EVENING SESSION.

The Institute convened at 7:30 p. m., MR. L. E. SCOTT in the Chair.

AGRICULTURE IN THE PUBLIC SCHOOLS.

MRS. IDA E. TILSON, West Salem, Wis.

Harvard’s brilliant President, Edward Everett, in a speech delivered in 1837, over sixty years ago, said that next to eternal things, the people of the U. S. showed most interest in education. Did he live now, he might not make his exception, if we may trust Gen. O. O. Howard, who recently declared we have no more theological sermons because ministers themselves are so busy with the practical details of this life of doing. If we do not lose sight of heaven, it seems to me the best possible preparation for it is to live aright the life that now is. I always take pleasure in presenting agricultural education, because it certainly has much to do with our material prosperity, and surely we can look up through Nature to Nature’s God. Though God is behind history and figures, agriculture opens a more direct path to Him than figures 40.

Why Teach Children Agriculture?

Usually the first question asked me is “Why teach children agriculture?” To help preserve a balanced state of our population, I reply. According to various statisticians, city population is gaining by a much more rapid per cent. than our country population is. In the last one hundred years, the collective population of our cities has doubled itself one hundred and fifty times, while that of the rural districts has only doubled itself fifteen times. Of our people, 40 per cent. now live in cities, 20 per cent. in villages, and 40 per cent. are farmers.

Advantages of Rural Life.

Naturally, this is the next question which comes: “Is the country any better place to live in than a city?” Well, where do poets, artists and novelists go for subjects and examples, when they wish to depict innocence and comfort, and where when they portray sin and suffering?

According to the researches of Arthur McDonald, for the Journal of Sociology, and he is said to have examined five thousand children, those of the city are more vivacious, while those of the country have more endurance, and, after five years of age, country children are taller and weigh more. Mr. Wm. Porter, who is said to have examined thirty thousand children in St. Louis, and other scientists in the U. S., France and Russia, find a general correspondence between brain power and weight of children, that is those promoted oftener and easiest, average better size than the laggards at the foot of classes.

Putting these conclusions together, we see the country is not only the best place to grow cabbage, but also to grow bodies and brains. You remember when Senator Dolliver interviewed the great men of New York city, he found every last one walked in from the country, except Theodore Roosevelt, just one exception to keep city boys from despair.

Agricultural Text-Books and Teachers.

One frequent objection has been “There are no text-books.” A demand
always creates a supply. The textbooks are in sight, and when states make agriculture a branch of public instruction, Normal Schools will attend to fitting the teachers. It is hardly a passing fad, like so many things that have weared the souls of teachers. The Agricultural colleges, Experiment Stations, and various agricultural and horticultural societies, inaugurated at great expense, are anxious for new recruits and are a large body of men to reckon with.

One county superintendent of schools sent word to me there was nothing a young woman could teach about agriculture which a farmer would value. Yet, many a young woman very acceptably teaches the science of numbers, who never did try to measure a load of stone or wood, and some of them couldn’t if they tried. I remember a brilliant and popular Farm Institute speaker, who always began by saying ‘Now, farmers, don’t ask me how to plow, because I never turned a furrow, but I have studied soils.’

Some Methods of Teaching Agriculture.

Let us take up some of the more important methods of teaching agriculture, or practical Nature study.

Children learn a great deal by mere absorption. Instead of entirely covering school house walls with spelling and geography charts, we might have some charts of the birds helpful or injurious to the farmers, as does every rural school house in France. The State University of New York has made a specialty of charts of insects injurious or helpful, and the Minnesota Agricultural college is preparing grain charts, showing stages of growth and how inflorescence and kernel appear under the microscope. I remember one school room with an impressive picture of Luther and his open Bible, unfortunately flanked on one side by a pictured bottle of Hire’s root beer and on the other by a gay reaping machine, and this is a frequent office combination. Could we not teach the children, and through them the homes, that grains and grasses, alone, make a more artistic decoration than unsuitable pictures or combinations?

Some microscopes and a field glass would cost no more than globes. One of my great pleasures, the past summer, was looking through a microscope at the flowers of my double white hollyhocks, the seeds of which came from Whittier’s garden. Among other wonders of construction, the petals seemed covered with diamond dust, invisible to naked eyes.

If there is an intelligent farmer and tidy farm near the school house, let the teacher ask permission to go there some afternoon and be escorted around. Then ask the children who accompany, to write essays on their inspection, and draw plans of the farm and fields, locating the buildings. Even in general essay writing, at other times, rural subjects have been too often neglected for “high-floored” topics.

Besides seeing agricultural work, there is much doing which can be arranged. In an experimental garden, a variety of seeds may all be planted at the same depth. Some will come up readily, others with great difficulty, and some be lost entirely, showing seeds require different depths. Similar seeds may be put in different soils, that the effect of sand, clay, or humus may be seen. Soils in the neighborhood can be washed and sifted, to discover the proportion of sand, etc. These are exactly the things Agricultural colleges are doing more elaborately and perfectly. Old seeds or weedy, mixed seeds could be used, to determine what percentage of valuable growth resulted.

My soul is weary of letters from Northwestern poultry keepers, asking whether they shall buy screenings or wheat itself. If screenings are sixty cents a bushel, or a cent a pound, and one-third of the bushel is foxtail or mustard seed, our wheat kernels will really cost one and one-half cents a pound, equal to clear wheat at ninety
cents a bushel, because poultry rarely eat those weed seeds uncooked. If teachers in that section, even without ever sowing any wheat or clover, would get small samples of these seeds, have pupils pick them over and compare face and real values, they would learn much, and I be relieved.

Decorating School Grounds.

Then, there is decorating school grounds, in which children should have an important part, helping to plant the trees, pulverizing the new bed, keeping the roots wet in transit, firming the earth under the tree trunks, and trimming the heads according to amount of roots saved. Grafting and budding are easily taught and learned in connection. Our fine trees in the West Salem school-yard, are all in front of the building and on the north side, at that. Let children discuss arrangement, and learn that a background for main building and a screen for outhouses, is most effective.

Study of Birds.

A bright woman who heard this lecture once, brought up her boy to talk with me at its close. "He is so fond of Nature study," she said. "No, I am not," very unexpectedly and emphatically broke in the boy. It was quite embarrassing for his mother, and a trifle so for me. By tactful inquiry, I found he was learning, in school, the divisions of birds. Accipiters, passerers, etc., scansores, gallinaceae, grallatores, natatores, brevipennate, and you would not like those names, yourselves. "Does your teacher ever walk and talk with you, and show you the birds eating those insects which would otherwise ruin our crops and trees?" I asked. "Oh, yes," said the little fellow, and, fairly clapping his hands, he gave a most animated, intelligent account of what had been done in that line. Here is testimony to the value of practical Nature study or agriculture, and also to the advisability of conducting such instruction as much as possible, away from text-books and out of doors.

Weeds.

President Roosevelt says the greatest internal question is how to preserve and enlarge our forests. If I should give specimen talks on that great subject, or on the formation of soils, would never get done, so will, instead, make some suggestions about weeds.

Perennial weeds, you know, have long roots, spreading in different directions, like those of shrubs. These weeds mean to stay, and prepare to draw on a large territory and get well anchored. The fight with them must be constant and complete. Biennials have a tuberous root, in which is stored material for the second and main year, while annuals, which must get their nourishment quickly, have a thick, circular mat of short roots. If biennials and annuals can only be kept from seeding, they will disappear. Pasture grasses have roots more like annuals, and may seem an exception, but they are only meant to grow thickly, giving us beautiful turf, while couch grass, and other undesirable sorts, have the long, branching perennial style of root.

This whole lesson can be taught children, in any school-yard, or by any road-side, and would have a great effect on cleaning future farms.

In Conclusion.

I call the country school teacher, the educational "maid of all work." When we get consolidated rural schools, may we not, next hope that both here and in towns or cities, there will be, for each school, one instructor who can teach agriculture, the foundation of all other kinds of business, and also one other instructor who can teach cookery, or transmuting farm products into healthy boys and girls? Are not some modern educational ideas "far fetched?" Was not the clerk correct, who, taking civil service examination, was asked the sun's distance from the
earth, and replied he did not know, but was sure it was not near enough to interfere with his work?

"Is not the word of truth very nigh thee, even in thine own mouth?"

MODERN METHODS OF DOING BUSINESS.

REV. THOS. W. NORTH, Milton, Wis.

Modern business methods are in decided contrast with the methods of former years. This change is apparent in every line of business. How different the work and business on the farm as compared with those of forty or even twenty-five years ago, and what is so plainly manifest there is but on a parallel with what has taken place in all lines of business.

When we speak of the farm of former days, we think of the sickle, the scythe, the flail, a crude plow, and an ox-team, or of the ever-present knitting needles, the hand cards, the foot-power spinning wheel and of the quarter acre of shallow milk pans and the old hand-dash churn, that was a true test of the perseverance of the saints.

In former days the shoemaker went from house to house with his tools and roll of leather, staying until he had the family shod for the winter, and he was followed in his rounds by the tailor, the clock tinker and the peddler with his pack.

This has all changed and on the farm we have the era of improved machinery. Now we see the traction engine, the gang-plow, the self binder, the steam thresher, and the horse-power corn planter. The farmer takes his milk to the creamery, where it is separated and churned and worked by steam power. Great mills and factories card and weave and knit and make the clothing for the family much easier and cheaper and better than it could be done at home. Machinery has done much to emancipate the farmer and especially the farmer's wife.

The traveling man of today is not the shoemaker, the tailor, and the clock tinker, but the army of men sent out by the great commercial houses to deal with the merchants and supply them with goods. The small shop, in which one man with a few tools did all departments of work, has given place to the large factories with hundreds of men and costly machinery. Business on a large scale and with vast capital is one of the characteristics of the present time.

Our grandfathers never dreamed, in their most visionary moments, of the