

ate potatoes and the Extra
potatoes. It was, therefore,
1913 to use only these two
sts. The same two varieties
in 1915.

variety of potatoes has given
er acre of all the varieties
Ontario Agricultural College
periments for the past nine
and some people object to
The Extra Early Eureka
re popular with some grow-
ious to secure early potatoes
arket. In the co-operative
Davies' Warrior gave an
Extra Early Eureka of 95.9
co-operative tests in 1913
average of 134.11 bushels
ka of 125.76 bushels per
e seen that the varieties
lds per acre in each of the
ls for 1915 are practically
and 127 bushels per acre
It should be remembered

ario in the past year was
ng to the reports of the
es, the average yield of
vince was only 76 bushels,
r Ontario for the past 34
which have been grown at
and the Extra Early Eureka
rot, the average for two
cent., while that of a few

SEED POTATOES.

O.A.C., discussed potato
A glance at the figures
au of Industries regarding
ear makes us realize more
recognized by every farmer
ario that the potato crop
rage in regard to quantity,
the average yield per acre
the last thirty-four years
st year (1915) the average
Ontario was 76 bushels,
1915 was over 5,000,000
yearly crop for the last
notwithstanding the fact
potatoes was much above
was to some extent due
conditions were such that
were stimulated at the
that the potatoes terded
cause, however, was an
Ontario of the fungus
and Rot. It is a con-
o place the reduction of
caused by this disease at
0c per bushel, would be

atoes is a fungus disease
and the tubers. It causes
a rotting of the tubers,
diseased leaves during
of spores are produced,
wn through the soil and
se is carried over from
ected tubers. Many of
are thus readily recog-
ar sound and cannot be
t in a year following an
of the seed potatoes will
ry difficult matter this
potatoes which are not
fungus. This does not
l have an epidemic of
depend upon climatic
paratively dry summer,
little or no potato rot;
et summer, the potato
se than in was it 1915.
f potato rot are brought
ected seed potatoes and

ve going to avoid using
one would be inclined
om localities where the
s year. Those who are
otato rot fungus know
year after year without
therefore that seed from
y free from rot the pre-
e infected, and that the
o an epidemic of rot if

y by means of which
e from infection can be
eties of potatoes which
and Rot. Varieties of
gard to their suscepti-
cellent and extensively
State and Rural New
ceptible to rot, while
g. The results of the
Department of Field
parative susceptibility
to rot are in this con-
In 1915 two varieties
ot under similar con-
periments for five
that those varieties
the Davies' Warrior,
Beauty and Hulborn's

Abundance; and those most subject to rot were Early
Rose and Beauty of Hebron."

Prof. Howitt strongly advised those who are anxious
to avoid loss from potato rot to select varieties which
experiments have shown to be the least susceptible to
the disease, and, in addition to this, to spray thoroughly
every year.

SWEET CLOVER.

Prof. Zavitz opened the discussion on Sweet Clover
describing the white-flowering plant as a slow grower
the first year, but a rapid grower the second season.
He went away back to the year 1899, and, according
to his figures, Sweet Clover yielded less per acre for
pasture than either Common Red or Alsike, and the
report stated that the stock refused to eat it.

Prof. Fulmer stated that analyses showed Sweet
Clover to contain as many feed nutrients as other
legumes.

It was brought out in discussion that all the cattle
on some farms had been found to eat it readily, and
that the yield was heavy and the effect of the crop
on the soil beneficial. There is room for much more
work with this crop, about which there is such a differ-
ence of opinion.

Morley Pettit discussed the plant from the view-
point of the honey producer, claiming that it was not
always considered a valuable honey plant.

EXPERIMENTS IN BEE-KEEPING.

Four hundred and twenty-one experiments were
conducted in Apiculture in 1915—Covering: Swarm
Control, Spring Management, Methods of Introducing
Queens, Combless Packages for Transporting Bees,
Wire Cloth Bee Escapes, Wintering and Special
Experiments with Foul Brood. Those who
experimented owned 14,808 colonies. By holding the
colony together swarming was prevented in the produc-
tion of extracted honey. In comb honey production
artificial swarming meant more honey and less work.
The fasting method of introducing queens was successful
and so was the smoke method, but Morley Pettit, who
presented the report, cautioned that all details must
be carefully looked after. The shipping of bees in
combless packages had been found practicable, and
bees were successfully wintered outdoors in the four-
box hives.

ELEMENTARY AGRICULTURE IN SCHOOLS.

In the absence of Prof. S. B. McCready, his paper
on Nature Study and School Gardening was presented
by J. E. McLarty of the O.A.C. It simply outlined
the work as Prof. McCready left it.

Dr. Dandeno, the Director of Elementary Agricul-
tural Education in Ontario, discussed the subject,
offering little new on the problem, sticking to the old
belief that the country must be made a better place
in which to live and the teachers must have a more
thorough agricultural training.

FARM ACCOUNTING.

The meeting was favored with an excellent address
by P. E. Angle, B.S.A. of Simcoe, Ont., on farm account-
ing. Mr. Angle is no theorist. He is a practical farm
manager who has made a success of a big farming
proposition through system and efficiency. Efficiency,
according to Mr. Angle, should be the aim of all farmers.
Business methods are nothing more than the best
methods to assist to greater profit or to obtain the end
in view. Changes in farming conditions have made it
imperative that the farmer do some cost accounting.
Increased production does not necessarily mean increased
profit. The farmer must get at the difference between
what is taken in and what is paid out. System means
crop rotation, increased fertility, fewer fences—all the
things that aid in promoting efficiency. There must be
system in labor. The farmer must plan ahead. Every
competent farmer should be able to figure out a plan
for the year. He should be open to new ideas. Mr.
Angle referred to the tool bags which each of his team-
sters carries to the field with him each day with a com-
plete set of tools, so that if breaks occur no time is lost
running back to the buildings for wrenches, wire, etc.
The idea was taken from a similar tool-bag used by the
Bell Telephone Co. A belt similar to a lineman's belt
was also devised to carry pruning tools, so that the
pruner always had them handy.

There is a way to do everything. Mr. Angle
described how their spray tanks are filled in the orchard,
never leaving the tree-row, by the use of supply tanks
and compression.

And accounts must be kept. In these labor is
the first consideration—man-labor and horse-labor.
The speaker produced some forms for loose-leaf book-
keeping as practised on his farm, and also an ordinary
grocer's bill book in triplicate, in which transactions
are entered as made. It requires work to keep these
books on man time and horse time, but nothing of
value is accomplished without work. It was one of the
best addresses of the meeting, and interest in the
ruled forms for bookkeeping was shown after the meeting
adjourned.

A. S. Ma-nard, of Chatham, led in discussion.
He made some rather strong statements, most of which
were humorously taken by his hearers. He believed
that the gross returns from the farm should be each
year 25 per cent. of the original cost and the net pr fit
not less than one-third, and should be one-half of the
gross returns. His advice was: "Never buy anything
until you need it."

FINANCIALLY STRONG.

The report of the Treasurer showed the finan-
ces to be in good condition, with over \$1,500 on hand.
An extra grant of \$1,000 was given by the Government
this year.

EXPERIMENTS IN WEED ERADICATION.

Prof. J. E. Howitt gave the results of experiments
in weed eradication. These experiments have now
been conducted for four successive years. The weeds
experimented with are Perennial Sow Thistle, Twitch
Grass, Mustard, Bladder Campion and Ox-eye Daisy.
Five experiments in all have been tried, viz., the use
of rape in the destruction of Perennial Sow Thistle;
the use of rape in the destruction of Twitch Grass;
a method of cultivation for the eradication of Bladder
Campion or Cow Bell; spraying with iron sulphate to
destroy Mustard in Cereal Crops; a method of cultiva-
tion for the destruction of Ox-eye Daisy. Some fifty-
eight farmers have co-operated in this work during the
past four years. These experiments have not been so
successful this past year as in former years, but this is
due to the exceedingly wet weather of the past summer
preventing the carrying out of the experiments according
to directions. Those experimenters, however, who, in
spite of the bad weather, were able to give the experi-
ments a fair trial report results which confirm those of
the past three years. The results of the four years'
co-operative weed experiments show:—

1. That good cultivation, followed by rape sown
in drills, provides a means of eradicating both Perennial
Sow Thistle and Twitch Grass.
2. That rape is a more satisfactory crop to use in
the destruction of Twitch Grass than buckwheat.
3. That rape gives much better results in the
eradication of Twitch Grass and Perennial Sow Thistle
when sown in drills and cultivated than it does when
sown broadcast.
4. That thorough, deep cultivation in fall and
spring, followed by a well-cared-for hoed crop, will
destroy Bladder Campion.
5. That Mustard may be prevented from seeding
in oats, wheat and barley by spraying with a twenty
per cent. solution of iron sulphate without any serious
injury to the standing crop or to the fresh seedings of
clover.

THE IMPORTATION AND DISTRIBUTION OF NOXIOUS WEED SEEDS IN ONTARIO.

Geo H. Clark, Dominion Seed Commissioner,
presented the report on the Prevention of the Importa-
tion and Distribution of Noxious Weed Seeds in Feed
Grain and Screenings.

Under the present conditions of international
grain trade, it is not to the advantage of the grain
grower whose land is foul with weed seeds to clean
his oats or barley before sending it to market. To
clean his feed oats would entail a dockage ranging from
10% to 20%, and since the Ontario feeders will pay
an advance in price of not more than 5% to 10% for the
re-cleaned oats, it is to the advantage of the Western
grower to ship his weed seeds to the Ontario feeder.
These feeders have not yet learned that 10% or 15%
of mustard and other weed seeds mixed with feed oats
or chop feed are not only useless as a feed, but are
actually harmful to the health of livery horses or dairy
cattle. The common spread in prices between No. 2
Canada Western oats and the lower grades of feed oats
available in the market is about one-half of the difference
between the actual feeding value of these grades, and
this because of the unwholesome nature of the weed
seed content of the lower grades. Efforts have been
and will continue to be directed toward securing better
methods of cleaning the grain in the Prairie Provinces
at the time of threshing; but progress in that direction
will of necessity be slow so long as the Ontario feeders
and feed manufacturers continue to buy for feeding
purposes grain that is badly contaminated with noxious
weed seeds.

It is important that Ontario feeders should more
clearly understand the actual value for feeding of the
re-cleaned grain as compared with the lower grades that
are polluted with weed seeds of all kinds. When the
demand for this grain makes a sharp discrimination in
price between the clean and the unclean, then it will
become unprofitable for the western grower to ship
his weed seeds to Ontario.

A representative carload was obtained by the
Seed Branch and provided to the Experimental Farms
Branch at Ottawa for feeding experiments. The experi-
ments show that in the practical process of separating
screenings, the finer weed seeds that were capable of
passing through a 1-14 inch perforated zinc screen were
not only useless as a feed, but were deleterious to the
health of all kinds of stock, except perhaps sheep.
After the fine weed seeds have been removed, the balance
of the screenings, when ground, make a wholesome feed
for all kinds of stock with a utility value equal to, and
for some purposes greater than, bran or chop feeds
made from coarse grains.

Following these experiments and the recommenda-
tions made as a result of them, the government terminal
elevators have adopted the plan of separating out and
destroying all of that part of their screenings that would
pass through a 1-14 inch perforated zinc screen. The
balance of the screenings, which consists largely of wild
buckwheat and small broken grains of wheat, are ground
in simplex grinders to make sure that the vitality of
all seeds is destroyed. The feed so manufactured is
now available to the public. It is the property of the
government terminal elevators and the revenue derived
from it is used for the maintenance and operation of
the elevators. It is the cheapest feed I know of in the
market to-day. At the present time private elevator
interests are carefully watching the operations of the
government terminal elevators in the handling of their
screenings. If the results indicate that larger returns
are to be obtained from their elevator offal by following
these methods, then I have no doubt the practice will
become more general. This year probably 150,000 tons
of grain screenings will accumulate at the terminal

elevators at the lake front, and while the great bulk
of this is exported to the United States, considerable
shipments are coming to feed manufacturers in different
parts of Ontario.

A lively discussion followed. Prof. Howitt brought
up the deficiencies of the Ontario Weed Act, and intro-
duced the same suggestions for its improvement that
were brought out last year. Finally, Mr. Clark moved
this resolution, which was carried: "That the Experi-
mental Union memorialize the Hon. Jas. Duff, Minister
of Agriculture in Ontario, to consider the advisability
of amending the Noxious Weed Act, or other law, to
declare unlawful the sale and distribution of feeds in
Ontario containing more than two per cent. of weed
seeds which will pass through a screen 14 meshes to the
inch."

CORN, THICK OR THIN. FOR SILAGE.

Prof. Fulmer read a paper on the feeding value of
corn, based on work described in Henry's Feeds and
Feeding. It was pointed out that the riper the corn
got the more carbohydrates it contained. Also that
thick sowing in rows gave higher yields of feed nutrients
than planting in hills. This bears out our own work
at Weldwood this year.

In discussion, it was brought out that the corn
sown in drills, provided it has the same number of days
to mature as hill-planted corn, will be equal to the
hill-planted in maturity, and even though it has no
ears, this year's analysis shows it to be of equal feeding
value. Remember, it must be mature. Because it is
sown thickly is no reason for anyone to believe that it
will not mature. Give it the same number of days
that the corn planted in hills gets, and be sure to give
it time to ripen, which it will do even though it hasn't
an ear.

MATURE AND IMMATURE CORN FOR SILAGE

Prof. G. E. Day outlined experiments now in pro-
gress at the O.A.C. on mature and immature corn for
silage. So far as the test has gone, ripe Longfellow is
giving much better results than immature Mammoth
Southern Sweet in feeding trials on dairy cows. This
has been generally believed for some time. These tests,
while still incomplete, show a decided advantage for
the mature corn. The results of this test will be more
thoroughly gone into in next week's issue. Again we
state that these results are not an argument against
sowing thickly in the row, because, by sowing early
and allowing time, the corn will mature in the thickly-
sown row. In fact, it should mature as quickly as in
hills if it is sown thickly enough. Look for Prof. Day's
results in full in next week's issue. They are valuable.
And we believe further work will bear out his findings.
In both thick and thin seeding and mature and immature
corn for silage further work is urgently required.

SEEDS FOR 1916.

In the absence of W. J. W. Lennox, Mr. Clark
discussed the outlook for seeds in 1916. Although the
quality may be somewhat below average, no shortage
is predicted in spring wheat, oats and barley. Rape
and vetch and beans and peas will be scarce. Alfalfa
seed will be scarce. Red clover seed is very scarce
and will be unusually high. Alsike is in fair supply,
but will be high, as more will be used in place of other
clovers. Timothy seed in quantity and quality is un-
certain. Seed corn of the best quality promises to be
scarce. There will be plenty of mangel seed, but
Swede turnips will not be plentiful. There will be
some shortages in garden vegetables of certain kinds.

FERTILIZER TESTS.

In bulletin form Prof. Zavitz outlined the results
of fertilizer tests.

Complete fertilizer with oats gave an increase of 9.8
bushels per acre at a cost of 42 cents per bushel.

Muriate of Potash with corn gave an increase of 1.2
tons per acre at a cost of \$3.33 per ton.

Nitrate of Soda with mangels gave an increase of 5.9
tons of roots per acre at a cost of 81.4 cents per ton or 2.5
cents per bushel.

Complete fertilizer with swede turnips gave an in-
crease of 5.4 tons per acre at a cost of 78.5 cents per ton
or 2.4 cents per bushel.

Complete fertilizer with potatoes gave an increase
of 3.8 bushels per acre at a cost of 11.2 cents per bushel.

Complete fertilizer with winter wheat gave an in-
crease of 5.2 bushels per acre at a cost of 82 cents per
bushel when applied in the autumn and an increase of
8.3 bushels per acre at a cost of 51 cents per bushel
when applied in the spring.

WHAT OF FRUIT-GROWING?

A part of the last afternoon was given over to the
discussion of fruit-growing in Ontario. Prof. W. T.
Macoun, of Ottawa, stated that he believed that a
good farmer can make more money out of fruit than
a poor fruit-grower can. In his opinion there is no
danger of over-production of the highest possible
quality of fruit. There is always danger for the grower
of poor fruit. Apples, in his belief, would be sold on
their merit. He advised growers to locate near a large
local market and sell fruit locally. He believed the
diversified fruit-grower had the best chance of success.
Summer apples pay close to town, and small packages
generally prove most profitable. Variety is most im-
portant. We have many good varieties, too many
poor varieties, and no ideal variety. There is no good
reason why we should not have apples as good as the
Wealthy, as free from scab, suitable for all seasons.
He pointed out the difference in yields from individual
trees, citing two McIntosh trees, one of which in 18
years has yielded almost twice as many apples as the
other. The one that bore heavily first kept it up