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| Maintype | Substrate |
| Crop     | Cucumber  |
| Croptype | Substrate |
| Variety  | Proloog   |

## Crop manual Proloog RZ (24-148 RZ)

### General

Proloog RZ is a cucumber variety suitable for a later, heated crop, planting from January, and for summer and autumn cropping. Rijk Zwaan has already supplied this variety large-scale all over N Europe and since 2007 Proloog has been the firm choice in many growing systems and many areas. In this manual we update you on the habit and character of this variety. For summer and autumn crops we have a separate section with more pointers and where no special mention is made of it, this manual applies to January and February plantings.

A Proloog crop is characterised by its steady, open habit but it certainly packs a punch when it comes to production power. Fruit quality is among the best a cucumber variety can give. Proloog gives very uniform grades, sizes and fruit shape. Both colour and shelf life are of absolutely the highest calibre. This variety gives a very high Class I (Super) percentage. Not only that, Proloog has proved to be very strong in particular against fruit mycosphaerella. Add to that the intermediate mildew resistance and it is clear why this variety appeals to so many growers.

### Plant raising

It was noticeable at the plant raiser's that Proloog behaves very quietly. Growth is slightly steadier than, for instance, with Carambole, Mystica or Roxanna. It is important, therefore, to count on having the plants one day longer at the plant raiser's in winter. During summertime plant raising, this difference with other standard varieties is not quite so pronounced. We like to see a quick plant for Proloog, with a strong structure, so a sufficiently high feed level is certainly advisable. Because of its smaller leaf size, Proloog can sometimes seem a little skinny at the plant-raising stage but that is no indication of the way the crop will develop.

### Start

Proloog does not require any special treatment as far as starting temperatures and conditions are concerned. In the first and later crops, normal temperatures may be used. We do like to see a sufficiently high feed level, though, so start in the January/February crops with an EC in the slab of 3.0 mS/cm and build it up towards 3.5 - 4.0 mS/cm while it is making its way to the wire. For the first crop: keep working with an EC in the substrate of more than 3.0 - 3.5 mS/cm. From the

start of cutting cucumbers from the secondary laterals (i.e. after all the cucumbers have been taken from the first lateral) the overall feed level can be slightly lower. As regards temperatures and pipe set points: an active climate should be realised, but that goes for all cucumber varieties.

### **Plant load**

Proloog naturally achieves one fruit per axil on the stem; nice and easy when it comes to thinning out. The stem fruit load should, of course, be made dependent on conditions. In the January crop, a stem fruit load of 6 - 8 cucumbers will be enough. As usual, the harvesting weight, growing method and conditions will also influence continued growth of the crop considerably. Quick and easy development and continued growth of the main lateral have to take centre stage, though. Remarkable about Proloog is that it gives its fruits nicely in succession, so that the fruit weight on the stem is at a very good level. The uniformity in length is also very nice, throughout the crop, and its very strong point is that even when light levels are low, as in spring and autumn, Proloog just keeps on producing those cucumbers.

### **Crop structure and lateral initiation**

Proloog gives plants that retain an open character throughout the entire growing period. The crop can be a little bit lanky on the laterals, but it will always keep its openness, which is due to the smaller leaf size of this variety. This is exactly why Proloog always looks neat and tidy and why it is labour-friendly.

Another remarkable thing about Proloog is that the flowers remain fairly small from start to finish of the crop. Sometimes they are so tiny even, that you would not expect to see any fruit come of them but there is no need to worry. What's more, this actually provides extra protection against mycosphaerella.

The main laterals grow steadily and often can look on the thin side. Always work on sufficient quality of the main lateral. If Proloog is pushed too much to produce on the stem, the main lateral could very well become too thin or not give enough fruit initiation. Don't force anything, certainly not in warm summer conditions. Make use of the natural regularity of this variety.

In order to prevent chlorosis in summer and autumn Proloog crops, we really like to see an extra high iron value. You would, therefore, preferably add, say, 30% extra EDDHA (red) iron.

Do not top the main laterals too late: preferably at a maximum of 6 leaves over the wire, because the whole lot will drop a little bit anyway. Remarkably, the cucumbers lower down in the crop can still be of perfect quality. It is not recommended, though, to retain too long laterals to take advantage of this.

Crop work is limited, in a continued crop, to some deleafing and topping a few laterals. Furthermore, it has become more common in recent years to remove the first 3 - 5 stem leaves from the seed leaves upwards. This is certainly worth considering with Proloog, because an active climate at the base of the crop reduces the risk of stem rot.

A pleasant trait of Proloog is that this crop does not give split heads very easily and burnt or tight heads are also sporadic occurrences. This makes Proloog very suitable for high-wire systems as

well.

### **Mildew tolerance**

Proloog has intermediate mildew resistance. This means that this variety is less susceptible to powdery mildew. A few attention points should be observed here, though.

If a young Proloog plant is planted in an environment infected with mildew (e.g. in an interplanting or half a glasshouse with a mature crop in the other half), mildew can very definitely strike with some speed. Intermediate mildew resistance has to 'ripen' first in a young plant and has not fully developed until the plant reaches the wire. Our advice is, therefore, for all systems, to carry out mildew treatment for the first three weeks (until the crop has reached the wire) as you would in susceptible varieties. The crop clearly shows less mildew afterwards. While the crop is growing you can then carry out tailored treatment as and when necessary, for instance when there are signs of mildew or when it is convenient for you. In a January/February planting you will not have to do anything about mildew control until you see the first signs or there is a real infection in the area. Mildew is also easier to control with a spatial treatment (fogging). Mildew will show slightly duller on the leaves and to a lesser degree than is the case in totally susceptible varieties. Not surprisingly, growers who have experience with Proloog are convinced of the usefulness of the intermediate mildew resistance.

### **Summer and autumn crops**

#### **Climate**

An active climate should be realised as regards temperatures and pipe set points, but that goes for all cucumber varieties. For August plantings in particular we want to create a sufficiently active and strongly-constructed plant. In the later autumn period, from September onwards, there is even more emphasis on having an active climate around the base of the crop in order to prevent foot rot. It is exactly with a healthy and active crop in September that very good yields may be achieved with Proloog in diminishing light.

#### **Feed**

In summer and autumn crops the same general feed advice as above is applicable but for the first build-up to the wire you may have 3.0 mS/cm in the substrate. From harvesting from the secondary laterals (i.e. once the first lateral is empty of cucumbers) the overall feed level may be slightly lower. We very much like to see that in order to prevent chlorosis in a summer or autumn Proloog crop, an extra high iron level is used. You would preferably add, say, 30% extra EDDHA (red) iron.

#### **Plant fruit load**

In April - end August plantings, the stem fruit load may be 12 - 16 cucumbers per plant. Harvesting weight, nursery equipment and cutting frequency are also highly important in this. We would like to emphasise that too high a stem fruit load will increase the risk of an imbalance in lateral development and during the remainder of the growing period. Proloog does not need any extreme loads, anyway, in order to find its balance.

#### **Mildew control**

Our advice is to carry out normal mildew control in all systems in plantings from April - end August for the first three weeks (until the crop is at the wire), as is done in susceptible varieties. The reason being that the mildew resistance 'still has to ripen'. This is certainly important to bear in mind for summer and autumn crops. From then on, tailor-made control applies, as described above.

The crop advisors of Rijk Zwaan wish you every success with your crop of Proloog RZ!

Crop advisors Rijk Zwaan, autumn 2009.

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