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**Physiological conditions of the sea buckthorn harvesting by cutting branches**





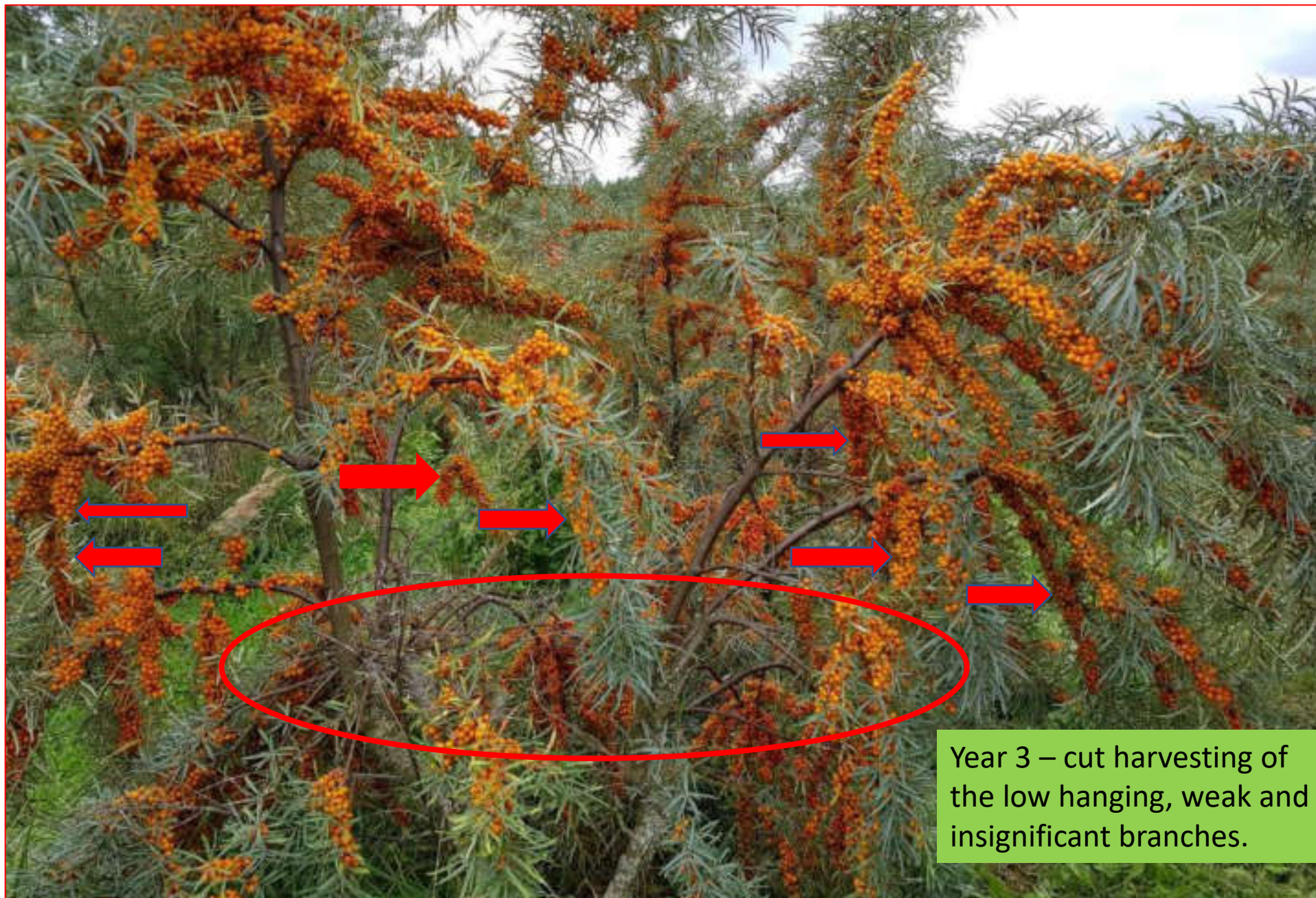
Year 1 – new shoots,  
no fruits





Year 2 – some fruits, no cut  
harvesting yet, just  
fingerpicking, if needed.



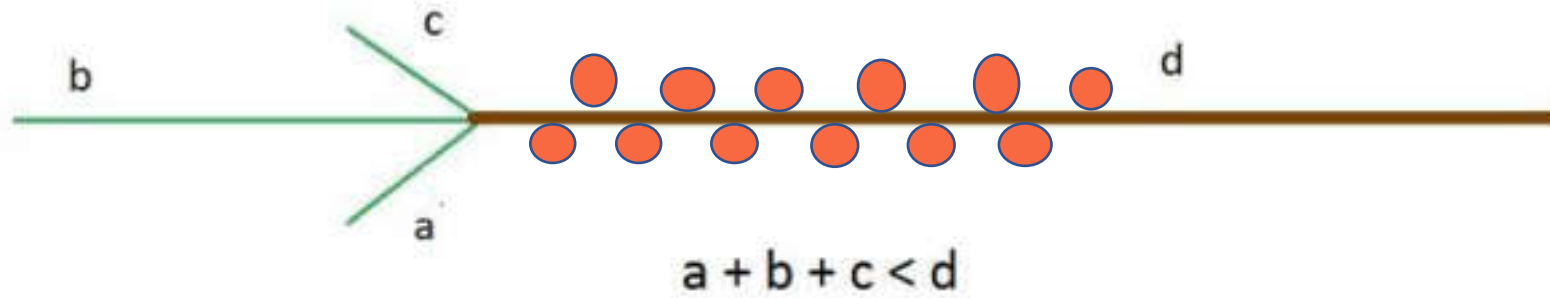


Year 3 – cut harvesting of the low hanging, weak and insignificant branches.

# The principle of selection of yielding branches to be cut

Current season

Previous season





Soluble sugars/starch concentration

Bud break

Starch loss prior to photosynthetic independence of new growth, Soluble sugar content decreases

Starch loss related to fruit, and tree growth, soluble sugars content is low promoting starch degradation

Low starch content period, new photosynthates used entirely for fruit and tree growth – potential presence energy reserves limitations, soluble sugars are continuously low

Healthy pre-dormancy level

Starch reserves gains, post harvest prior With limited or halted tree growth, soluble sugars content is high promoting accumulation of starch

Leaf fall

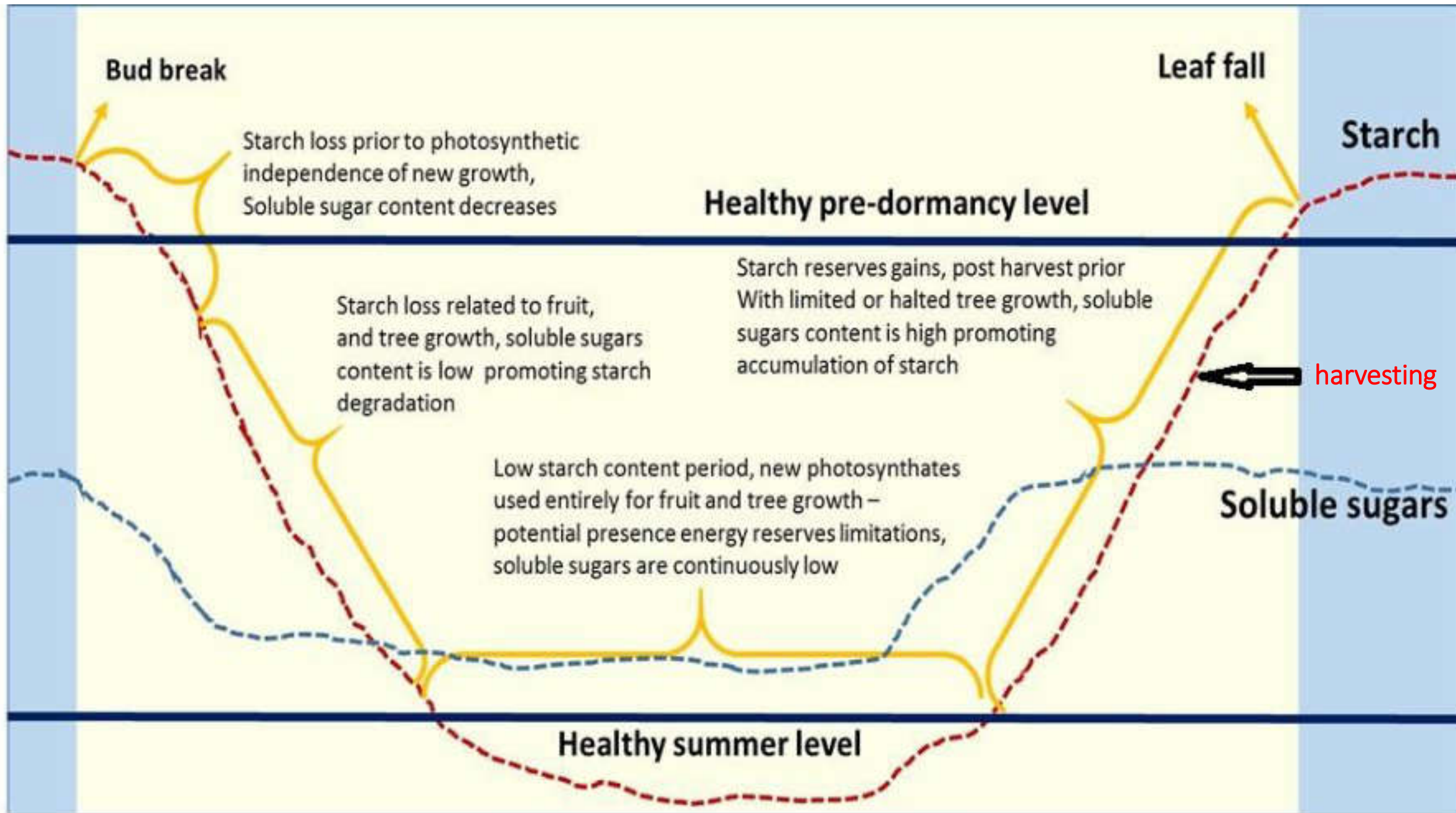
Starch

harvesting

Soluble sugars

Healthy summer level

Time (January to December)







Year 4 – continuing the same way, collecting branches with weak and small leaves, saving terminal leaders with strong and large leaves.





Harvesting is done.  
The strongest annual  
leader shoots with at  
least 50% of all leaves  
must remain  
untouched.



4 - 5

6 - 7

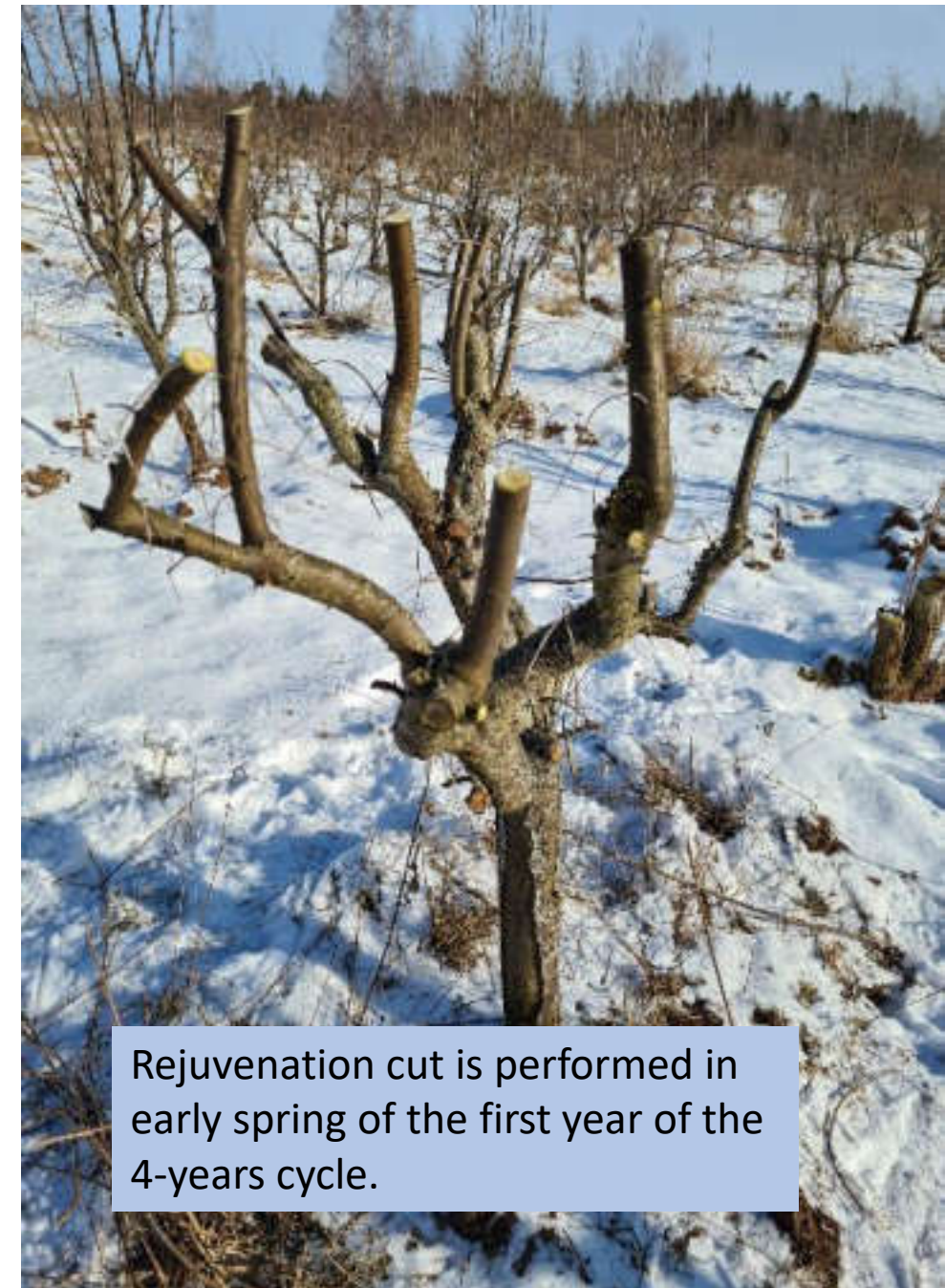
8 - 9

10 - 11

12 - 13

Harvest

Regrowth



Rejuvenation cut is performed in early spring of the first year of the 4-years cycle.



## Rejuvenation

Remaining three years old branches do not have preformed buds, they are gone with removed top branches.

New shoots can emerge only from adventitious buds.

As dedifferentiated parenchyma cells in the beginning they are not connected with the vascular system, it takes time and extra energy to join first to phloem and later to xylem.





## Adventitious shoots

A subject to intense insect attacks, because:

- They start to grow late, when more insects are active
- They are lushy, soft and clearly visible





### *Why four years instead of three?*

Only one crop year in a three-year cycle, half of the leaves should stay with the bush, so we would get relatively less fruit.

### *Why four years instead of five?*

1. The production area becomes relatively small.
2. It is located high above the ground.
3. The older the branch, the harder it is to form new shoots.



**THANK YOU  
FOR YOUR  
ATTENTION**