

on the same land, for nearly all the land now likely to be benefited by it. I urge that the harrow shall follow the plough, so as to preserve all the moisture and at the same time start into free germination all the foul annual seeds then in the soil, repeating the harrowing as often as the weeds show up in the seed leaf. This consolidates the lower stratum of the soil while killing out all the foul seeds and at the same time putting the land in better condition for preserving all the sap. If there has been a wet spell in summer (a rare thing here) and the weeds get a start, a skinning with the spade cultivator or similar appliance on a warm dry day will be needed, as after the weeds have got a good start harrowing will help rather than hinder them.

"Land thus treated will start the grain next spring earlier and more evenly than any other, the crop will ripen faster with a full yield of the best grade of wheat that Canada is fit to produce. If the land is infested with Thistles or Stink Weed there must be some modification of this plan. For Stink Weed and other noxious annuals, I would follow the same course, but keep stirring the surface more, so as to work out all the foul seeds I could in the topmost two or three inches, and while ordinary annual weeds might be let grow after August, I would keep stirring for Stink Weed until snow came. If any plant of Stink Weed is left alive in the fall it will live on all winter under the snow and start early in the spring, often overtopping the grain crop in May. I will not now go over the whole case for or against summer-fallowing. Green cropping may help in a rotation of crops that would enable us to dispense to that extent with fallow work, and there must be a difference in the treatment for such perennials as Couch Grass and Thistles; but when farming is to be done on hundreds of acres with a very limited working force I hold that wheat cannot be profitably grown without summer-fallowing, and the live question for to-day is not whether we shall summer-fallow, but how it can be best and most cheaply done to suit the purpose."

Through the kindness of the Honourable Minister of Agriculture for the Province of Manitoba I have had exceptional opportunities, during the past three summers, of travelling through all the important wheat growing districts of that province. It was very apparent to me during these visits that in many instances summer fallowing was begun much too late in the season to get the best results as to weed eradication. By the middle of July several kinds of the most noxious annual weeds have developed their seeds sufficiently for these in the dry climate of Manitoba to ripen beneath the soil, even when ploughed well under out of sight, which, however, is by no means always done. There is always of course a temptation to put off the ploughing of land which is to be summer-fallowed as long as possible so as to reduce the subsequent labour of cultivating and harrowing. From a careful study of the development of weeds on summer-fallows in Manitoba for three summers I believe that to obtain the best results in the eradication of such early-ripening plants and annual weeds as Stink Weed, False-flax, Ball Mustard, Pepper-grass, Shepherd's Purse, Blue Bur, Golden Fumitory, etc., all summer-fallowing should be completed if possible not later than 12th of July, so that no risk may be run of ploughing down mature seeds.

SEEDING DOWN.

The prevention of seed-production is of great importance when clearing land of weeds. Many weeds may be held in check to a large extent, particularly upon land, which is not required for cropping, by seeding down to grass or clover, but, of course, any ripe seeds of weeds which are in the soil, will germinate as soon as the land is broken up again. But in the same way that weeds crowd out crops and reduce the yield of seed, so may

weeds
them
wheat
destr
thus
again,
must b
A
some w
the spo

The
practic
have b
given e
Hawk
Townsh
destruct
Chemist
for dest
ing soda
of water
the begi
out the
lbs. blue
above.
Botany,
bolic acid
can is th
chemicals
not given
ing them
Names
plants, w
list, are
A Spik
example
A Race
of an equ
A Pan
example, C
A Cory
from the s
level, or n
A Cyme
form a fl
example, I
A Head
example, C
An Umb
length; ex
a secondary

* In the fol
are treated of