

PRACTICE ABSTRACT 14

Strategies to produce tomato seeds during regular tomato harvest

Tomato production can be time consuming especially when it is done to produce and keep small amounts of seeds from several varieties. It is nevertheless important to produce and preserve seeds from interesting varieties which are well adapted to your production system and environment.

In a trial conducted over two seasons at FiBL in Switzerland, two harvest regimes were tested on eight tomato genotypes. One regime consisted of a regular harvest of fruits twice a week followed by seed extraction, while the other consisted of a harvest of fruits every three weeks for seed extraction. The main difference between the fruits from the two regimes is their stage of maturity i.e. all fruits are at the optimal stage for consumption with the frequent harvest while fruits are at various maturity stage – from optimal to overripe – with the less frequent harvest.

Seeds were also extracted from fruits regularly harvested (twice a week) and stored in a cool chamber (ca. 7°C) for up to 4 weeks prior to extraction.



Mashed tomato fruits in buckets, left for 3 days at 26°C with regular stirring to enable fermentation.

Fermentation facilitates the separation of seeds from fruit flesh (left) and extracted and dried tomato seeds (right).

Pictures: Patricia Schwitter, FiBL

Our results show that using fruits from irregular harvest including overripe fruits does not negatively affect seed viability and seed production per Kg fruit. We however advise – as we did – to remove fruits or part of fruits with clear disease symptoms prior to seed extraction.

However, plants from which fruits were frequently harvested produced a higher fruit yield than those harvested every three weeks. This increase of fruit yield indirectly increased the seed yield. Cooling of the fruits did not impact seed production and viability. A way to save on time, space and resources while enhancing production, is therefore to pool fruits from several regular harvests and store them in a cool room until the quantity is enough for the desired seed extraction. This also allows to have a small side production of seeds in parallel to the regular production of fruits. If the cultivation is done for the sole purpose of seed production, a less frequent harvest procures a large quantity of fruits at once for the seed extraction and does not negatively impact the seeds.

If you are cultivating several tomato varieties to produce seeds and want to preserve your variety, it is important to prevent cross pollination by either separating the varieties with a net or making sure pollinators have no access to your plants.

By pointing out different seed multiplication strategies, we hope to support small scale seed producers and farmers working with niche cultivars to produce seeds and be independent from seed companies.

If you want to read more on this topic, check our [publication](#).

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THE AUTHORS

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THE PROJECT

BRESOV SHAPING THE FUTURE OF ORGANIC BREEDING & FARMING

BRESOV aims to tackle the nutritional challenges of a growing world population and changing climatic conditions by enhancing productivity of different vegetable crops in an organic and sustainable farming infrastructure. BRESOV works on broccoli, snap bean and tomato as those staple vegetable crops have significant roles in meeting our global food and nutritional security goal, and under organic conditions can contribute to storing carbon, introduce nitrogen and improve organic soil quality.

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