

\$5,383,276 in earnings, after deducting \$2,953,759 for taxes and interest on funded debt. These roads carried 360,964,876 passengers and 852,294 tons of freight; employees, 11,390; wages, \$6,316,777; persons killed, 95; and injured, 2,538.

Farmers' Week at Pennsylvania Agricultural College.

INTERESTING LIVE-STOCK EXPERIMENTS.

From the 19th to the 24th of December, 1910, the Commonwealth founded by William Penn, devoted a considerable sum of money, and much valuable time and effort of those connected with the State College, to entertain and instruct the five hundred farmers in attendance at what is known as "Farmers' Week." We never saw more enthusiastic farmers, nor many more anxious to obtain information. We also found the Pennsylvania agriculturists and their leading men in connection with public-school work very eager for information about what is being done for the advancement of agricultural education "up in Canada." One of the State Superintendents of Education was present to get pointers on a scheme he has in view, of placing scales and Babcock testers in the hands of the older pupils of every school in his jurisdiction, and have them weigh and test the milk from at least one cow for a year, and make a report on this to the teacher. It is proposed to give prizes for the best records.

and for the one who is able to draw the best conclusions from the work done. He was very much interested and pleased with the Ontario system of having an agricultural representative in a county to direct agricultural thought and practice. A representative of one of the Philadelphia daily and weekly papers was present during the week, and sent a daily account of the proceedings to his paper. There may have been other newspaper representatives present whom I did not meet.

The live-stock department of the College has been organized but recently, with a man from Missouri in charge, and he is certainly "going some." His cattle-feeding experiments, comparing cattle housed with those running out of doors, having an open shed for cover, are very interesting. The steers are grade Angus, divided into lots of six or eight in each bunch, and those outside are doing as well as those stabled. In the dairy stables they have a similar experiment with milk cows, and the results from cows running in an open shed are nearly equal to those in good stabling. It looks as if we should have to revise our notions about stabling for both steers and cows.

Another interesting experiment with horses is in progress. Last fall, about thirty horses were bought on the Chicago market at a cost of \$250 each, delivered at State College, Pa. These horses are grade Belgians and Percherons. They are used for class-room instruction work during the term, and are being fed on three

different rations to compare gain in live weight and effect upon general thrift. In the spring these horses will be sold to Pennsylvania farmers at a price of about \$300 each, but a team fed on each of the rations will be kept on the College farm to work, in order to see the after-effects of the winter feeding.

The professor in charge of these feeding experiments said they expected to pay all expenses out of the proceeds of sale of stock, and have the manure as "velvet," together with a cash surplus. Last year he cleared over \$800 on the steer-feeding experiments.

Space forbids any detailed description of the work taken up during the "Week." In a word, those attending are divided into five sections for two periods in the forenoon (8.30 to 10 o'clock, and 10.15 to 11.45), and two in the afternoon (2 to 3.30, and 3.45 to 5.15), while all attend a joint meeting at 8 o'clock in the evening. I was told that many farmers are returning year after year. I talked with some who were back for the second year, and they were most enthusiastic over the benefits to be derived from a week spent at the State College. A very hopeful sign was the large number of young men in attendance. At some of these meetings in other places the attendance is largely made up of older men, the young ones having left the farm. If this hopeful farm spirit prevails generally among young men throughout the State, it is an indication of future greatness for Pennsylvania farmers. H. H. D.



The Tale of the Pioneers



The history of the pioneer farmer is largely unwritten, except in the pastures clothed with flocks, the green meadows, and the waving, swaying grain fields, as they bow their countless golden heads beneath the midsummer sun.

The roads, bridges, schools, churches, and even the cities, are but the outgrowth of the labor of the pioneer farmer.

Your eye wanders over a June landscape in this beautiful Province of Ontario, dotted with homes—sweet, peaceful homes, surrounded with comforts and conveniences from the sweet blossoms of spring until the gorgeous fruits of autumn, when the farmer receives fresh from his Creator his supplies, while his wife, rejoicing with him, prepares and spreads them upon the family board. They with bowed heads and grateful hearts adore and praise the Hand that feeds them.

About the year 1820 my father left the heather hills of Scotland, where he herded the peaceful sheep. What he could have seen in the future of the unbroken forests of London Township is hard to understand. However, he chose it as his future home. He went back to the borders of Scotland, and remained about a year. He married, and returned again to the forests of London Township, accompanied by a large number of border families. There were six families of Beatties, four of Scotts, two of Telfers, two of Robsons, two of Taylors, one Ord, Charlton, Hedley, Whillians and Waugh. At that time it took more weeks than it now takes days to cross the ocean, with few of the comforts that are found on the vessels of to-day. I never heard whether the many who came with him were disappointed; however, no one went back. How blessed have been these twenty-one families with "health, peace and sweet content," for the crown deeds are still in the hands of all those families, except Ord and Waugh. These families did not suffer the isolation and lonesomeness of even Western pioneer life, but privation was common to all.

Happy were they who could gather their first grain, handful by handful, from among the stumps. There were no floors to thresh it on, no place to store it, nor mill to clean or grind it. After mills were built, men carried wheat from five to fifteen miles on their backs to be ground.

Soups were largely used, grain and vegetables both being made palatable and nutritious. There were many devices by which the coarser grains, such as peas and barley, could be used without grinding.

A chain was hung in the chimney place on which to hang kettles for boiling. A later device was the "crane," which swung back and forwards to hook kettles onto. The pan for baking bread was rather flat, with a close-fitting lid. A later improvement was the tin oven, which was set on live coals in front of the fire.

The farmer was also getting improvements slowly. The first drag or harrow was a good implement for its purpose, as it served on freshly-cleared land as both harrow and plow. It was made of two rather heavy poles, like the letter A, with about a dozen heavy iron teeth, probably an inch square, and was drawn by the point, so it would easily pass stumps and snags.

Mowing hay with the scythe, tedding with a fork, raking and forking by hand, was slow and laborious work. The cradle was a great advance over the sickle. The cradler and binder were on their mettle from morning till night, with no light spots. The men of to-day can look to far more rapid and perfect improvements in tilling, harvesting and threshing of the last twenty-five or thirty years.

As families and clearings increased in size, larger houses and barns were called for.

The big raisings were usually a jolly affair. Peeled basswood skids, well soaped, were used for running logs up onto the buildings. Even large logs sometimes went a little too fast for safety where there was an abundance of whiskey. The social was a big feature, with women, old and young, present. The dinner hour was usually moderately quiet, but supper was often marred by troublesome guests.

Allow me to insist that a raising was a tame affair compared with a logging-bee. Over sixty years ago, I saw thirteen acres logged in one day. There were twelve yoke of oxen. To each team were five men with handspikes, their sleeves rolled up to their armpits. The driver had a blacksnake whip, with a new craker for this occasion. Each team took a strip one heap wide. It was a race to see who would be on the other side first, and, like the Scotchman at Burns' Haggis, "Deil tak' the hin' most, on they drive." The log-heap, if possible, was placed in a hollow, and in the center, so they brought a log both ways. Talk about your slow oxen! Say, those oxen seemed to comprehend the situation in a moment, for the logs fairly jumped over the roots. As the driver picks up the chain, the oxen turn half round, and as soon as they heard the click of the chain-hook they were ready to spring. When hitched to a monster log, the driver would put a half roll on his hitch, while two men dropped a skid. The whip swung in the air with a snap, and a shout told the oxen what was expected of them. They were game, if it even just came half its length. Remember, this whip seldom touched the oxen, for its snap, with the rattling shout of the driver, would inspire effort. How quick the handspikes dropped, and lighter stuff rattled on the heap until the next log came in. But what a joyous shout when the first set were finished. There was no lack of inspiration in either men or team, but no whiskey was at this logging.

The Rev. Jas. Skinner, from Dundee, Scotland, had taken charge of the two churches, English Settlement, and Proof Line, about the year 1835. He, with a number of his congregation, viewed the drink habit as a great evil, since it endangered life, and was a menace to peace and common decency, and considered it an awful wickedness to drink that which would de throne the reason, the highest gift of God to man. Should he not tremble, lest his reason should never return? Thus sprang up the first temperance movement at English Settlement, which has always been maintained and extended. The minister had the fullest co-operation of his people. In almost every home the family altar was set up. When the big hall Bible was brought down, with an accompanying Bible for each one who could read, a hush of quiet prevailed as they gathered around the table. How reverently this service was approached. My father's words in opening were, "Let us compose our hearts to sing God's praise."

Mr. Skinner's mode of travelling was in the saddle. He rode through the trackless forests of Middlesex, where the bay horse and rider in black, with light-drab leggings, were everywhere, fording streams, swamps and bogs. Once "Billy" floundered in a bog and threw his rider off. His clothes were in such a condition he had to borrow a suit from a farmer to preach in. He remained with his two charges about thirty years, where he died, and was buried among the people who loved and revered him.

Horseback was about the only mode of conveyance, and eggs, butter and other produce were thus carried to London, then called "The Forks," named from the junction of the North and South branches of the River Thames. Wm. Simpson walked to London, carrying butter and eggs fifteen miles. He returned at night with a load consisting of nails, putty and glass for his new house. There was eight inches of soft, slushy snow. Again, Mr. Johnston and his son Stephen carried bars of iron from London, twenty-three miles, to their home on the townline between Williams and Lobo; then three miles to a blacksmith to get the iron made into drag-teeth.

As clearings and crops increased, roads and markets became two great problems. Nothing would bring cash but black salts. Grain and pork could be sold at Sarnia. A straight road from London to Sarnia was surveyed, and most of it planked. The courage and enterprise certainly deserves praise. But their judgment may well be questioned, for plank was found to be much inferior to the old corduroy roads, which could be made fairly passable with a brush and earth covering; but the planks curled up like troughs, got loose, and made the worst possible travelling for horse and wagon.

The dress of the pioneer was a matter of real