

there for slaughter
amongst British flocks
le cannot be landed
cannot, and herein

atters are there, it
can sheep had been
go, when 300 sheep
port. In English
of so-called fat cat-
ting the country of
probably have a big
so far as the admit-
is concerned, there
val of the embargo.
but rather a bene-
fatted in Canada,
eeders might benefit
but not Canadian

RM.

Forage Crops.

the Field Crops De-
cultural College may
and-span appearance
hen the excursionists
es, but it is doubtful
uable lessons were
ugust 19th, when a
er's Advocate" had
spection, in company
It is true many of
arvested, but all were
corn and forage crops
e stages.

sown somewhat late,
ed a striking appear-
euri, was very badly
C. 21, which is an
lection upon Mands-
etter than the parent
; the third lot pre-
it stood up per-
ectly straight and
strong, had a splendid
stiff, strong, long
straw, and a heavy
yield. It is a cross
between the French
Chevalier barley and
Mandscheuri. The
quest was for a barley
containing the above
qualities, that would
be sufficiently late in
ripening to permit of
its sowing with a
standard variety of
oats. Prof. Zavitz
is much gratified with
the success of this
cross, and feels that
it will displace O. A.
C. 21 just as that
barley has displaced
Mandscheuri. The evi-
dence of these plots
was all in its favor.
The College has no
seed whatever of this
new variety for send-
ing out, but one hun-
dred test plots are
being made this year,
and if they all prove
as favorable as the
College lots, in an-
other year there will
be some seed avail-
able.

of the potato rows, one
potatoes standing up
healthy green in color.
This was Davie's War-
o, of oval shape, quite
ty. It has beaten all
last five years in yield.



Dexter Cross Heifer.

averaging 282 bushels. Rape was growing splen-
didly, but it had a rival beside it that, for yield
of forage for sheep, beef cattle and young stock,
can easily produce five tons more to the acre, and
has been doing so on the experimental plots. This
is the stock cabbage, which is grown so much in
Great Britain. Sutton's Earliest Drumhead has
proved the best at Guelph in the numerous trials
carried on, and, from its heavy yields, promises
to become very useful to Canadian farmers, since
it requires no more care than does rape.

Extensive experiments are being carried on with
mangels, testing vitality of seed, varieties, and
trueness to variety names. Among other things,
this work showed the reliability, or, rather, lack
of reliability, of these seeds, indicating the ad-
visability of farmers producing their own seed,
which can be very easily done. The Yellow
Leviathan has proved to be the largest-yielding
and most desirable type of mangel for farm pro-
duction.

Splendid crops of alfalfa seed were being pro-
duced on many plots. The test being made as
to whether the first or second cutting should be
grown for seed, at the time of visiting, seemed to
indicate very clearly that, in the present season,
the first crop would produce much more mature
seed, but on this point absolute certainty cannot
yet be arrived at. But it is certain that either
the first or second crops must be used as the seed
crops.

Is Manure Not Worth \$2.60 a Ton?

By Prof. M. Cumming.

The following excellent article, dis-
cussing the value of manure, was so-
lited last winter from Prof. M. Cum-
ming, Principal of the Nova Scotia Agri-
cultural College. The first manuscript
sent us seems to have gone astray in
the mails, causing several weeks' un-
avoidable delay in publication. The
second copy, when received, pleased us so
well that we decided to hold it for our
Exhibition Number.—Editor.]

We value barnyard manure for the amount of

the essential elements of
plant food (nitrogen, phos-
phoric acid, and potash) it
contains, for its vegetable
matter, which, when decayed,
we call humus, and for the
bacterial life which it adds
to and encourages in the
soil. The first of these we
can, at least comparatively,
value in dollars and cents;
the latter two we can only
value in a general way, stat-
ing, however, that it is these
that make barnyard manure
in general a much more sat-
isfactory fertilizer than any
commercial fertilizer we may
buy.

If we value manure for the
nitrogen, phosphoric acid and
potash it contains, and if
we know what we have to
pay for a given quantity of
these three elements when we
purchase them from the fer-
tilizer dealer, we should be
able to make a comparative
estimate of the value of the
plant food contained in the
manure.

Now, for nitrogen, as we
buy it in sodium nitrate,
sulphate of ammonia, tank-
age, blood meal, or bone
meal, etc., we pay, depend-
ing upon its availability,
from 15 cents to 20 cents
per pound, or an average of
about 17 cents.

For phosphoric acid,
which we buy in bone meal,
basic slag, acid phosphate,
etc., we pay from 4½ cents
to 7 cents, depending upon
its availability, or an aver-
age of about 6c. per pound.

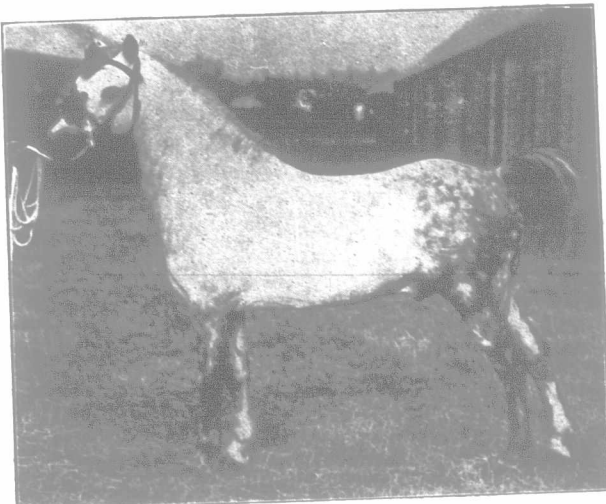
For potash, which we buy
in wood ashes, muriate of
potash, sulphate of potash,
kainite, etc., we pay from
4½c. to 6c., or an average of
about 5c. per pound.

We think, therefore, we
may fairly value the nitro-
gen, phosphoric acid and
potash contained in barn-
yard manure at 17 cents, 6
cents, and 5 cents per
pound, respectively.

A ton of average mixed barnyard manure
contains, as follows:

10 lbs. nitrogen, at 17c. per lb.	\$1.70
6½ lbs. phosphoric acid, at 6c. per lb.	.40
10 lbs. potash, at 5c. per lb.	.50
Total	\$2.60

Of course, the fertilizer dealer may object to
the above valuations on the score that the nitro-
gen, etc., of barnyard manure is not as quickly
available as the nitrogen of the commercial fer-
tilizers themselves. In a measure we admit this,
but, to offset it, we restate that, in addition to
its value for the plant food it contains, barnyard
manure is valuable on account of its humus and
bacterial life.



Shooting Star.

Welsh Pony stallion. First at Royal Show, Liverpool, 1910

We do not think we are very far astray when
we value a ton of good average barnyard manure
at \$2.60. Some manure is worth more than this,
and some less, the principal determining factor
being the character of the food upon which the
animals are fed. For example, we have calculated
in the same way as in the foregoing, that the
manure from a steer fed 16 pounds of mixed
clover and timothy hay, 40 pounds of turnips, and
6 pounds of mixed meal, is worth about 12 cents
per day; whereas, that from a steer fed 8 pounds

of value from it. The man, for example, who
keeps this manure under the eaves of his barn,
and allows it to both heat and leach, may lose
anywhere from 50 per cent. to 75 per cent. of the
original value, and even the man who keeps the
manure in a manure cellar may, through allowing
it to heat, in the course of three or four months,
lose 40 to 50 per cent. of its value. Whether,
therefore, a given farmer gets \$2.60 worth of
plant food from a ton of fresh manure, or not,
will largely depend upon the manner in which he
cares for the manure.

Experiments carried on at Ottawa and many
other Experiment Stations have gone to show
that the greatest value is obtained from a given
quantity of barnyard manure when it is applied in
as near a fresh condition as possible. We, there-
fore, state that in general a man may get \$2.60,
or less, down to \$1.00, for a ton of fresh manure
as found upon his farm, depending upon how soon
he gets it on the land after it is made, or, bar-
ring this, upon the care he takes to prevent leach-
ing and fermentation from the heat.

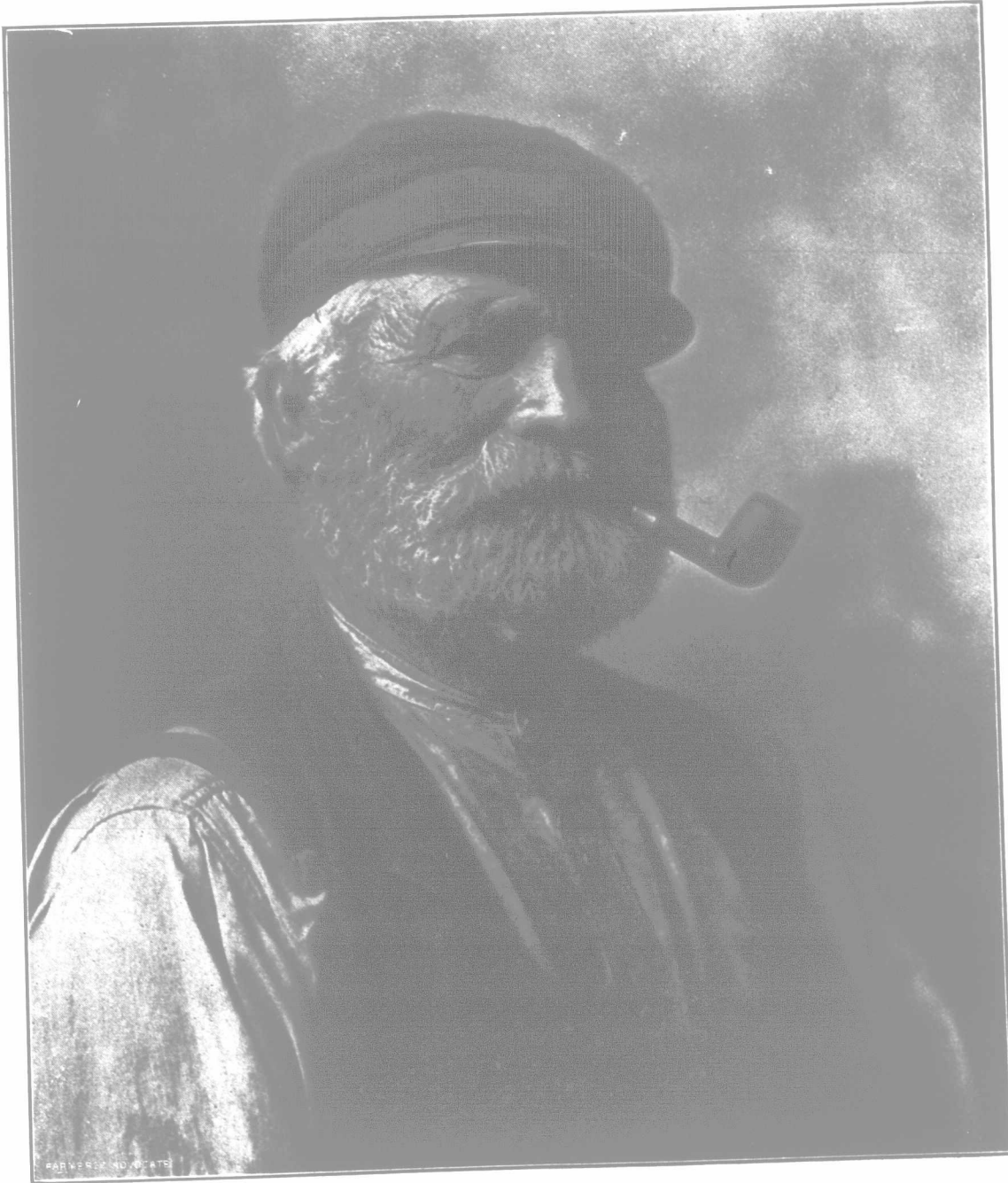
OTHER CONDITIONS AFFECTING THE RE-
TURNS FROM BARNYARD MANURE.

We need not more than suggest that there are
conditions other than the care of barnyard ma-
nure which help to determine whether in actual
practice a farmer will get the full value we have
attached to it. Such are the nature of the drain-
age, the state of cultivation of the soil, the rota-
tion practiced, the crop to which the manure is
applied, and, in a measure, the distance of haul.
If any of the first three of these conditions—
drainage, cultivation, or rotation—are indifferently
attended to, the value of a ton of barnyard ma-
nure, even if it is well preserved, may in actual
returns be reduced 25 to 50 per cent., or more;
for, in farming, as in other realms, no truer
maxim holds than that to him that hath (a well-
cultivated farm) shall be given.

It makes a great deal of difference as to the
actual returns which a farmer will receive from a
ton of barnyard manure, which crop he applied it
to. In general, if the largest returns are ex-
pected, manure should be applied to the most

valuable crop. Setting aside
such exceptionally valuable
crops as strawberries, garden
produce, etc., and confining
ourselves to the more strict-
ly farm crops, we have found
in our experience that ma-
nure applied to the hoed
crops, such as turnips, corn,
etc., has given much larger
returns than an equal quan-
tity of manure applied to
the grain or hay crops. When
we have applied manure to
the hoed crops, we have not
only gathered a much larger
harvest from these fields, but
we have also, in the succeed-
ing oat and hay crops, cut
almost, if not quite, as large
crops as if we had applied
the manure directly to them.
And this brings us to the
point which most clearly il-
lustrates the high value of
a ton of barnyard manure.

We have applied from 20
to 30 tons of barnyard ma-
nure to a field of turnips,
and with this amount of
manure we have grown a
crop that has paid us, for
feeding purposes alone, \$25
to \$30 profit per acre, when,
without the barnyard ma-
nure, the crop would scarce-
ly have paid for the labor
spent upon it. Then, we
have reaped 15 bushels, or
more, of oats in the succeed-
ing year over and above that
which we would have reaped
had no manure been applied;
and then, we have cut two
crops of hay, averaging from
one to one and a half tons
more than on the unmanured
lands. And the striking
point of it all is that, by
sticking to this practice for
a few years, we have not
only gathered into our barns
as much larger crops as in-
dicated, but we have brought
our fields into a more pro-
ductive state than they were
when we began. If anyone
will take the trouble to fig-
ure this out, we think he
will see that our valuation



A "Character."

of hay, 12 pounds of straw, and 40 pounds of
turnips, is worth, in comparison, only 5 cents per
day.

Granted, however, that we have on a farm a
ton of average fresh, mixed manure, which may
reasonably be valued at \$2.60, it does not neces-
sarily follow that every farmer gets \$2.60 worth

of manure has not been too high.

Now, in all this we have made no allowance
for the labor of hauling and spreading. This any-
one can figure from the data he has in connection
with his own farm, but just how much teams and
men should be charged for the time they are en-
gaged in hauling manure, will vary with the con-