ing features of the programme that has yet, at time of writing, to be gone through, unless the management rules differently, is the taking all the sheep, all breeds at once, section by section, into the live-stock forum or arena, to be passed upon by the judges, which means dragging some of the heaviest sheep and hogs over thirty rods each way, and there stand, perhaps for hours, in a boiling sun, where not a breath of air can blow. This rule the Chief of the Live-stock Department seemed willing to amend, but Supt. Thompson seemed determined that the rule should be strictly enforced. The exhibitors, of course, are awaiting results, some patiently, some otherwise, but all more or less disappointed in the Sheep Superintendent. It certainly is impracticable to show sheep to the best advantage, where an exhibitor has more than one breed to look after in the ring at once, if he only has a few hands with him. This rule may look very well on paper, but a Superintendent who looks at the practical side ought to see the impossibility of carrying out such a rule. Canadian exhibitors in the swine department are: J. E. Brethour, Burford; Jos. Featherston & Son, Streetsville; D. Douglas & Sons, Mitchell; W. H. Durham, Toronto, and A. Elliott & Son, Galt, whom it is expected will fully sustain Canada's reputation as a bacon-producing country.

Some Suggestions to Cattle Feeders.

Chas. Robinson, of the big cattle commission house in Chicago, has the following pertinent advice to give, born of experience gotten in the great live-stock market of the world:

It is fully as important to know what not to do as to know what to do. In fact, most of the mistakes in management and methods made by cattle-feeders arise from a lack of knowledge of conditions governing the varying demand for different classes and weights of cattle, hence in many instances they do the right thing, but at the wrong time.

Perhaps the most common error is that of feeding heavy cattle into a hot-weather market; that is, for shipment during the latter part of May and the months of June and July, when light, handy-weight carcasses are required by the trade.

Steers scaling 1,400 to 1,500 pounds are good sellers any time between the first of August and first of April, but during the last half of April and the months of May, June and July, the handy weights are most sought after and are the best sellers. Although a few loads of heavy cattle can be disposed of to fair advantage during the latter months, the demand centers principally upon the light-weights. While heavier cattle are used by the exporters during the winter months, the last of April and fore part of May they begin to call for steers weighing 1,300 to 1,400 pounds.

Our experience teaches us that short-fed cattle, as a rule, make the most money; that where good, thin cattle weighing 800 to 900 pounds are bought during the months of October and November, they can be carried along on fall pasture, cornstalks, and other cheap feed, until—say the first of March—feeding a little corn during January and February to keep them gaining; then putting them on full feed about March 1st, they could be finished to good advantage for the May, June and July market, at which time they will sell within 15 to 25 cents per cwt. of heavy steers that cost 50 to 75 cents per cwt. more to produce. Handled in this way beef can be produced at a reasonable cost, and the feeder escapes a great deal of rough weather feeding during January and February, at which time cattle make little gain, as it takes most of the corn they eat to maintain animal heat.

Another plan which we think can be followed to good advantage is to buy half-fat steers during September, and feed them ninety to one hundred days. Cattle with weight can usually be fed the above length of time to make money. It is very important to buy for this purpose steers weighing 1,150 to 1,250 pounds, the heavier the better, as such cattle with one hundred days feeding can be made heavy enough for export, whereas if a man starts in with steers weighing 950 to 1,000 pounds, he can only make them suitable for dressed beef purposes. In other words, with the same amount of feed and labor the heavier steers will bring 25 to 40 cents per cwt. more than the light-weights, because they will be suitable for the best-paying trade.

O. A. C. Short Courses.

Following is the list of short courses at the Ontario Agricultural College for the approaching season:

Dairying.—Creamery course for factory buttermakers only, December 1st to December 21st, 1904. Milk producers' and milk dealers' course, December 12th to December 22nd, 1904. Dairy school, long course, for factory, cheese and butter makers, January 4th to March 24th, 1905. Course for dairy instructors, April 3rd to April 13th, 1905. Summer course for butter and cheese workers, May 1st to September 30th, 1905.

Stock Judging and Seed Judging.—Including the determination of weeds and weed seeds, January 10th to 21st, 1905.

Poultry-raising.—January 10th to February 3rd, 1905.

Do your reading at nights by the aid of a lamp with a large burner. Oil is cheaper than eyesight or spectacles.

FARM.

Emmer and Spelt.

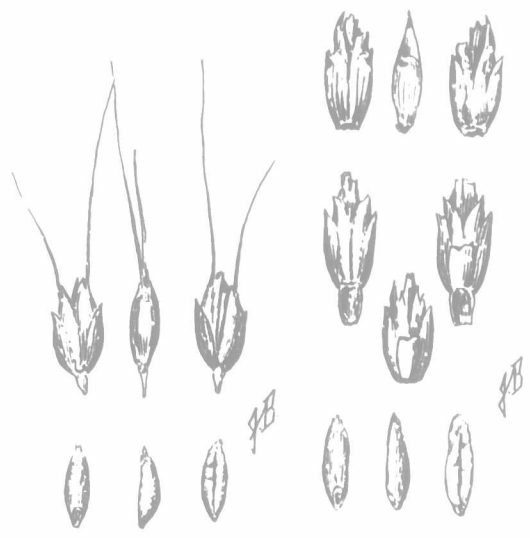
To the Editor "Farmer's Advocate":

Sir,—Emmer and spelt are two distinct types of wheat, there being a number of varieties belonging to each type. The grain of both the emmer and the spelt is tightly enclosed within the chaff, from which only a small portion is separated in the process of threshing. The heads of emmer are short and compact, and are nearly always bearded; while those of spelt are long, narrow, open, and are usually bald. The spikelets of the emmer overlap each other like shingles on a roof, which thus makes the head close,

Two-thirds natural size.

smooth and regular. The portion of the stem adhering to the spikelets after threshing is much smaller and more pointed in the emmer than in the spelt. The spikelets of the emmer are flattened on the inner side, while those of the spelt are arched. The grain of the former is much harder, and the chaff much softer, than that of the latter. Emmer is considered a very hardy plant, being much superior to spelt in this respect. Some of the differences between these two types of wheat are illustrated by the accompanying drawings.

Three varieties of emmer and ten varieties of spelt have been grown in the Experimental Department of the Ontario Agricultural College. All the varieties of emmer have given decidedly better results than the best varieties of spelt which we have grown. In the average results for four years, the common emmer has given a yield



Two-thirds natural size.

of 2,727 pounds of grain per acre. In the co-operative experiments throughout Ontario, in 1901, 1902 and 1903, emmer produced a larger yield of grain per acre than the best varieties of oats or the best variety of barley which were distributed. It is quite probable that the emmer will be grown considerably throughout Ontario for the production of good clean straw, and a large yield of grain to be used as a food for live stock. For feeding purposes, the grain and the surrounding chaff are usually ground together in the same manner as oats are ground into meal. The average percentage of hull of emmer is only about three quarters as great as the average percentage of hull of oats.

C. A. ZAVITZ.
Ontario Agricultural College.

The Care of Portable Engines.

The care of the portable engine is one of the most important points to be conside ed by thresher men, for if it has not the proper care it will soon "kick the bucket." Be sure that you have enough water in the boiler, for leaky flues are a great source of trouble, and are almost always caused by low water. Feed the water gradually, and keep the boiler clean.

The slide valve should be set accurately, as any derangement in this part of the engine causes an immediate increase in the fuel consumed, and decrease in power. Excessive firing is always attended with more or less danger, because the intense heat repels the water from the surface of the iron, and allows the boiler to be burned. Do not have more draft at any time than would produce a sufficient combustion of the fuel to keep the steam at the working pressure, as by opening the damper to its utmost limit, great quantities of heat are carried into the chimney and lost.

Keep the ash-pit clean, so the grate-bars do not warp or melt. Special attention should be paid to keeping the cylinder well oiled with the best quality of cylinder oil. All the vibrating and moving parts should be kept well oiled and free from grit and dirt. If this is neglected, the friction of the moving parts will soon wear away the metal and induce pounding, and cause what is called lost motion, which detracts greatly from the power of the engine, and, if allowed to run in this condition, will soon necessitate large expense for repairs, and shorten the life of the engine. Tighten all the boxes as they wear, being careful not to get them too tight.

LAYING UP AN ENGINE.

To prepare the engine and boiler for laying up through the winter, while steam is on clean boiler and engine thoroughly outside, scrape off all oil, grease and scale, after which apply a coat of asphaltum paint to the boiler and smokestack. If no paint can be had, take rags, saturate them with grease or oil, and go over them with that. Now allow the boiler to cool off, after which take out all the hand-hole plates, and wash the boiler out thoroughly, removing all mud and scale; then replace the hand-hole plates, close the blow-off valve, and fill boiler nearly full of water, after which, pour in a gallon of black oil upon the water. After this is done, open the blow-off valve again and allow the water to run out. The oil will follow the water down and cover the whole inside of the boiler with a coating of oil, making as good a protection against rust as can be found.

Clean the flues, fire-box and ash-pan, also paint ash-pan. If engine is to stand out over winter, remove all the brass fittings, such as lubricator, steam gauge, safety valve, injector, check valves, pump valves, gauge cocks, etc. Disconnect all pipes where water may lodge, in order to prevent freezing; unscrew all stuffing-boxes and remove the packing, for unless this is done the parts will rust where the packing was allowed to remain.

Remove the back cylinder-head; roll the engine forward, and smear the inside of cylinder with tallow or oil; also smear all the bright work, such as piston-rod, connecting-rod, etc., with grease; and last, but most important, put the engine in a well-built shed, and you will find another season that your engine will be clean, free from rust, and ready to serve you faithfully, without any trouble or delay in starting, either in time or expense.

The Automobile Question.

To the Editor "Farmer's Advocate":

Sir,—I rejoice to notice in the editorial page of the September 22nd issue that you have taken up the automobile question. I agree with you and Mr. Barnes, that something should be done to stop it, or at least to make them pay for the damage done. The law now in force is of little use in the way of protecting the general public against loss of life and the smashing up of rigs. As I live on the London and Sarnia road, where a great many autos have passed this summer, I have had a good opportunity of judging the matter fairly. I have been an eye-witness to more than one accident, and in one case when the man handling the machine did everything the law required, slowing up and at last stopping, but the horse attached to the buggy would not go by, turning round short in spite of a good driver. The driver was then thrown out with great force on the gravel road, and the horse made off with the buggy. The best way when meeting one of those dangerous machines is to run up a sideroad or into an open gateway till the automatic fiend goes by; but is it right or fair that the farmers and horse owners all over the country should be driven off their own roads by a few rich men that only run through the country for pleasure? And as some of them have gone through at the rate of 30 miles an hour, it is impossible to follow them or find out who they are. Thanking you for the space.

Adelaide, Ont. HORSE OWNER.