



Growing Tips

PADUA

For growers seeking an improved alternative to Komeett, we are proud to introduce Padua, the most recent TOV launch for De Ruiter®. Padua is a red on the vine tomato hybrid that produces large round fruits in the range from 145-170 grams. Developed in Ontario to withstand tough summer conditions, the variety also offers high yield potential and extra vigor for glasshouses and greenhouses operating year round. It has intermediate powdery mildew resistance, and has performed well in dry climates.

One of Padua's features is its ability to maintain fruit size and quality under conditions with high heat and humidity. This tomato is not jointless, and is known for its endurance and uniform trusses.

Early Season Tips

Especially in the beginning of the crop, Padua's vigor necessitates leaf removal. Growers should remove a leaf from the top of the plant on a weekly basis, to make sure that the plant will work on its fruits enough. During the duration of the crop, continue removing a leaf from the top as needed to keep this crop open as the leaves can become quite large. Padua will need a generative climate approach, especially in the beginning of the crop, with good pre-nights.



TYPE

Large red tomato on the vine

PLANT TYPE

Long (indeterminate)

AVERAGE FRUIT WEIGHT

160 grams

USE

High-tech greenhouses,
year-round

DISEASE RESISTANCE *

HR: ToMV:0-2/ToTV/Ff:A-E/Fol:1,2/ Va:1/Vd:1

IR: On

Performance may vary, from location to location and from year to year, as local growing, soil and weather conditions may vary. Growers should evaluate data from multiple locations and years whenever possible and should consider the impacts of these conditions on the grower's fields.

The recommendations in this article are based upon field observations and feedback received from a limited number of growers and geographies. These recommendations should be considered as one reference point and should not be substituted for the professional opinion of agronomists, entomologists or other relevant experts evaluating specific conditions.

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Powdery Mildew Resistance

Powdery mildew is one of the most devastating diseases affecting tomato cultivation worldwide.¹ A good disease package can go a long way for tomato varieties, and Padua comes with intermediate resistance to powdery mildew. This helps during warmer weather and longer seasons. In the event of an outbreak, early disease detection is crucial.²

Because of its strong vigor, it generally doesn't require grafting to resistant rootstock. However, Padua provides flexibility for growers on long crop cycles, as it grows well in grafted systems.

Grafting Criteria

When choosing a grafted approach, growers should select either Maxifort or DR0138TX rootstock, being certain to pinch the graft. Pinching on the second true leaf is advised.

Other factors that would impact the decision to graft include the type of substrate used, and the amount of carbon dioxide per hectare. Padua has the potential to perform well regardless of whether or not you choose a grafted or non-grafted approach.

Approaches to Fertilizer

Growers taking a grafted approach could consider choosing rootstocks with high nitrogen acquisition ability, which can allow for decreased fertilizer application without reducing yields, minimizing environmental nitrate pollution.³ Early in the season, growers want to encourage generative rather than vegetative growth, so controlling nitrogen is very important. Excessive nitrogen can contribute to easy growth, which is not desirable in such a vigorous variety. Please contact your De Ruiter representative for questions on fertilizer management.

Vigor and Artificial Light

By 2025, nearly 50 percent of glasshouse growers will be using artificial light, according to expert predictions. By staying in market every day of the year, they could produce a more consistent supply to meet consumer demand.

Padua's vigor should also support good growth under artificial light conditions, which can offer growers a measure of control in unpredictable lighting and temperature conditions. The heat generated by high pressure sodium lights accelerates generative growth, which can stress less vigorous varieties.

KEY TO DISEASE RESISTANCE

F:A-E: Fulvia fulva Race A-E
Fol1: Fusarium wilt - Fusarium oxysporum f.sp. lycopersici Race 1
Fol2: Fusarium wilt - Fusarium oxysporum f.sp. lycopersici Race 2
On: Powdery mildew - Oidium neolycopersicum
ToMV:0-2: Tomato mosaic tobamovirus strain 0-2
ToTV: Tomato torrado virus
Va/Vd1: Verticillium wilt - Verticillium dahliae Race 1

*HR — HIGH RESISTANCE

The ability of a plant variety to highly restrict the activities of a specific pathogen or insect pest and/or to restrict the symptoms and signs of a disease, when compared to susceptible varieties. Varieties with high resistance may exhibit some symptoms when specified pathogen or pest pressure is severe. New and/or atypical strains of the specific pathogen or pest may overcome the resistance.

*IR — INTERMEDIATE RESISTANCE

The ability of a plant variety to restrict the growth and development of the specified pest or pathogen, but may exhibit greater range of symptoms compared to varieties with high resistance. Intermediate Resistant plant varieties will show less severe symptoms or damage than susceptible plant varieties when grown under similar environmental conditions and/or pest or pathogen pressure.

¹ http://www.actahort.org/books/1159/1159_17.htm

² Patrick Wspanialy, Medhat Moussa, "Early powdery mildew detection system for application in greenhouse automation" Computers and Electronics in Agriculture, Volume 127, 2016, Pages 487-494, ISSN 0168-1699, <https://doi.org/10.1016/j.compag.2016.06.027>. (<http://www.sciencedirect.com/science/article/pii/S0168169916304318>)

³ M.J. Asins, A. Albacete, C. Martínez-Andujar, F. Pérez-Alfocea, I.C. Dodd, E.A. Carbonell, J.A. Dieleman, "Genetic analysis of rootstock-mediated nitrogen (N) uptake and root-to-shoot signalling at contrasting N availabilities in tomato" Plant Science, Volume 263, 2017, Pages 94-106, ISSN 0168-9452, <https://doi.org/10.1016/j.plantsci.2017.06.012>. (<http://www.sciencedirect.com/science/article/pii/S0168945217302510>)