far the most satisfactory method we have yet learned of for conducting this clearing process.

In conclusion, we must leave a word of caution to the beginner in the goat business. We are not assured as yet of the hardihood of these animals in exposed conditions during our rigorous winter weather. The kids also are much more weak and feeble at birth than lambs and must be kept housed for some weeks after birth before they can go to the fields with their dams. The flesh is not so valuable, perhaps, as mutton, since they do not have such broad, well-covered backs as sheep and consequently dress with a larger percentage of poor meat, not so well flavored as mutton. The market for the hair also is not as satisfactory at present as it might be. We may hope, however, to have some positive assurance one way or the other on these points very soon from Mr. Hall and others who are making a study of the business as applied to conditions in northern Wisconsin. The writer would advise the prospective purchaser of goats to go slowly, purchase a few, give them a fair trial, study their needs and peculiarities, and when assured of their value for the purpose intended go ahead.

THE FARMER'S SON OF THE TWENTIETH CENTURY.

ELL A EUGENIA WOODWARD.

Read at Farmers' Institute held at Orfordville, Jan. 24-25, 1901.

It is almost impossible, nowadays, to go to a gathering of any kind and not hear something about the Twentieth century, something about it as compared with the Nineteenth century, and we recall with pride the wonderful changes of this past period. But in all the evolution and growth of the last one hundred years, nothing has been more wonderful than the development of the farmer's boy. What will the next one hundred years do for him?

He will not be the boy whose education consists of the three R's—"readin', 'ritin' and 'rithmetic," with perhaps just a smattering of "gorgfly." Will this new century have a place for the boy who cannot figure up his own account when he buys and sells produce for the farm? The boy who stumbles in multiplying when he is trying to find out how much he ought to get for twenty bushels of potatoes at twenty-five cents a bushel; and when he is handed five dollars for them, wonders whether it is all his, or whether he ought to give the man back ten cents or a dollar? And neither will the Twentieth century farmer's boy be one who cannot read without stopping every now and again to spell out a word containing some four or six letters. It is said that our newspapers are one of the greatest factors in educating the masses. It is true, that one cannot know what is going on in his own nation or state, and hardly his own town—to say nothing of the world at large,—if he does not read the newspapers. But where can the newspapers come in, with such a lad? He cannot keep up with the times when he has no papers; and that which is worse, cannot read them with understanding if he did have them. And right in connection with this one can readily see that a knowledge of geography would be "quite handy" and of a great deal of use. In fact, intelligent reading is impossible without we have a certain information of geography—we cannot read an article without this knowledge is brought into play.

Will this century's farmer boy count writing as a non-essential? Can business be carried on without the use of
pen or pencil? And yet, in that glorious Nineteenth century of which we have boasted so often, how many a farmer's son had not enough education to enable him to write a common business letter! Has the new century a place for that boy? Will he be recognized as a competent agriculturist? The incoming century brings with it the best methods of reading, writing, arithmetic, geography and all the other common studies, not mentioning the higher branches. We are now taught the most legible style of penmanship that has yet been produced. In even common schools, the up-to-date teacher is giving lessons in vertical writing. It is now that we are taught to read with emphasis and expression and to understand the article after having read it. And it is thus with all other studies.

Nevertheless, we are now confronted with this question: Is the rural school education even as complete as we found it in the closing years of the Nineteenth—sufficient for the farmer's son of the Twentieth century? If we judge the progress we are going to make in the next one hundred years, by that made in the last one hundred years, certainly, the farmer's boy is going to find himself out of sight and entirely unfitted for the duties which he must perform, if he is only to have the education afforded by the rural schools.

How many a farmer's boy has been held down all his life through lack of education! And yet, over and over again, we see the same thing—go to school when there is nothing they can do on the farm. I grant you, there are cases when it is the lad's own fault, but in the majority it is not. "There are exceptions to all rules," nevertheless, by far the largest number of intelligent farmers of this new century see that their sons must have education and that it does not pay to keep them out of school at the very time when they are becoming interested and are learning fastest and best. If they do keep them out, what does it result in? A little better than no education at all. Why? Simply because the average American boy has enough pride to be ashamed to be in classes with pupils much younger than himself, therefore when he gets a little older he objects and will not go. And can we blame him for not wanting to be called "pumpkin-head?" And when the last day comes, and with it the closing day exercises and he must speak, he will have done his best with: "Strike the nail aright, boys; hit it on—hit it—strike the nails aright, boys; hit it on—hit it on—on the—on the head," and suddenly leaves the room in hasty disorder.

Why is this kind of work largely a thing of the past—gone with the past century? One can readily understand why, if he stops to think of the progress made in this line in the last fifty years. Those of you who are older, who can remember, do you not verify that which history teaches us who are younger, namely, that there is hardly any one thing that has made faster progress than education. And the farmer's boy has been the recipient of nearly all of the advantages thereof.

Now looking forward fifty years, we see a boy who does not have to run away from home to get an education—one who was not expected to get his schooling before he was 15 years old, and that by going two months or so in the winter—a boy into whose head has never entered the thought of running away from home or going to the city or sea or some strange country for change and romance and enjoyment—a young man who has had an education that will fit him for his life employment and make it a pleasure to him. And this boy is the farmer's boy of the Twentieth century. His parents have let him have the full privilege of the improved rural school which that time will bring. He has been taught to see all the liberty and change and romance and pure enjoyment there is in a prosperous, intelligent farmer's life. Then he will be sent away and his education will not weaken him from the farm, nor take him from it, only so long as is necessary to acquire it.

Someone may inquire, "Will there be more money to send the boys away to school than now?" There has never been a period in the history of our country when there were as many well-to-do farmers as now, and we know no reason why we should not continue to prosper. But, leaving that out, let me answer by asking: "What
has been running at a higher tide in the closing years of the Nineteenth century—what is running higher now than ambition?" And the farmer's son has not been exempt—he, too, has been among the masses who have been swept along by it. But if this has been of no benefit to him, let us renounce it and, with Shakespeare, say, "Ambition should be made of sterner stuff." However, we can see the benefit derived from it. How many of us know young men who had not the means for an efficient education for farming, but did have the ambition—went to work with a will, acquired, first the means, then the education, and who shall say that, if they continue in the way they have begun, they will not make farmers of which the Twentieth century will be proud!

And that is not all that his education is going to do for the farmer's son of this new century. It gives him general knowledge, as well. He will not have to be dictated to about voting. He will not have to be told who the candidate for President is, and when he hears his name look bewildered and know no more than he did before. He will know who the candidate is, will know what party he stands for, know what that and the other party platforms are; and when some high-flying city politician steps up and says, "Here, never mind your party—here's a five—vote for us," he will answer, "No, I thank you; I vote for the one I think most competent, and need not pay for that." When a convention is called and on the platform are seen a dozen of the most prominent, the leading men, the majority will be farmers. When some bright young man is wanted to introduce a political speaker, the one chosen will, undoubtedly, be a farmer's son. When the chairman of the program committee wants a debate for the Farmers' Institute and, after naming over the young people of the town, finds that there are none that will or can debate the questions, it will not have to be given up. There will be plenty of farmers' sons who will not be afraid to tackle a debate, and, what is more, are more than competent of doing so. He will have all the education and refinement of the college man of the Nineteenth cen-

tury, together with the hustle of the live business man and the vim and vigor of the sturdy farmer.

By the time the next fifty years have come and gone and we write it 1950, there will be seen a boy who, when he is away at college and is asked about his home, will not evade the question if possible. And, if it becomes necessary to answer, blush, stammer and say, "We—we—live on a—a—farm," then add in a reassuring manner, "But guess paw's goin' to move to town purty soon." No, indeed. His answer will come clearly and with pride, "My home is near Orfordville—my father is a farmer." As it has been in the past, the little, impertinent street urchins, anxious for sport and something to laugh at, upon seeing a farmer's boy drive into town, greet him with, "H-a-y-s-e-e-d;" or "Say, say," and when he looks, "Your wheel's turnin' round." If they try that on this century's farmer's son, they are very liable to get answered like some boys in a story a number of us know. They were yelling at this lad, "Say, say, have you got all the hay-seed out of your pocket; have you got all the hay-seed out of your pocket?" and the answer came in just as lustrous a tone, "I guess not, by the way the calves are bleating after me." As it will be, the urchins will have as much respect for a farmer's son as for any other professional man's son.

Yes, farming has come to be a profession. It is no longer the life of the ignorant. The prevailing idea has been, anyone can farm, but people are coming to see that it takes quite a somebody to make farming a success.

A lazy, slack, unintelligent person would make just as good lawyer as farmer. It is no longer the life of slavery that it was fifty years ago. At the present time, the best of our farmers and their families participate in the social functions and have time for the literary and enjoyable part of life, besides. The successful farmer of the Twentieth century will be the man who combines education and physical forces in doing his work and producing his wealth.

The farmer's son of this new era will not be the boy whose jaw will fall and knees tremble when a beautiful girl looks at him. And when this
young lady is asked about the employment of her escort, she can hold her pretty head very high when she says, "He is a farmer's son." When this farmer's son thinks of a home, he will not be looking for some girl, any girl, that can wash dishes and get something to put into them to make them dirty again and so on indefinitely. He will not call her "my woman." He will be looking for one who went from the farm to the seminary, only to return to be equal to any farmer in all the problems of a farmer's life. And not that alone, for, when called upon, this Twentieth century's farmer's wife can fill the place of lady as well. Giving 7 o'clock dinners, spreads, and entertaining the Shakespearean club will be as natural to her as getting a meal for thresherers. She will be the lady who, when her husband is elected to the Senate, Assembly or House of Representatives, can fill her place as hostess in Madison or Washington, or wherever the place may be, quite as well as he can fill the office to which he has been elected.

To-day we find farming one of the most independent occupations. By the middle of the Twentieth century he will be the one out of many who is not obliged to smile at everyone and acquiesce to everything everyone says, saying, "Yes, yes, yes," when he thinks no, no, no. There is no occupation that affords such breadth and richness of opportunity as that of the successful farmer. Not the one who gives his pigs what he cannot sell and what the pigs will not eat, eats himself; but the one who puts the first and freshest fruits and eggs and butter and milk on his own table and has enough left of his prime produce to supply the cities and make the bondholder part with a part of his bonds. And at the same time his moral and intellectual opportunities are as broad as the earth.

God's first command to man was to dress the vineyard, and thus, dressing his vineyard, we leave the farmer's son of the Twentieth century.

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**CARE OF MILK FROM COW TO CREAMERY.**

**JAS. G. MOORE.**

Read at Farmers' Institute held at Albion, March 6-7, 1900.

Mr. Chairman and Ladies and Gentlemen: A few years ago the Department of Agriculture sent out requests to men engaged in the handling of milk or its products asking them what branch of dairying, in their opinion, was in need of the greatest improvement. The consensus of opinion seems to have been that it was on the care of milk from the cow to the creamery. On the care of milk, therefore, from the time it is drawn until it arrives at the creamery, depends much of the success or failure of the creamery, as no creamery that has not a supply of good, wholesome milk can expect to make that extra grade of butter that is necessary to supply the demands of the market and receive the highest price for its product, when it comes into competition with butter from creameries which are supplied with such milk. Farmers generally seem to have an idea that sweet milk is necessarily good milk, and in fact sweetness seems to be the only criterion for the butter-maker to go by in accepting or rejecting milk.

This season we expect to use Farrington's Acid Test in determining to some extent whether milk is fit to be used for making butter, and no milk should be used that has more than two-tenths of one per cent. acidity. Under ordinary conditions the milk from healthy cows is free from germ life, while in the udder, but in withdrawing the milk it invariably comes in contact with germs that are bound to affect it, and generally to its detriment.

A leading factor in the contamination of milk, the importance of which is rarely thought of, comes from the bacteria that gain access to the milk