



Maximise your Marinice crop

Growing tips: Marinice

Besides the agronomic benefits, Marinice is an innovative tomato with an impressive improved internal red colour in the large truss segment. Marinice is the answer for high-tech glasshouse growers looking for a variety that delivers large fruit, has high yield potential and Intermediate Resistance to Powdery mildew.

Marinice is an improved alternative to Komeett and Merlice. It delivers larger shiny fruits with a balanced ratio height/diameter even during summer time, making it feasible to be grown year round.

Propagation

It is recommended to graft and pinch the second true leaf to obtain two heads per plant. When growing Marinice for long crop cycles, it is advisable to use strong rootstocks such as Maxifort or DR0141TX.

When available, Equifort can be used too. Equifort will provide a more generative response from the crop.

In order to obtain better results, it might be of some benefit to inform the plant raiser of the fact this material tends to deliver boats when grown in a vegetative way or grown too cold at the plant raiser stage.

Non-grafting is an option, however crop cycle and growing conditions must be considered.



HIGHLIGHTS

Plant type:	Indeterminate. Vegetative.
Plant vigour:	Moderate/Strong
AFW:	160-170 grams depending on growing conditions.
Use:	High tech glasshouses - year round.
Disease resistance:	HRToMV:0-2/ToTV/Ff:A-E/Fol:0,1/For/Va:0/Vd:0; IR On



Plant density, transplant and early season stage

The plant density decision must be based on the greenhouse cover (plastic or glass), coordinates latitude/longitude, CO₂ availability, weather regime of the location and crop cycle type. Standard head density in large truss crops that are commonly used will apply to Marinice, and it varies from 2.8 to 3.6 heads/m². There are, of course, other factors that will play a role in the plant density decision, such as irrigation set up, substrate set up, heating system capabilities, etc.

Upon plant arrival, it is recommended to keep the transplants aside of the slab hole as it is the standard growing procedure in the industry. Depending on the growing conditions during the first week of crop, and because Marinice has strong vigour, it might be suitable to extend the time the transplants stay aside of the slab hole for a couple of days vs standard varieties: it will steer the transplants more generatively. Still, you may have to transplant *on time* or earlier depending on how much sunlight was delivered and how much the plants have grown. Avoid keeping the plants too long off the hole if the irrigation frequency becomes so high as it turns out to be vegetative.

By the time plants move to the hole, a string must be attached to each head. It is not recommended to clip it right from the start but tie the string and wind it around the stems. It will help steer the crop generatively. Keep *winding* the string around the stems weekly as long as possible. As a rule of thumb, winding continues until strings are tight, then followed by clipping it to the stems.

Too cold temperature regimes and/or too vegetative growing conditions are not desired. They will favor the formation of **boat** shaped fruits. Such fruits tend to show up under:

- Low light levels
- Vegetative growing environment such as absence of substantial differential between night and day.

Light levels dictate how a crop should be driven in terms of temperature. Bright days allow warm growing conditions that will favour more crop growth. The more sunlight available, the better for Marinice, of course, the remaining growing factors must be in place.

Pollination is key. Start mechanical pollination the day the first flowers open. Marinice delivers a good number of flowers per single truss and you should not have less than five flowers available per truss, unless plant vigour has become poor. Trusses should be pruned to five flowers under regular growing conditions.

At plant arrival, start monitoring CO₂ levels in the greenhouse. Ideally, never let it drop under outdoor level during daytime [-380-400 ppm]. CO₂ injection can start as soon as plants set first fruit and they should be applied to ensure best photosynthetic performance during the peak of light at daytime.

Grow Marinice

To summarise how to successfully grow Marinice in a few words, the key is **Plant Balance**.

Marinice is considered a vegetative variety and must be steered generatively at different levels depending on each phase of development. To name important tools that must be used to successfully drive plant balance, you must keep in mind plant spacing, nutrient balance, irrigation volume and frequency, temperature regime, crop work and environment.

The following weeks after plants are transplanted to the hole, the existing low fruit load will call for higher 24-hour temperatures if light levels are high, in comparison to more generative varieties. Night and days differentials are ideal for best results. Too cold or cool 24-hour temperatures are not desired. If low light levels do not permit the crop to warm up at any time of day, fruit development may slow down.

As a generative variety, low light levels will have a negative impact on Marinice. Marinice is a vegetative yet strong variety, and will tend to end its crop cycle better compared to weaker and generative varieties.

Nitrogen can be fed at lower rates only during the first week after transplant to answer basic needs of fruit and plant development, and gradually increased as fruit load increases. This decision must be made in accordance with what the plant needs to develop a large tomato, yet do not overfeed as any excess of N may make the plant more vegetative.

From transplant to first harvest, Marinice will load truss after truss until it reaches full load.

Based on trials when in development, Marinice tends to deliver its first harvest a few days later than Merlice. Ideally, keep the crop generative to avoid harvest delays by:

- Doing weekly bottom leaf removal on time. Leaf removal in the morning is ideal, so the petiole wounds have time to dry out before dark when humidity levels tend to be higher. Removing leaves on time will help speed up first harvest date. Delaying removal of the leaves will delay first harvest more than expected due to its vegetative nature.
- Doing leaf removal in the mid-part of the plant. It will create a more open plant and deliver a better micro climate and better light penetration throughout the plant. It will help fruit ripening as well increase the light interception from bottom leaves.
- Delivering a more active climate through:
 - Humidity control
 - Air flow
 - Use of a *grow pipe*
- Balancing nutrition. It might help to avoid excessive doses of vegetative elements such as magnesium and nitrogen.
- Lowering the crop to have the trusses closer to a grow pipe or rail heating pipe. This will help to speed up ripening and unloading.



Pruning must be done as soon as the truss is at the flower stage. Some growers might opt to delay and prune fruits if boat incidence is high.

The first harvest is expected when the plant reaches about eight trusses in fruits; sometimes it may reach nine and that is not ideal. Marinice is not an early producer, which is why it is best to keep the environment optimised for production under vegetative conditions.

The first trusses harvested will have slightly ribbed and slightly flat fruits. As crop grows into the summer, the fruit shape will change and it will be smoother, ribs will be absent and the height will tend to increase.

Production starts slow. Marinice is not considered an early producer, but speed of harvest will increase as light levels increase. Marinice responds well to high light levels.

Complete crop work - such as leaf removal, lowering, winding/clipping, pruning and cluster support - on time. Marinice has an 'easy to work with' type of plant. Marinice is not a tall plant compared to standard materials in the industry.

The first trusses tend to have a long and extended truss, when early in the mornings and late afternoons the temperature is slightly excessive. Cooler temps under low light levels is best.

In spring and autumn, ensure the right amount of Potassium is delivered and leaf removal is not delayed. Marinice is sensitive to blotchy ripening.



First trusses with some ribs present.

During summer months the leaf removal should be less aggressive. In locations of North America with typical continental weather, trials have shown temperatures outdoors may not allow the cooling of the greenhouse at night time, creating a vegetative condition that may lead to the appearance of more boats in summer. Review the available tools to apply generative actions, such as lowering vent settings during the night to capitalise any drop in temperature.

Pruning should always be to five fruits, unless a different strategy is applied such as higher plant density, which might not be needed with Marinice because of its vigour and endurance, especially if grafted on DR0141TX.
