PanAmerican Seed®

Growing guide - Peppers

Production schedule

	Week	Week	Week	Week	Week	Week	Week
Sowing	5	10	15	20	25	30	35
Potting	8	13	18	23	28	33	38
Spacing	12	17	22	26	31	37	42
Sale	23	27	32	36	41	47	1
Weeks in total	18	17	17	16	16	17	18

Production time depends on the light and temperature conditions under which plants are produced.
Weeks mentioned above are for `Hot Fajita' produced in northern Europe and can be used as guideline for most varieties. In warmer regions with high light levels, production time will usually be 1-2 weeks faster.

Plug Size

We recommend using plugs grown in a 264/288 cell tray or similar.
Plugs **may 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 medias can be used, but as plants need to be grown dry, good drainage is important. Substrates mixed with Coco fiber works well.
Important to use substate with starter fertilizer.

Pot sizes
5-8" (13-19 cm)
Main pot size 6" (EU 14 cm)

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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.

2 weeks after potting

Plants should be spaced 3-4 weeks after potting

Spacing
5” (13 cm) 20-22 pl./10ft^2/m^2
6” (14 cm) 16-18 pl./10ft^2/m^2

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Growing phases and irrigation

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

*Moisture levels see PAS seed product information guide.

Nutrition

Peppers need high feed to develop optimal so irrigation with fertilizer is needed, preferable with every irrigation.

Fertilizer composition recommended for Kitchen Minis products.

N	NH_4	P	K	Mg	Ca
100	<10%	20	130	16	85

+ micro elements

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

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

PGR

Use of Sumagic (uniconazole) have effect on peppers and can be used at an early stage (before spacing), however, we recommend NOT to use any PGR during production of edible products.

Fruit setting

If plants are grown dry as recommended, it will have a positive impact on fruit set as it promotes better flowering.
Use of bumble bees ensure the best possible setting but is not a must.

Average temp. of min. 66°F. (19°C.) for optimal fruit set.

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Watering tips

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

Keep the plants very dry from spacing to flowering.

Light sprinkle with a hose/nozzle

How dry?
Weight of this pot (5”/13 cm) is as low as 10 oz. (300 g) before irrigated.

Use of sprinklers for a few minutes works very well

Important: If EC above 1.5 is used for watering from above, make sure to rinse with clean water afterwards to avoid leaf damage.

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Climate

Light level
Peppers tolerates high light intensity.

Temperature
Peppers are "heat-lovers" and tolerate high temp. Too low temp. will delay production time and cause problems setting fruit.
Recommended growing temp. is 65-80°F. (18-27°C.), best result if temp. is kept between 68-77°F. (20-25°C.)
To control temperature, moderate shade might be needed during high light conditions (+800W/m^2 – 8000Fc.)

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

Humidity
Humidity above 80 % should be avoided.

CO_2
Peppers can be grown without additional CO_2.

Artificial Light
When grown under low light conditions (DLI <15 mol/m^2/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.

Pest and diseases

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

Pest
Most common pest are Thrips and Aphids and we recommend use of biological control which works well in peppers.
Best results are obtained if biological control is used preventively.
Contact your local supplier of biological control for more info.

Biological control works well in all Kitchen Minis products

Virus and bacteria
Peppers are sensitive to bacteria which 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 peppers.
Thrips are main vector for viruses and need to be controlled carefully.

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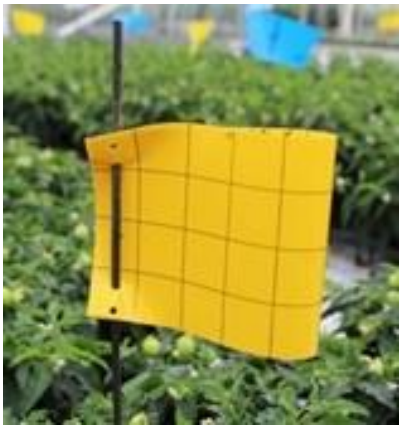
Sticky traps
An important part to prevent pests is active use of sticky/roller traps. Change traps as needed and make sure they are placed max. 10”/25 cm above the crop.

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

Pest scouting
It is recommended to monitor for pests on regular basis (ideally weekly) using separate registration sticky cards, 1 pcs/2500 ft^2/250m2.
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

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