

building one. I had had some experience with granaries and found the most troublesome part was the floor, what with joists rotting and breaking down and holes working into floors, with mice and gophers and one thing or another, I had lots of trouble and loss, so having some experience with cement in a stable floor I decided upon trying it for a granary. So first selecting a dry, well-drained situation, we drew in about a foot deep of clay which we tramped down well with a horse, then we drew several loads of small stones which we paved in on the clay and rammed them down good, then put on two courses of cement mixed with gravel 1 to 6 for first course, and for second 1 to 3 of sand, putting down planks on edge all round outside, well braced, about 4 inches wider than the building on all sides. While the cement was soft we took a short piece of 2 x 6 in. and made holes in the cement for the studding which the carpenter fitted in when he came to build. The building is 20 x 40 ft. with 14 ft. walls. There are neither sills nor joists in bottom. The studding is 2x6 in., 14 ft., the upper floor is supported by joists 2x10 in. spiked on to studding and supported by a beam 6 x 6 in. running lengthwise, is supported by an extra 2 x 6 in. post at each end and by two 6 x 6 in. posts, 14 ft. from each end, which with eight pieces of 4 x 4 in. for posts form the partitions for bins, there being two bins of 14 x 20 ft. and one 12 x 20 ft. in centre. It is 10 ft. from cement to upper floor, which is of flooring, this gives us a fine loft for oats, etc., but which like Dinah's cupboard is "handy for most anything." We have a stair outside at one end into it. The walls are double boarded with tarred paper between. We used a portable elevator in filling it, run by a 3 H. P. gasoline engine, which is on skids and can be moved anywhere. We have large doors in front, 6 ft. 6 in., and can back a wagon or sleigh in if necessary. It will hold 6000 bushels or more below the upper floor. We have about 5000 bushels in now and it never sprang a particle. The only mistake we made, we should have left a gothic window or pediment in the roof, through which to work the elevator. We had to cut a hole in the roof, but intend having a gothic window put in. The principal feature of course is the floor, which I consider a complete success and cost no more than an ordinary one.

The total cost of building, which is well finished and painted, is about \$500.00. I invite anyone within reach of here to come and see it, or will cheerfully answer any questions by mail. Souris, Man. A. LOVATT.

On the Seed Train.

The seed train special has come and gone as far as the province of Alberta is concerned and from start to finish the interest never flagged. Through the south, in the Mormon country, the attendance was very large. The habit of the people in this section, of living in communities has its advantages and the attendance reached three hundred at some of the meetings. Further north the turn out was also good, and by the time Calgary was reached 4,520 people had listened to the gospel of good seed and clean farms.

From Calgary the train was supposed to skip the intervening country and go to Red Deer, a distance of 94 miles, but the agricultural districts of Didsbury, Olds and Innisfail could not be denied, for when the train left the Didsbury station at 7:45 in the morning over one hundred and twenty-five people took seats in the cars. This load went north and returned on the regular train. An overflow meeting was held at Olds and the Innisfail people next boarded the train and went on to Red Deer. In this way a measure of service was given, but doubtless when next the seed train comes this way a better arrangement will be made. Farmers who come twenty-five miles in the early dawn of a winter's morning are in earnest and the progressive agricultural societies of these towns deserve recognition.

The lectures were good; the only protest heard was "more, more, give us more". G. H. Clark, of the Dominion Seed Division, and W. C. McKillicum, of the Calgary branch of the Seed Department, with an illustrated lecture in which they pointed out the importance of seed selection received the closest possible attention. The illustration of the two plots of wheat, one showing a splendid growth and vigorous appearance, the other a weakling and a failure, the difference due entirely to seed should, be remembered and heeded by the people of the West. Another example, and a striking one was a sample of Joannette oats from which "even the color had run out" owing to improper seed and an adverse selection.

SMUTS, RUST AND WEEDS.

The increase of grain growing in this province during the past few years made the discussion of this subject one of vital importance to the community. Immigration has its attendant evils; one of them is the tendency to import poor seed, and the one crop farming methods of the West tend to accentuate the difficulty.

Messrs. McKay and Bedford of Indian Head and Brandon, T. N. Willing, Territorial Weed Inspector, and Arch. Mitchell of the Forestry Department gave the people the benefit of their long experience and careful study. Keep the weeds on top and kill them by cultivation was a point frequently emphasized, for some of the people even wanted to bury the spores of smut with the plow. Sometimes the company resolved itself into an experience meeting and someone told how he had failed or how success had come to him in the years that are gone. The wild oat received a goodly share of attention; it is not so prevalent here as in some of the other provinces. Long may it be so.

Will smut attack fall wheat the same as spring wheat? Certainly it will. How long will wild oats remain in the ground and still grow? Possibly ten years. How about clover in Alberta? It is a success now and gives promise of being our most useful crop. Such were the questions and answers, and then the lecturer would proceed to explain his point and one thing always leads to another, and the time sped all too quickly and soon the Institute on wheels moved on.



JAS. WILSON, GRANDVIEW FARM, ALTA., AND ONE OF HIS FAVORITE DOGS.

The question of early sowing of fall wheat brought up by Mr. Mitchell deserves attention. Late sowing will some day be the course of the southern part of Alberta. It is winter wheat in earnest down there, for they sow it almost in the depth of winter. This year few fields have the necessary top and poor results are apt to follow. The warning so frequently uttered in this paper cannot be ignored with impunity. Fall wheat is fall wheat, and sooner or later the farmers will find out that even in Alberta it cannot be sown in winter.

The people have started to think. Next they will start to act. They brought samples to be tested for vitality, and why should they not yet send more and why should they not test it themselves? There is a heap of late-sown frost touched seed throughout this country. If it must be used why not know what it is worth?

The seed train is gone, may its memory long remain with us, and may every word that was uttered fall upon bright minds filled with the keenest desire for a forward move to a better condition in things agricultural, is the earnest wish of

ALTA.

Veterinary Director General To Go To Mexico.

Dr. J. G. Rutherford is, according to the press reports, to investigate the conditions under which Mexican cattle are raised and inspected, so that he may from personal observation be enabled to judge how stringent the import regulations on such stuff should be. This is well.

A New Building Material in Favor; the Concrete Block.

Concrete, as is well known, is a perfect mixture of an aggregate, such as crushed stone, with sand and cement, the aggregate forming the body of the mass, while the sand fills up the voids between the aggregates, and the cement fills up the voids between the grains of sand. As the purpose of the concrete is to take the place of stone, it is therefore necessary that the mixture be so thoroughly proportioned that each aggregate and each grain of sand has a coating of cement paste so that when the block has dried thoroughly, the mass will be held in perfect rigidity by the hardening of the cement bond. The aggregates used may be of either gravel, crushed granite, quartz, or trap rock, and should be clean and free from dust, clay, or iron rust, which will resist the adhesion of the cement bond. The sand should be as pure silica as possible, should be washed clean to be free from lime, vegetable matter, etc., and should be as sharp as possible. The proportions used in the mix will depend on the sizes of the sand and the aggregates, and can only be determined by testing. This is one of the most important items to be considered, and none of the proportionate rules laid down by the manufacturers of hollow concrete building-block machines should be followed, but the proper proportions should be determined by careful and repeated tests, measuring each ingredient carefully until a perfect mix has been secured. Power mixers should be used wherever possible, as by their use a more thoroughly uniform mix can be secured; and where there are any number of blocks to be made, the power mixer will be found to be not only the best, but the cheapest, as the time and expense of mixing are considerably reduced thereby, while the quality of the mix is far superior to that of hand mixed. However, where hand mixing is found advisable, the aggregates should be spread evenly over the mixing board at a uniform depth, the sand spread over this, and the dry cement over the sand. Then this should be turned over at least three times, which should result, if properly turned, in the mass being free from streaks. Then the mass should be sprinkled and turned three times more, sprinkling at each turn, and then smoothing over to test for streaks. If streaks should appear, turn until they disappear. Lime is sometimes used to give a white finish and produce a hard waterproof block, but when it is considered that the life of lime is only from six to sixteen years, while good concrete should last forever, it will readily be realized that a block containing lime will in a comparatively short time crumble and deteriorate. In a like manner the use of vitrol, sodium, soda, argol, salt, and other chemicals should be discouraged, as while they tend to harden a block in a shorter time, their life is short compared with the life of a good concrete building block. A good waterproof block may be made by mixing five per cent of dry powdered alum with the dry cement and ten per cent of a saturated solution of common washing soap with the water used in making the concrete. This will not affect the life of the block in any way, and will result in a perfectly waterproof block being turned out.

The block is nothing more than a quantity of concrete tamped in a mold and dried. A carpenter could, in a few hours, make a block mold from wood that would form the first blocks in a satisfactory manner, but the mold would soon be sprung out of shape upon subsequent tamping of the blocks.

The principal reason for buying a machine at all is to secure some means of making your blocks in as economical a manner as possible, at the same time securing one that will produce perfectly satisfactory blocks. It would therefore be best to secure a tried machine, that has been in use long enough to demonstrate its value both as regards quality of product and also rapidity of production, as upon these depend the ultimate success of your venture. The only reason one would have need to buy a block machine would be to secure the advantages of labor saving, high quality of product, and rapidity of production, and for that reason the best machine on the market is the cheapest at any price. Many machines are so constructed that the block is formed face downward, so that the face of the block can be made of somewhat finer material, that can be waterproof and colored to suit the requirements of the users. On such machines it will be found possible to make the face hard and waterproof without waterproofing the entire block which is indeed not necessary if the block is made with a waterproof face; also, it will be found possible