



Pre-sprouting of potato seed tubers

Problems

For potato and seed potato production in organic farming, it is recommended to shorten the growing period under field conditions, in order to reduce disease attack during development and mitigate the potential damage, achieving good quality and certification of organic seed potato.

Solutions

The most effective way to shorten potato growing period under field conditions is pre-sprouting or chitting tubers by light or elevated air temperature before planting. This provides earlier plant emergence in field, faster tuber initiation and bulking and formation of bigger tubers, compared to planting tubers early in cold soil. Often higher tuber yield can be obtained and earlier harvesting can be conducted. It also helps to prevent late blight, rhizoctonia and other disease damages. Reducing risk of aphid attack is important, as aphids are vectors of several viruses. Light sprouts are more resistant to soil borne diseases, when tubers planted in cooler soil.

Practical recommendations

- 2 to 8 weeks before planting, place seed tubers in the light, avoiding direct sunlight. Longer exposure to light causes bigger tuber size of new yield, while shorter exposure promotes higher tuber number.
- Split seed tubers in shallow boxes with higher corners, stack filled boxes, leave space between stacks **OR** → pour seed potatoes in net-bags and hang them up.
- Favorable temperatures are 12-15 °C during the day and 4-5 °C during the night. Make sure the tubers are protected against night frost.
- Strong and short light sprouts will appear on tubers, they will be durable to mechanical damages. Potato planters can be safely used.
- Lower night temperature tempers the sprouts.

Further information

1. [Möller, K. & Reents, HJ. Impact of agronomic strategies to control late blight on tuber growth and yield in organic potato crops, Potato Res. \(2007\) 50: 15.](#)
1. http://www.baltorgpotato.com/sites/default/files/Joint%20testing_Priekuli_Jogeva_FinalReport.pdf





Figure 1. The effect of seed tuber pre-sprouting on emergence of different potato varieties, average 2009-2013

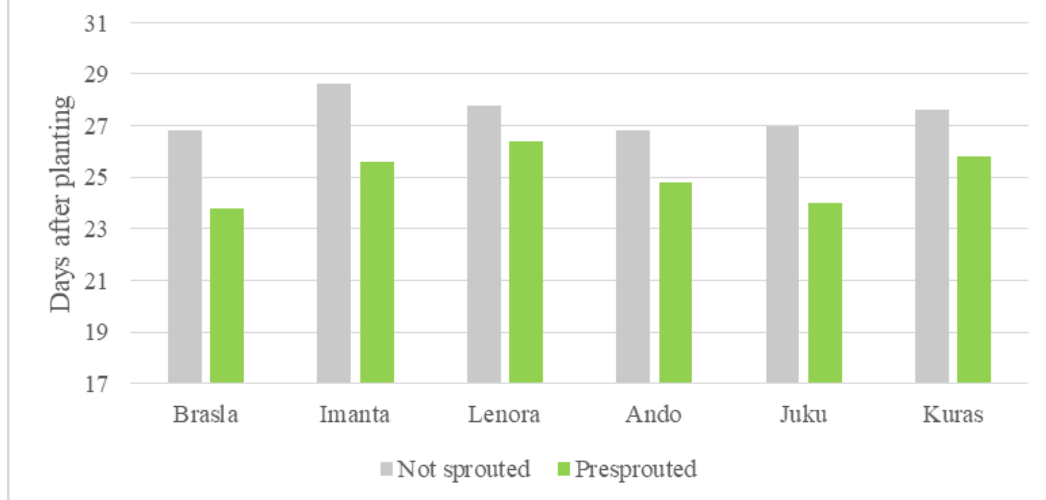


Figure 2. Tuber yield of variety 'Lenora' using not sprouted and pre-sprouted seed tubers



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