

Substrate Nutrition Guidelines- Prize and Arabella

Introduction

The PSI Everbearer varieties Prize and Arabella provide growers with viable alternatives in terms of yield (Prize) and quality (Arabella) to proprietary (restricted) varieties (e.g. Sweet Eve 2 and Summer Blush from BerryWorld, or Driscolls Katrina and Zara from BerryGardens).

Prize is a mid-tier variety with good production potential, while Arabella is a variety with exceptional flavor and top-tier potential but slightly lower yield potential than Prize. Both varieties produce cosmetically attractive fruit with good shelf life and consumer appeal.

Arabella Variety Summary

The main varietal advantages of Arabella are as follows:

- **Very attractive heart shaped fruit, excellent colour and superior shelf life-** great shelf appeal.
- **Outstanding flavour and Brix** - typical premium variety with consistently high-quality fruit.
- **Lower management costs-** consistent season-long production with less de-leafing required compared to some alternative varieties.



Figure 3. Fruit Quality characteristics of Arabella

Arabella is an earlier fruiting Everbearer variety than Prize, commencing fruiting on spring-initiated flower around mid-July, from March planted bare root plants, following a small production from overwintered flowers commencing around the end of May. Arabella volumes generally start to drop off a bit earlier than Prize, and production declines into the late Autumn, eventually becoming uneconomical, often before weather stops production.

Arabella Plant Types and Establishment

Arabella plants are available in the same formats as Prize. Suggested planting density is 8 plants per linear metre for all plant types.

Arabella is a less vigorous grower than Prize and minimisation of stress during establishment is even more important. Removing pre-flower (i.e. any open flower expressed within 5000 GDH of planting) helps to minimise plant stress and to promote better establishment for all plant types.

Arabella Nutrition Guidelines

Arabella benefits from a more generous Nitrogen feeding approach compared to Prize, due to its naturally less vigorous growth and lower leaf area.

As for Prize, it is important to plant Arabella into well buffered coir substrate. Starter and fruiting feed K/Ca ratios are the same as for Prize.

Drip + drain EC and pH targets are similar to Prize, except that a slightly higher EC Sum may be beneficial during the vegetative phase (2.8-3.0 mS) to allow extra N and promote better leaf area development.

Give runoff as discussed above for Prize in order to control EC. Vary % runoff according to plant size and conditions.

As for Prize, drip fertilizer recipes should be calculated according to substrate and background water supply. General guidelines on nutrient targets are given in the table below.

 Delphy	NO ₃ -N	NH ₄ -N	P	K	Ca	Mg	S	Fe	Mn	Zn	B	Cu	Mo	EC feed (mS)	EC sum (mS)	pH
-Vegetative	10.8	0.25	1.3	3.5	3.8	1.5	1.2	39.4	21.9	7.7	13.0	1.9	0.5	1.4-1.8	2.8-3.2	5.5
-Fruiting	10.7	0.00	1.3	5.2	3.2	1.2	1.1	35.8	18.2	7.7	15.7	1.9	0.5	1.4-1.8	2.8-3.2	5.5

Figure 4. Suggested Vegetative (Starter) and Fruiting recipes (mmol/L) for Arabella in Coir Substrate

Summary

- Prize is a more vegetative variety than Arabella and benefits from a lower-N feeding regime.
- Arabella requires higher N in order to produce sufficient leaf area and to sustain cropping though the season.
- Drip + drain EC targets of 2.6-3.2 mS should be maintained for optimum results. Too low an EC Sum results in weaker plants due to insufficient nutrients. Too high an EC Sum results in more tipburn, Calyx burn and smaller fruit.
- It is important to give sufficient runoff to control the build-up of EC, especially on the lower-N Prize recipe which contains higher levels of Sulphate. Vary % runoff according to plant size and weather conditions.
- Aim pH 5.3-5.5 at the dripper with both varieties to prevent trace element deficiencies.
- Nutrient demand varies with plants stage, crop load, temperature and other parameters. Base starter and fruiting recipes are guidelines only.
- It is recommended to send substrate, drip + drain, and/or leaf samples to a recognised laboratory for analysis every 2-4 weeks during the growing season. Fertilizer recipes can then be adjusted according to the results.