

HISTORY OF A FOREST

MANY TREES START IN THE RACE,
BUT FEW CAN KEEP PACE.

ONLY THE FITTEST SURVIVE

Real Struggle For Existence Starts
When the Trees Are Large Enough
for "Crowns" to Touch—Then Be-
gins the Race Upward to the Light
—Eventually Only Fastest Growers
Survive.

It is important—in fact, essential—
for anyone who has to do with plant-
ing or tending forest trees to under-
stand something of the history and
natural development of a forest.

Take the case of a forest where the
trees are but a few—even two or three
—years old. This can sometimes be
observed in nature where a fire has
burned all the timber on a tract or
where all trees on a tract have been
blown down, and this tract has sub-
sequently been seeded up and covered
with a thick growth of young trees.

For a few years each little seedling
has a chance to grow as it will. It
will have many hardships to contend
with—dangers, for instance, from
frost, drought or excessive moisture
—and naturally many of the young
trees will die from such causes. When
these are overcome, however, each lit-
tle tree can grow at its best rate for
some time, enjoying as much as it
wants of soil, space and light.

As time goes on, however, and the
little trees increase in size, there
comes a time when the crowns of the
trees—the term "crown" meaning the
foliage of the trees as a whole—begin
to touch each other. This has a
beneficial effect on the soil, much of
which has hitherto been more or less
exposed to sun and wind; now evap-
oration is hindered, and, moreover,
the soil is enriched by the leaves and
twigs which fall from the trees and
which, by their decay, form new hu-
mus.

The effect on the trees themselves
is a remarkable one. Now begins a
struggle for existence. Now that the
crowns of the trees have touched and
even begun to interlace there is ob-
viously no more room for them to
grow in a horizontal direction. The
great need of the plant—that part of
it, at least, above the ground—is light.
As there is no chance for the tree
to get more light by growing horizon-
tally, so it spends its strength in
growing upward. Eventually the fast-
est and strongest growers are the sur-
vivors. As growth in height goes on,
the light is cut off from the lower
branches, and they become sickly and
finally die. In time the dead
branches are blown off by the wind,
or knocked off through being struck
by other branches, or are broken off
in some other way.

Meanwhile the fastest-growing trees
are getting the most light, and so
they have the best chance for develop-
ment. Having got above the other
trees, they get the chance to spread
out sideways, and so to hinder by
their shade—finally, probably, to kill
—their slower-growing companions.
This process will go on for years and
tens of years, and in the end only a
small proportion of the trees which
originally started in the race will be
alive. As an actual instance, the re-
sult of work done in the Turtle Moun-
tain Forest Reserve, in Manitoba, by
the Dominion Forestry Branch, may
be cited; there it was found that,
while the average number of poplar
trees per acre when the trees are but
ten years old is four thousand (4,000),
when the trees have reached 80 years
of age, their number has been reduced
to three hundred (300). At 40 years
of age, there had been 850 left, and
at 60 years 425 had remained. In an-
other study made by the United States
Forest Service in New England, the
White Pine was the tree under in-
vestigation. Where there were two
thousand two hundred (2,200) white
pine trees per acre at ten years of
age, at 60 years of age there were but
two hundred and sixty (260) remain-
ing. At 30 years of age the number
had been just about halved, being
1,000; at 40 years of age 650 had been
left, and at 50 years of age 400.

In forest tree planting a hint is
taken from nature, and the trees are
planted close together—a tree every
four to six feet. The crowns of these
trees in a few years—say, six or eight
—and so the ground is shaded. The
great majority of the trees die, of
course; the forester knew this would
happen, when he planted the trees.
But the close planting is much the
cheapest way of preserving the mois-
ture in the soil and further enriching
it by the forming of new humus.

The trees which go under altogether
in the struggle are known as "sup-
pressed" trees, while those that tower
above the rest are known as "domin-
ant" trees. Those betwixt and be-
tween these two extremes, that man-
age to live on, though they do not
keep pace with the dominant trees
are known as "subdominant" trees.

Finally, however, growth in height
ceases; the chief reason for this is
that the tree is no longer able to pump
up water so as to give a proper sup-
ply to their crowns. The tree contin-
ues to grow in diameter, however, for
some years after the main growth in
height ceases; and that, too, at a
pretty rapid rate. Eventually, even
this growth in diameter falls off large-
ly though it continues—at a less rate,
of course—to a very old age.

Trees often live to a very great
age. From a forestry standpoint,
however, it is an error to allow this.
Very old trees, when cut down, are
frequently found to be more or less
rotten at the butt; and the best still-

ization of the timber is secured by cut-
ting the tree down before this age is
reached.

F. W. H. Jacombe.
Ottawa, Feb. 25, 1907.

Some Definitions.
Argument—A device generally em-
ployed to convince ourselves that we
are right.
Holiday—A thing happily conceived
to make us appreciate the restfulness
of work.

STABLE VENTILATION.
Hoard's Dairyman Discusses the
Question of Its Cash Value—Prof.
Grisdale's Experiences.

A neighbor once said to us, "Hoard,
if you find anything is particularly
good in dairy management, you keep
pounding it into us."

Well, perhaps that is so. We keep
in mind, that old proverb in the Bible
"Line upon line; here a little and
there a little."

For several years we have seen that
dairy farmers, as a rule, do not real-
ize the cash value to them of a
rightly ventilated stable. They do not
see that it means more cash for them;
better profit, more milk from their
cows; larger returns from the same
feed. They do not see these things. If
men do not see things they should
not be expected to be governed by
them. And so we keep at them trying
to make them see the truth as we see
it. Recently we printed a very excel-
lent article from Mr. J. H. Grisdale,
the manager of the dairy department of
the Canadian Experiment Farm at
Ottawa. In that article Mr. Grisdale
relates his experience in putting cows
into an unventilated stable and one
that was properly ventilated. He
shows clearly the finer condition of
the cows in the latter and their more
profitable work, and he says:

"It might lessen your feed bill. It
would certainly lessen your doctor's
bills. It would certainly increase the
comfort of your animals. There is
much less danger from lung troubles,
or diarrhetic or trouble of urine, and
there is much less danger from
troubles with the digestive organs
when the air conditions are correct.

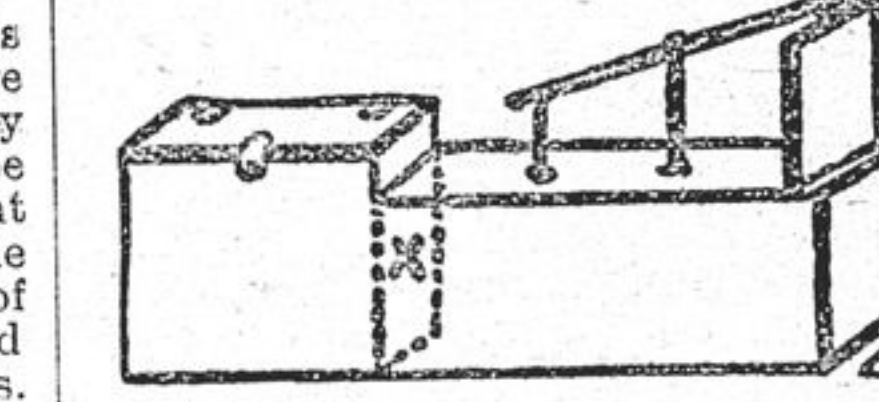
Now, there is a solid, practical
statement. No theory about it. That is
the way we have found it, as well as
hundreds of other men who have
tried it. Cows in that shape are go-
ing to do much better for a man on
the same expense of care and feed.
That means a cash value in the re-
turn. You do not reap unless you sow.
You invest a little money to make the
stable right and healthy, and you reap
a big interest on the investment.

It is astonishing what an amount of
real sanitary ignorance prevails
among men about the condition of
their stables. It is astonishing, too,
how long they will go along being
punished for their ignorance and never
realize it. One old man once said
to us that it seemed to him "that an
idea had to be big enough to knock
him down before he could sense it."

Hundreds of farmers have had to
lose almost their entire herd with tu-
berculosis, before they could be made
to stop and think about the value of
pure, fresh air. And we need not won-
der at it, when we look into the
sources of supply for knowledge these
men have. They will not read; they
will not go anywhere or do anything
to obtain knowledge. Why shouldn't
they be as helpless as children when
wrong conditions govern them all the
time? Why shouldn't they lose money
on their cows by bad stabling, when
they really think and believe the bad
is good? An Irish captain in the civil
war was asked why he didn't get his
company out and join in the fight.
He answered, "The men are asleep.
How can a man fight when he's
asleep?"—Hoard's Dairyman.

A BOX TRAP.
Protecting Poultry From Weasels and
Other Animals.

The box trap here shown, from
Iowa Homestead, is credited to an
exchange. Minks, weasels and such
small animals as are destructive to
poultry can nearly always be trapped
by using a box trap made about
thirty-six inches long and about six or
seven inches square in two compart-
ments, one about twelve inches and
the other twenty to twenty-four in-



TRAP FOR WEASELS.

ches, with a division between made of
small mesh poultry wire or woven by
hand with baling wire with no less
than one-half inch meshes. The outer
end of the smaller division should be
of the same. Arrange a drop door in
slides like the ordinary rabbit trap.
Put a live chicken in the small di-
vision and set the trap near a coop
which has been visited or anywhere
the animals have been seen, and they
will be caught in a few nights.

Ward of the Grafters.

Get rid of the grafters! Almost
every flock or herd has one or more.
One horse in the stable is a poor work-
er, so we use the others oftener rather
than bother with him. One cow
in the herd is a boarder, giving thin
or little milk. We hardly know why
we keep her, but she still boards with
us. One ewe refuses to own her lamb.
She did the same last year. Why
don't we sell her? One sow in the
pig pens or lies on all her pigs every
time. We ought to fire her. Some
old hens just "cluck, cluck," and
never lay like the others. Let's get
after all the grafters!—Farm Journal.

Correct Dress for Men and Boys.

Every judge of good clothing pronounces "Piccadilly" and "Fashion Brand" garments two of the most satisfying lines of ready-to-wear clothing produced. The style, the fit, the handsome shoulders, and the close-fitting collars, are the admiration of tasty dressers. The only difference you will find between "Piccadilly" and "Fashion Brand" Clothing and the product of the leading fashion centres is in the price, and that is all in your favor.

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Proprietor

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Woolen Rugs, Robes
and Mitts at bottom
prices.**

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etc., on hand.**

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Government to place immigrants from
the United Kingdom in positions as
farm laborers or domestic servants in
this vicinity. Any person requiring
such help should notify me by letter,
stating fully the kind of help required,
when wanted and wages offered. The
number arriving may not be sufficient to
supply all requests, but every effort will
be made to supply each applicant with
help required.

Thos. Robson,
Canadian Govt. Employment Agent,
FENELON FALLS, ONT.

THE WINTER TERM AT THE

Peterboro' Business College

BEGINS WEDNESDAY, JANUARY 2nd, 1907.

A very large number of applications for admission at the
beginning of the term have been received, and it is advisable
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commencement of the term as possible. **You cannot make
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JOS. HEARD - Fenelon Falls.

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and hen house, on Murry street.
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or to **McLAUGHLIN & PEEL, Lindsay.**

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your wheels in now so they
will be ready before the rush
comes on.

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