

cultivated to produce moisture and give a good seed-bed.

The variety of fall wheat which invariably produces a fair crop is the Democrat. Though not such a heavy yielder as some others, it is much surer. The Genesee Giant, Jones' Longberry, Golden Chaff, all are pretty successfully grown, and the Kansas Red also has given fairly good results this year. As you state in your timely and able editorial on this subject in Aug. 1st issue, the only apparent reasons for growing this cereal are that it diversifies the work of the year, and gives a good opportunity for seeding down.

Perth Co., Ont.

Yours, etc.,

JOSEPH MOUNTAIN.

#### SOW FALL WHEAT ONLY ON WELL-PREPARED LAND.

To the Editor FARMER'S ADVOCATE:

Referring to your editorial in Aug. 1st issue, as to acreage of fall wheat compared with former years, we would not like to see less fall wheat raised in Ontario, but, rather, more. At the same time, it would be well for farmers to limit their acreage to the amount of land which they have fitted to grow wheat. Then, by carefulness in preparing the soil, they would have more wheat of better quality, more satisfactory crops, and more land to use for other purposes.

I would consider Aug. 25th to Sept. 15th extreme dates for sowing fall wheat, and prefer Sept. 1st to 10th.

I find wheat does best following peas, clover sod and barley. Summer-fallow well manured is the best preparation for wheat. Clover sod plowed once in July or 1st August, then well cultivated, or pea and barley stubble well cultivated and top-dressed with well-rotted manure, do very well.

The Hessian fly has done very little damage in our section, and I have had little or no experience with it. Cap Sheaf has taken the lead here this season, Dawson's Golden Chaff next. Not having had any experience with Hessian fly, I do not know of any precautions effective in preventing its attack.

Halton Co., Ont.

ROBT. NOBLE.

#### FALL WHEAT AND THE HESSIAN FLY.

To the Editor FARMER'S ADVOCATE:

SIR,—Regarding the best means that may be used to produce the best results in wheat-growing and to escape the ravages of the Hessian fly, I beg to submit the following:

Plow clover sod, well manured at least three weeks before sowing, cultivating the land well in the meantime; roll the ground, sow two barrels of lime to the acre the last thing before sowing. Harrow after sowing, so as to partly cover the lime and keep it from blowing. It will also give a roughness to the surface that the wheat requires. Sow any time between the 1st of September and the 25th that you find the land has plenty of moisture to produce a rapid growth. About the 10th of May sow one barrel of fine salt to the acre in the morning while the dew is on or immediately after a rain.

Persons following the above instructions on suitable fall-wheat land, nine years out of ten will have an abundant crop, despite the Hessian fly or any other fly. I might state here that in 1883, or about that time, there was as great a cry about the Hessian fly as there is this year. I treated a field as here described, and threshed 60 bushels to the acre. My first sowing on the field was on the 2nd of September and the last was the 25th. The latest sowing was the lightest straw, but all was too heavy to harvest with comfort. The wheat was the old Scott variety.

W. MURDOCK,

Asylum Farm, London.

Farmer.

#### QUIT SOWING WHEAT FOR A TIME.

To the Editor FARMER'S ADVOCATE:

SIR,—In order to overcome the ravages of the Hessian fly, I would say discontinue sowing fall wheat for a time. No date was safe for sowing last year in this vicinity, as the fly treated all alike. We prefer to sow on summer-fallow, clover sod or pea stubble. One year ago our best wheat (about 40 bushels per acre) followed ensilage corn; the same two years ago. The land was worked thoroughly with disk harrow. Wheat was sown about 1st October. This year both early and late sown wheat on fallow and corn ground was almost totally destroyed by Hessian fly. Crop worthless. All varieties appear to fare the same in this district; almost total failure.

MATT. RICHARDSON & SON.

Haldimand Co., Ont.

#### GOOD PREPARATION DEFEATS THE HESSIAN FLY.

To the Editor FARMER'S ADVOCATE:

In the districts infected with the Hessian fly, I think the acreage should be very much reduced, confined to what land can be put in the very best condition, and thoroughly well manured to insure a strong and vigorous growth. I come to this conclusion from the fact that in districts where the wheat is nearly all destroyed, there will be found an occasional field, put in under the most favorable conditions, but slightly affected.

Extreme dates, and between which it would be safe to sow, are 8th of September to 8th of October. I would prefer from 10th to 20th of September, that we might be pretty certain of frost before the plant is large enough for the fly to deposit eggs on it.

Fallow is no doubt the best preparation, but may follow peas or barley and even oat stubble, which should be thoroughly prepared by cultivation. It should be plowed as soon as possible after the crop is off, and worked, that it may gather and hold the moisture. Top-dressing with well-rotted farm-yard manure should be given to insure a vigorous growth.

If it were not for the fly, I believe Dawson's Golden Chaff has given the best yields, but it is one of the very worst affected by the fly, consequently it is not safe to sow. I believe from what I have observed in travelling over a large district where the ravages of the fly have assumed large proportions, extending from west of London to 30 miles east of Niagara Falls in New York, the Genesee Giant has escaped as well as any.

I don't know of any preventive measures for the Hessian fly except date of sowing and the very best possible condition of the soil to produce a strong growth of the plant. At the prospective market prices, there is no inducement to sow much wheat, and especially on land that is not in the best condition, that would be risky in the absence of the Hessian fly. For the sake of dividing the work, both in the fall as well as at harvest, I believe it safer to sow rye instead of wheat; it will stand late sowing better, and it is a good crop to seed down with.

JOHN JACKSON.

Wentworth Co., Ont.

#### SOW WHEAT AFTER FIRST FROST.

To the Editor FARMER'S ADVOCATE:

DEAR SIR,—Winter wheat is not extensively grown in this section. Not more than half the farms grow fall wheat last year, I think from five to ten acres being the most on a farm. It was hurt considerably with the rust, and what was not in before the big rain on July 27th, 28th and 29th was badly sprouted.

I sowed last year on September 1st and some as late as September 20th. I prefer the early seeding, and if the growth is too rank we pasture it with the sheep two or three weeks. After it is sown let them eat it well down, then take them off and do not put them on again.

For wheat ground I prefer summer-fallow; and after peas, worked up fine with cultivator. I have seen some very good crops grown after corn was cut for ensilage, worked fine with cultivator and drilled in. It has stood the winter better than that sown on fallow or after other grain. The corn stubble seems to protect it.

There has been no damage from Hessian fly here for some time. The Dawson's Golden Chaff and Genesee Giant are best yielders. When we were troubled with the fly, I generally did not sow till after our first frost, which we generally got between the 15th and 20th of September. When early sown, pasture it with the sheep till October. If taken off then it will have plenty of top and be the better for the tramping.

JOHN MILLER.

York Co., Ont.

#### THE BEST FARMERS GET GOOD CROPS.

To the Editor FARMER'S ADVOCATE:

SIR,—It is useless to endeavor to kill out the Hessian Fly by ceasing to grow wheat, as all farmers cannot be induced to do so. In this section the farmers who sowed good seed on well-prepared land got fair crops even this year, while many careless ones did not get their seed back. Vigorous, strong-growing wheat will withstand the fly whether sown early or late. The early-sown did best here this year. This is contrary to the teaching of scientists, and is no doubt due to the greater vigor of the plant where the land is rich and put in first-class condition.

I sow fall wheat for its straw, and to get catches over, and consider the latter of more importance than an average crop of grain. Late grass I mow or early in October, on corn ground, but cultivate well. Dawson's Golden Chaff went 20 bushels; a new sort, resembling it, from N. Y. State, yielded 30 bushels, and the Red about 16 bushels per acre in one plot and 21 in another. The fly took about half the Dawson's, a third of Turkey Red, and infected the new sort also. The best crop I ever grew was sown on clover sod, plowed about the middle of August, well cultivated, rolled, and sown Sept. 15th. The yield was 50 bushels per acre.

Oxford Co., Ont.

E. D. TILLSON.

#### Back from the Far West.

Mr. James Gilmour, M. P. for East Middlesex, Ont., recently returned from a visit to Alberta, where he has considerable interests in farming land and in ranching, in which his son is engaged at Lacombe. Mr. Gilmour reports the cattle business in the district north of Calgary in a very thriving condition, there having been several good seasons. Consequently it is becoming rather difficult now to acquire desirable ranching lands in succession. The great development of the Pacific coast mining interests has provided a market for a large quantity of meat from a secondary class of animals not suitable for export to the East, and which heretofore was sacrificed, having a very depressing effect upon local markets. All is now absorbed at fairly remunerative prices. Very large areas of Alberta are specially adapted for ranching, which is likely to prevail for a long period to come. The country between Calgary and Edmonton has doubtless a great future before it, particularly in view of the fact that so much of it is well watered and adapted for stock-rearing as well as grain production, ensuring a safer system of farming than those areas of Manitoba where wheat growing alone is relied upon. Settlement is extending northward from Edmonton towards the Peace River country, which in the course of time will become the home of an extensive agricultural population.

#### Wheat Breeding.

An annual increase of income in three Western States alone of over \$22,000,000 from improvement of the wheat crop—this is what is being accomplished by the work of experimental wheat-breeding now carried on at the Minnesota Agricultural Station. This work and its results are described in the "World's Work" (May) by W. S. Harwood. The work of wheat-breeding, he says, was begun in France many years ago by M. Henri Vilmorin, more than a thousand new wheats having been tested by him. Ten years ago similar work was begun at the State institution in Minnesota. Mr. Harwood writes: "To create a new wheat, the pollen from the flower of one wheat must be artificially transferred to the stigma of the flower of another wheat. Wheat is a self-fertilizing plant. Left to itself, it will reproduce itself throughout endless centuries. Great care is necessary in the work, and trained men are essential. As soon as the pollen is transferred—which is done about four o'clock in the morning, at the hour when the wheat florets open—the head of wheat is encased in a tissue sack, so that the work may not be interfered with by any pilfering insect or bird. Two of the best-known varieties are selected, one for the father, the other for the mother of the new race. When the harvest comes, it may be that the new wheat has some of the poor and few of the good characteristics of the parents; or the reverse may be the case. It is impossible to say in advance what the new wheat will be. From the single head which results as the first harvest, only a handful of kernels is threshed out. This handful is of immense importance, for these kernels may become the source of a mighty race, destined not only to supplant the old wheats, but to add enormously to the wealth of the world."

#### DAIRY.

##### Home Buttermaking.

Milk should be set in a perfectly clean, well-ventilated place where nothing else is kept, and the room so constructed that the temperature can be regulated as desired. There should be another room where the cream can be ripened and churned and the work of the dairy performed. Very few farmhouses have proper conveniences. The cellar is often used to set the milk in, and the kitchen used to ripen the cream in and do the dairy work. The cellar is all right if it is not used as a general storeroom for the house. Bad surroundings and bad company are fatal to making fine butter. I set the milk in common milk pans. It is better not to stand longer than twenty-four hours. This will be sufficient time to get the cream all out if the temperature of the room is 40 to 50 degrees.

When I take off the cream I keep it cold until I have enough for a churning. I then stir it well and warm it to a temperature of 80 degrees, and add one pint of good pure buttermilk to every three gallons of cream. I then set it away to cool. In the summer I set it on ice or in my refrigerator. In about twelve hours the cream will be ready to churn. The ripening of the cream is a very important matter, both for quality and quantity. If it is not properly ripened it will not be developed, and it will be of a weaker body and lack in quality. If the cream be overripe the acid will be too far advanced, and the fine sweet aroma in flavor will be killed, and the quality will be poor.

In churning, scald and clean the churn properly, put in the cream, and a lump of ice will do no harm these warm days. Churn steady but not too fast; 35 to 45 minutes should bring the butter. At this stage add one quart of pure water to the churn; it firms the butter and helps to separate it from the milk. The churning is merely a mechanical operation to bring the butter globules together to strike each other, so that they may adhere together without being broken up. If the butter is churned too warm the globules are soft and get bruised and broken; the result will be greasy butter and no grain.

Now, the best way of getting it out of the churn. A good deal depends on what kind of a churn is used. If the barrel churn is used (I like this churn the best), perhaps the readiest way is to draw off the buttermilk and run it through a cotton cloth, so that no butter escapes in the milk, and when the milk is mostly drawn off put in a little cold brine, not very salty, give the churn a few turns, draw off the water, and repeat this operation two or three times, until the water comes off clear, then take out the butter into the