

**Growing Winter Wheat for Best Results.**

- 1st.—Following what crop?
- 2nd.—With what method of sowing and quantity of seed per acre?
- 3rd.—With what tillage before and after sowing?
- 4th.—With what manuring?
- 5th.—With what variety or varieties?
- 6th.—What means can be adopted to successfully combat the ravages of the Hessian fly and other insect pests, and winter-killing?

**30 TO 35 BUSHEL YIELDS THIS YEAR.**

This method is now adopted by very many, and the yield has been from 25 to 45 bushels per acre. There is quite a large number who have wheat that will average 30 to 35 bushels this year where the lands were thoroughly cultivated and underdrained or have natural drainage.

1. Hay or pasture lands plowed early and well cultivated till seeding time.
2. With drill,  $1\frac{1}{2}$  bushels per acre.
3. Plow the manure under; roll and harrow; cultivate until near seed time—if you did not plow manure down, then top dress with manure; get your land firm, not dusty. Plowing down manure and top-dressing has been tried in some fields, and the former gave best results.
4. Barnyard manure.
5. Dawson's Golden Chaff is first.
6. Sowing from 12th to 15th September, and having land well drained and natural wheat land is the only preventive for Hessian fly. Top-dressing with coarse, light manure in winter will prevent winter-killing.

C. M. SIMMONS.

Middlesex Co., Ont.

**HAS TRIED ARTIFICIAL MANURES.**

1. We have had best results after clover.
2. By drill, with seven to eight pecks per acre.
3. Plow well to cover second growth of clover, as shallow as possible to make good work; harrow, roll, and cultivate with spring-tooth to secure a firm, solid seed-bed with a loose, friable surface.
4. Seldom manure. Have tried artificial manures, but without beneficial results.
5. Dawson's Golden Chaff has been very satisfactory. Gold Coin has done the best this season, and I think it will take the place of Dawson's Golden Chaff.

RICHARD GIBSON.

Middlesex Co., Ont.

**DRAINAGE AND TILLAGE IMPORTANT.**

1. Crops to follow—1st choice clover sod after one crop has been taken off; 2nd, after peas. With the clover sod, plow shallow shortly after haying, roll and harrow so that the sod will decay enough to allow the cultivator to work. Cultivate about eight inches deep and as often as required to kill all weed growth; harrow well before sowing. With the pea land, cultivating will be sufficient; harrow once before sowing. If manure is used, plow shallow and harrow in both cases just before sowing.
2. Sow with a seed drill,  $1\frac{1}{2}$  bushels per acre, the last week in August or the first week in September.
3. Tillage, as stated above. After sowing, if no grass or clover seed is sown with the wheat, when the grain is six inches high, on sandy land use the Breed Weeder, on clay land use the tilting harrow sufficient to loosen the soil and kill small weeds.
4. Barnyard manure, 10 to 12 tons per acre on clover sod or pea land.
5. Dawson's Golden Chaff, Hungarian, Genesee Giant.
6. Winter-killing. Plow in ridges 24 feet wide, and clean out all furrows to allow the water to run off. Select a sheltered field. Soil, heavy sandy loam, with a free, deep or porous subsoil, or clay loam very well drained. All the above applies to fall rye as well as wheat.

JOHN FIXTER.

Central Experimental Farm, Ottawa.

**TOP-DRESS FALL WHEAT IN WINTER.**

1. Following peas or barley that has been sown on root ground of the previous year.
2. Always sow with drill, from  $1\frac{1}{2}$  bushels to  $1\frac{3}{4}$ , according to condition of land; rich land requires the smaller quantity.
3. One good shallow plowing as soon as possible after harvest, followed by frequent cultivation until time to sow. Have never done anything after sowing.
4. Manure with barnyard manure if available, keeping manure as near the surface as possible, also top-dress during winter if the ground is bare.
5. "Dawson's Golden Chaff" and "Early Arcadian."
6. Cannot say much about Hessian fly, as both early and late sown fields are affected in this vicinity. I think the varieties with white chaff are damaged most.

R. S. STEVENSON.

Wentworth Co., Ont.

**FALL WHEAT GROWING AT THE O. A. C.**

1. Our fall wheat invariably follows the pea crop.
2. We sow with a drill. On rich soil, when the seed is good, about 5 pecks of seed per acre is sown.
3. The land is manured before the peas are sown, either during the winter or in the spring. After the peas are removed, the land is usually gang-plowed, harrowed, and then gone over with a

grubber to loosen the soil more deeply than the gang plow could.

4. We use farm-yard manure and apply from 12 to 15 loads per acre before sowing peas.

5. Dawson's Golden Chaff and Early Genesee Giant have proved the most satisfactory varieties in this locality, with the advantage somewhat in favor of the former.

6. We have had practically no difficulty with the Hessian fly, and so have not adopted any special means for its prevention. We usually sow during first week of September.

G. E. DAY.

Ontario Agricultural College, Guelph.

**COMBATING THE HESSIAN FLY.**

1. Following wheat crop, peas, barley.
2. One and three-quarter bushels per acre put in with drill, and shallow.
3. The land should be thoroughly manured before the preceding crop, plowed as soon as possible after the crop is off, and kept well worked to secure a fine, moist seed-bed.
4. Barnyard manure, if possible, and no more land than can be well manured. One acre well done is better than two half done, not only for the crop of wheat, but on account of securing a catch of grass.
5. Dawson's Golden Chaff has done as well as any. The Golden Giant looks well this year.
6. The only means I know of to combat the Hessian fly is to thoroughly prepare the ground to ensure a rapid and healthy growth, and delay sowing till about the 10th of Sept.

I think a great mistake is made by many in sowing too early, sowing too much, sowing land not in proper tith, and also in sowing too late.

Wentworth Co., Ont.

JOHN JACKSON.

**FALL WHEAT FOLLOWING PEAS OR JULY-PLOWED SOD.**

1. Following a crop of peas, and I have had good results from sod plowed in July, and fair crop on barley stubble.
2. In all cases the land must be thoroughly cultivated, harrowed and rolled—never plowed.
3. The seed to be put in with the drill, from  $1\frac{1}{2}$  to 2 bushels per acre.
4. Top-dress with well-rotted manure.
5. Dawson's Golden Chaff. The Red Clawson has done very well. Genesee Giant only gave me one real good crop in several years' testing. We have a new variety I got from Mr. Rennie last fall, called the Banner, nearly like the Dawson's Golden Chaff that has done well this year.
6. Have not been much troubled with the Hessian fly, but would never sow earlier than the 30th or 31st of Aug., prefer the 4th or 5th of Sept.

N. B.—If corn could be cut into the silo in time to clear the land by the 15th or even the 20th of Sept., the land will be in the best condition for fall wheat, or cultivated well in the spring it gives the best results with goose (spring) wheat.

Peel Co., Ont.

J. PICKERING.

**GREEN MANURING.**

We, as a rule, follow clover with winter wheat, spreading what manure we have immediately after haying and plow and keep thoroughly worked until sowing time. We do not follow the practice of having a summer-fallow or bare fallow, the nearest we come to it perhaps is by occasionally plowing the sod in the fall and seeding with oats in the spring, plowing under the oat crop about the 1st of July, and surface-working well until seeding. This method we use on a field that is more or less weedy and find it more effective than any other plan we have used. In both cases we roll after plowing to pack the soil and stop any air chambers that may be under the sod, cultivate with spring-tooth cultivator and harrow. After sowing we harrow, if needed, first, then roll and harrow again; we never like to leave the surface rolled. We find the Red Clawson very satisfactory, sow about 6 pks. per acre. As to the insect pests, we are never troubled enough with them in our wheat to think of means of combating them. I don't know whether it is our light land, our methods of sowing, or something else, we are not troubled with the worms or flies to any great extent.

F. C. E.

Huron Co., Ont.

**AN OXFORD CO. WHEAT-GROWER'S EXPERIENCE.**

Perhaps we have had most success with fall wheat on clover sod. Cut the hay as early as possible, and if there are a few showers to start the aftermath, all the better; if it can be left until six or eight inches and then plowed, not very deep. Roll after plowing and harrow often. Cultivate or disk harrow after rains; the ground should be stirred about twice a week. Sometimes we plow sod in the spring and sow peas, and then manure and plow lightly and sow fall wheat, but in any case the ground should be plowed several weeks before sowing time, and harrowed and cultivated several times before sowing. It is almost impossible to harrow and cultivate too much. We sow about  $1\frac{1}{2}$  bushels per acre by the drill. Even a very little manure before or after sowing makes a great difference to the crop. Find that it is a good practice to, as it were, mend up the knolls and thin places with a little manure if we have not enough to go all over. We have a very good crop this year of Dawson's Golden Chaff, but, generally speaking, the same wheat should not be re-sown too often on the

same farm, but the seed should be changed every few years, as it generally runs out.

We think that it is a great mistake to sow too early. Some years ago many farmers used to sow in the end of August, and I have seen wheat green on the first of September. I think this is a mistake; perhaps about the middle of September is early enough, and I have had a good crop sown after the 20th. It is said that sowing early encourages the production of the Hessian fly. But be that as it may, I do not like to sow too early. I have had good crops of rye sown in October.

In brief, fall wheat should be sown on manured, well-prepared ground of a fine tith, damp enough to germinate the seed at once. We sometimes, when necessary, roll the ground just before sowing, but never after, as we do in the case of spring grain. We sow the best seed we can get, and see that the grain has been got into the barn dry, because if it has been taken in slightly damp, or a little too soon, before it was ready, and allowed to heat a little, the germinating power of the seed will be just so much weaker.

D. LAWRENCE.

Oxford Co., Ont.

**WHEAT AFTER PEAS, BARLEY AND CORN.**

1. We find best results when the wheat crop follows peas or barley, and seldom have had it a success following oats. We do not manure for wheat, all our manure goes on root and corn ground.
2. We always sow with a drill and put about  $1\frac{1}{2}$  bushels per acre.
3. We plow once immediately after crop is off the field, then work thoroughly on top until sown, harrowing after the drill.
4. We have never used any other than stable manure on the farm, and do not use any kind with the wheat crop.
5. We have the largest and most satisfactory yields from Deihl, Eureka, Red Clawson and Dawson's Golden Chaff. Very little other than Dawson's Golden Chaff has been sown for two or three years in this vicinity.
6. We sowed on Sept. 1st, 1890, and the last after corn on 16th Sept., and have very little Hessian fly, while other fields I have seen, which were sown about the same time, are very badly affected. But I would take my chances with wheat sown on clean, well-cultivated ground in "good heart" and sown the first week in September. Occasionally a good crop can be grown when sown about the middle of September, or later, on corn stubble, but wheat is not a sufficiently valuable crop to take the chances.

I believe the farmer who has no regular rotation of crops, but who goes haphazard, wheat after wheat, or any other way outside of a reasonable rotation, will have more Hessian fly or other pests that may be on hand at the time.

North Middlesex, Ont.

A. W. SMITH.

**FALL WHEAT AFTER MEADOW IN MICHIGAN.**

I prefer meadow land for wheat; hay crop cut the last week in June, manured with stable manure, plow and cultivate until seed time; sow from 1st to 10th of September. I sow  $1\frac{1}{2}$  bushels of seed to the acre, with drill. Dawson's Golden Chaff takes the lead in this locality. We prefer not to harrow after drill. Have not been much troubled with insect pests.

HENRY JACKSON.

Sanilac Co., Mich.

**EARLY SOWING ESSENTIAL.**

1. Barley, peas or clover. A practice growing in favor is to plow sod in spring for peas, after harvest manure, and plow under with very light furrow, working thoroughly on the surface. If the manure is rough and coarse, it had better be applied before plowing the sod in spring. Another very successful method is to cut the clover meadow early, then spread the manure, allow the second crop to grow up fairly well, and then plow all under with a light furrow.
2. Drilling 6 to 8 pecks of seed per acre, depending on soil.
3. Underdraining, light plowing, and very thorough surface cultivation before sowing. The drill should be the last implement on the field in the fall.
4. Short barnyard manure. If the manure is coarse, it should be applied to the previous crop.
5. Dawson's Golden Chaff, Democrat, and on very strong land the Manchester.
6. I cannot speak from experience concerning insects, but would certainly not advise late sowing. Would rather abandon the culture. Unless the conditions are exceptionally favorable, wheat to succeed in this district should be sown not later than September 10th; preferably about September 1st.

Huron Co., Ont.

A. P. KETCHEN.

**THREE METHODS—SUMMER-FALLOW, AFTER PEAS AND CLOVER SOD.**

1. There are three methods practised here—summer-fallowing, following a pea crop sown on sod, and plowing down a clover sod. The summer-fallow gives the best results if properly cultivated and manured. After a pea crop sown on clover sod is the more usual method, and the results are generally satisfactory if the land is in good condition; if not, it should be top dressed. Plowing down a clover sod some seasons does well; this season I see fine crops on clover sod.
2. Sown with a drill at the rate of a bushel and a