

W. McConnell as Colborne, in each of the past three years. The number of barrels, the percentage of No. 1 apples and the receipts are also given for the three years previous to our taking charge. This will be a basis of comparison between the orchard when in a neglected condition and after being properly cared for

#### NORTHAMPTON AND DURHAM DEMONSTRATION ORCHARDS

F. W. McConnell's Orchard, Colborne, 177 trees—approximately 2½ acres. Soil—Light sandy loam. Orchard 32 years old.

#### RESULTS

EXPENSES—	After cared for		
	1911	1912	1913
Scraping .....	\$11.50	\$52.00	\$39.00
Pruning .....	34.00	7.65	4.00
Painting wounds .....	10.25	4.00	4.50
Gathering brush .....	6.75	4.00	4.50
SPRAYING—			
First .....	25.90	21.90	20.55
Second .....	16.75	15.70	15.15
Third .....	23.17	22.35	16.60
Centering holes in trees .....	1.35		
Bracing trees with wire .....	1.37		
Removing dead wood and thinning suckers .....	90	1.80	
FERTILIZER—			
Manure .....	28.00	30.00	30.00
500 lbs. Muriate of Potash .....	15.00	11.70	12.60
1,000 lbs. Acid Phosphate .....	11.00	11.00	16.00
Applying .....	1.00	1.00	1.00
Freight .....		2.75	
Cultivation .....	7.50	18.00	5.70
Total expenses .....	202.60	178.22	174.63
Expenses per acre .....	81.04	71.29	69.85
Yield in barrels .....	331	332½	334
Receipts from sale of apples .....	\$740.55	\$449.80	\$483.58
Per cent. No. 1's .....	47.6	40.5	42.5
Net profit .....	537.95	271.58	313.95
Net profit per acre .....	215.18	108.63	127.58
In neglected state			
Yield in barrels .....	1909	1909	1910
Receipts from sale of apples .....	\$300.00	\$200.00	\$190.00
Per cent. No. 1's .....	30.60	30.60	30.60

Yield in barrels .....

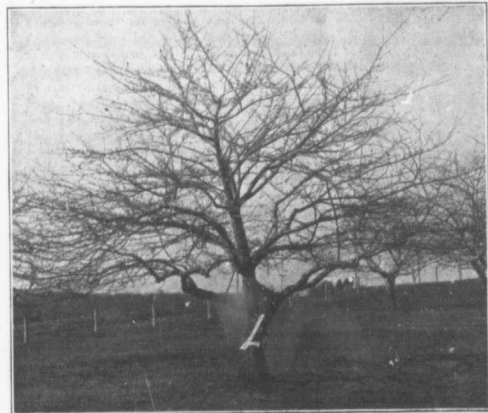
## Benefits of Winter and Summer Pruning Compared

Dr. C. D. Jarvis, Conn. Agricultural College (Formerly of the Guelph Agricultural College)

PRUNING is a natural process. It may be observed on both fruit and forest trees. In the struggle to exist the weaker branches, or those unfavorably located, die and drop off. An attempt, often successful, to heal the wound takes place. The modern practice of pruning is an attempt to assist nature and to improve upon her crude methods.

In the pruning of the apple tree there are two distinct styles or ideals, the central leader type and the open centre type, each with its crops of

\*Extracts from an address delivered before the Massachusetts Fruit Growers Association



A Type of Apple Tree that Finds much Favor with Western Fruit Growers

In pruning their apple tree growers work for one of two distinct types. The type here illustrated, known as the Central Leader type, is much favored by Western fruit growers on the ground that it is a stronger structure than the open centre type illustrated above, and not so likely to be broken down by wind and heavy crops of fruit.



Favored by Growers in Eastern Canada.—The Open Centre Type of Tree

Figures from the other orchards could be given, but the foregoing will be sufficient to show in detail the expenses and returns.

The results obtained were in striking contrast to the small and indifferent crops yielded in unpruned and uncared for orchards of the same locality. The quality of the fruit in each of the three years was exceptionally high—the percent-

age of number one's being raised from 30 to 60 in 1908, 1909, and 1910, prior to our having charge, to 75 to 87.6 per cent. while under our care. Further, from 76 to 98 per cent. of all the apples grown in these orchards was absolutely free from any insect pest or fungus disease. Scarcely an apple could be found with a worm in it, and it was only an odd apple here and there that showed a spot of scab.

In conclusion, let me say that as a result of these demonstrations the old orchards are being cared for in a manner as never before. Carefuls of spray material and a great number of spray machines, both hand and power outfits, have been sold to fruit growers in the counties. The demonstration orchard method has proved its effectiveness as a means of stimulating interest in up-to-date methods, and inspiring a new respect for abandoned orchards.

Many nurserymen are making a mistake in "rubbing" their trees too high; by this I mean that all the buds and shoots are rubbed off from the yearling tree to a point six or eight inches below the point where the tree is headed in. If the practice is to head a tree 30 inches from the ground, the "rubbing" should not extend more than 12 inches from the ground, leaving a space of 18 inches for the proper distribution of the scaffold limbs of which there should be from three to five. These should be fairly evenly spaced along the central axis and no more than one should be allowed to develop at the same point.

An apple tree is a wonderfully tractable object when handled properly. The man who follows the ordinary practice of severely pruning in the dormant season only, is going to have trouble, for the more we prune at this season of the year the more persistent the tree becomes. To encourage the development of the weaker growing branches and to check the persistence of the stronger ones, it is necessary to do some pruning during the growing season.

I believe that in the past we have grown our trees too fast and have pruned them a great deal too much. To develop a strong fruit-bearing structure, a tree should not be unduly forced. It may be observed that with trees that have made a normal growth the branches are more tapering and more rigid than those on rapidly grown trees. The excessive growth is frequently due to liberal fertilization and cultivation, but is just as often due to severe winter pruning.

During the past six years I have had under observation a young orchard that has been developed under various systems of pruning, and I am forced to state that the best shaped trees in the orchard to-day are those that have not been pruned since they were planted. Now, we should not deduce from this that under all conditions a young tree should not be pruned. These trees were Baldwin and McIntosh, and were

the old orchards are being cared for in a manner as never before. Carefuls of spray material and a great number of spray machines, both hand and power outfits, have been sold to fruit growers in the counties. The demonstration orchard method has proved its effectiveness as a means of stimulating interest in up-to-date methods, and inspiring a new respect for abandoned orchards.

the old orchards are being cared for in a manner as never before. Carefuls of spray material and a great number of spray machines, both hand and power outfits, have been sold to fruit growers in the counties. The demonstration orchard method has proved its effectiveness as a means of stimulating interest in up-to-date methods, and inspiring a new respect for abandoned orchards.

the old orchards are being cared for in a manner as never before. Carefuls of spray material and a great number of spray machines, both hand and power outfits, have been sold to fruit growers in the counties. The demonstration orchard method has proved its effectiveness as a means of stimulating interest in up-to-date methods, and inspiring a new respect for abandoned orchards.

the old orchards are being cared for in a manner as never before. Carefuls of spray material and a great number of spray machines, both hand and power outfits, have been sold to fruit growers in the counties. The demonstration orchard method has proved its effectiveness as a means of stimulating interest in up-to-date methods, and inspiring a new respect for abandoned orchards.

(Continued on page 34)

Thir

M AN

pe  
ham coun  
60 cents  
anyway, a  
off, wher  
ground th

By thine  
value ther  
entire pac  
tensive ap  
county, a  
are sellin

In 1912  
our demor  
in Northu  
selected.

the size o  
with thin  
from lads  
clusters t  
close eno  
or in such  
a limb of  
apples or  
that of th  
ning was  
matured i  
been mad

The res  
ditions w  
Thinne  
quarters

Unthin  
three bar  
barrels of

In an o  
another  
Duchess  
as with t

Six un  
ones; th  
Six un  
ones; t  
barrel of

In this  
more th  
barrels o  
the numb  
ed color,  
at all. T

at the r  
three bot  
hour bein  
will be s

was larg  
unthimpe

The ve  
the incre  
ber ones  
sold to a  
number

very litt  
this worl  
sold thro  
pro-rat

is done  
Growers  
is at on  
of the tw  
tioned.

ber one  
Ass  
for the