

Production schedule

	Week						
Sowing	5	8	13	18	22	27	32
Potting	7	10	15	20	24	29	34
Spacing	10	13	18	23	27	32	37
Sale	18	21	25	29	33	39	44
Weeks in total	13	13	12	11	11	12	12

Production time depends on the light and temperature conditions under which the plants are produced.

Weeks mentioned above are for 'Red Velvet' produced in northern Europe and can be used as a guideline for most varieties. In warmer and more sunny areas, time of production will usually be approx. one week faster.

Plug Size

We recommend using plugs grown in a 264/288 cell tray or similar.

Plugs **must not be dry** (below level 3) when being potted.

Sanitation

Make sure to start out as clean as possible. Disinfect benches and cultivation floors before potting.



Growing media

Most growing media can be used, but as plants need to be grown dry, good drainage is important. Substrates mixed with Coco fiber work well.

It is important to use substrates with a starter fertilizer.

Pot sizes:

Compact varieties (Red Velvet) 4.5-6" (12-15 cm)

Siam 5-8" (13-19 cm)

Main pot size 6" (14 cm)



Potting:

To ensure the best growth habit, plant the young plants **as deeply as possible**, preferably with the cotyledons right at the level of the media.



Spacing:

5" (13 cm) 20-22 pl./10 ft²/m²
6" (14 cm) 16-18 pl./10 ft²/m²

Plants should be spaced 3-4 weeks after potting

Growing phases and irrigation

		ML*	EC level in irrigation water (ebb/flow)
Potting to spacing	Start out moderately moist to get roots established. When roots become visible, start growing dry.	4-2	2.5-3.0
Spacing to flowering	Keep the plants very dry at this stage.	3-1	2.5-3.0
Flowering to sales	The risk of stretching is less when plants become generative. Keep moderately moist. Too dry in this stage could result in poor fruit set.	4-2	1.5-2.0

*For moisture levels, see PAS seed product information guide.

Nutrition

Tomatoes need high feed for optimal development, so irrigation with fertilizer is needed, preferably with every irrigation.

The fertilizer composition recommended for Kitchen Minis products is:

N	NH ₄	P	K	Mg	Ca
100	<10%	20	130	16	85

+ micro elements

It is highly recommended to check EC (and pH) levels in the pots weekly. Recording the results is a good way to ensure crops stay on track. Use of soil analysis, for example 2 weeks after spacing, will not only show pH and EC levels, but also balance between elements.

EC/pH level in the pot:
EC: 1 – 1.5 (1:2 ratio)
pH: 5.3 – 5.8

PGR

No PGR should be used at any point during production.

Fruit setting

Growing plants dry as recommended will have a positive impact on fruit set, as it promotes better flowering.

Use of bumble bees ensures the best possible fruit setting, but that is not a must.

Use an average temp. of min. 66°F (19°C) for optimal fruit set.



Perfect flowers, ready to set fruit

Watering tips

Correct watering is important to grow tomatoes successfully. The best results are achieved if irrigation is combined with light watering from the top with sprinklers or a hose/nozzle. This will cool down the plants, the soil remains dry and stretching is avoided. Even after being very dry, plants recover easily. Complete irrigation is still needed to ensure a supply of fertilizer.

Climate

Light level

Tomatoes tolerate high light intensity.

Temperature

Tomatoes tolerate high temperatures. Too low temperatures will delay production time and might cause problems setting fruit. Recommended growing temperature is 65-80°F (18-27°C). For the best results, keep the temperature between 68-77°F. (20-25°C) To control temperature, moderate shade might be needed under high light conditions (+800W/m²– 8000 Fc.)

Humidity

Humidity above 80% could cause *botrytis* in the flowers and should be avoided.

CO₂

Tomatoes can be grown without additional CO₂.

Artificial Light

When grown under low light conditions (DLI <15 mol/m²/day), use of artificial light is highly recommended.

Split bamboo/Clips

Due to the weight of the fruits and to support plants during transport, we recommend using split bamboo and clips.

Keep the plants dry from spacing to flowering.



Tomatoes need high light levels.
Temp: 68-77°F (20-25°C)



Growing guide - Tomatoes

Pest and diseases

In general, tomatoes are less sensitive to fungal diseases. We recommend preventive treatments with a *Trichoderma harizianum* spp drench ASAP after potting.

Powdery mildew can be a problem. Spraying preventively with foliage feed with Mg can reduce the problem.

Pest

The most common pests are Thrips and Aphids, and we recommend the use of biological control which works well in tomatoes.

The best results are obtained if biological control is used preventively. Contact your local supplier of biological control for more info.

Virus and bacteria

Tomatoes are sensitive to bacteria that can be spread with irrigation water. Use of silver-stabilized hydrogen peroxide in the water will reduce the problem.

Different types of viruses can affect tomatoes. Thrips are the main vector for viruses and need to be controlled carefully.

Sticky traps

An important part of preventing pests is active use of sticky roller traps. Change traps as needed and make sure they are placed a max. 10"/25 cm above the crop.

Biological control works well in all Kitchen Minis products.



Good to keep in mind:
If you catch 1 thrip, you avoid 125-150 new eggs too.

Pest scouting

It is recommended to monitor for pests on a regular basis (ideally weekly) using separate registration sticky cards, 1 pcs/2500 ft²/250 m². Registration of weekly counting will give a good overview of pest pressure and is the best way to forecast which and how many beneficials to use.



Sticky trap for monitoring



'Red Velvet' (12 weeks from sowing) ready to be shipped

More information

We hope you find this guideline useful. If there is any question related to growing Kitchen Minis prior and during production, please reach out to kmtech@panamseed.com

Kind regards

The PAS Kitchen Minis team