

Experience of Managing Seed Propagation for Optimum Profit at Nightpark Nursery®

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INTRODUCTION

Nightpark Nursery was started as a family business on a green-field site in 2001, with most of the work being undertaken ourselves, including infrastructure such as roadways, tunnels, and the heated propagation facility. It is a small but expanding business specialising in young plants of grasses, perennials, and woody plants raised from seed. There is one full-time worker in addition to the author; this is boosted by two part-time workers for 6 months of the year. Plants are marketed within Ireland but also increasingly to the U.K. The main customers are wholesale nurseries selling to either the garden centre or landscape market. Most young plants are sold as large plugs. Plug sales outnumber 9-cm liners by 5 : 1. Approximately 500,000 units were produced in 2007.

PAST EXPERIENCE

Originally some plants were propagated from cuttings, but seed propagation quickly took over as the main activity. I have been interested in seed propagation since 1993 when I was introduced to it by Andy Kelly of Lullymore Nursery.

Prior to setting up the nursery I had spent several years working for other growers, including 3 years growing potted herbs for the retail market, during which time I learned much about profitability.

Many of the herbs were grown from seed, and I liked the quick crop turnaround — most were grown from start to finish in 6 to 8 weeks — yet the price earned for a 9-cm potted herb was more than a 9-cm liner was making at the time even though the 9-cm liner took nearly a year to produce.

Large plugs seemed to be the way to go, and seed propagation of ornamentals such as grasses interested me. Crops could be grown in 4 to 5 months and could be sold to the wholesale growers in large numbers.

MEETING THE COMPETITION

Nightpark competes with many other suppliers of young plants, both imported and home-grown, in a limited marketplace. Many of the imported products are cheaper but are generally a smaller size. Our main home competitors were well-established with strong relationships built up with the customers that we were hoping to supply.

We started supplying jumbo plugs of seed-raised plants because there were no real Irish competitors. Our first availability list was just one page. The quantities were very small. How were we ever going to get anyone to buy from us? We did, because we had something that no one else had to offer at the time — a large quantity of good quality *Uncinia rubra* plugs. We still sell these to the same customer except the order has increased five-fold. In a way, it is the same story today since we offer ranges of plants that not many others do, or in sizes that others don't supply.

FACTORS AFFECTING OUR PROFITABILITY

Economical Size and Price. The size of the plug makes it relatively cheap to transport, easy to keep in good condition, easy to handle, and ideal for potting. Most of our range are quick growing items and, due to the natural vigour of the seedling, make a saleable plant in a reasonable time after potting. For example, grass plugs potted in August are saleable the following March. Plugs potted in March are saleable in May. Both propagators and wholesale growers are benefiting from the quick turnaround of the crop. Plugs are approximately 66% of the cost of a 9-cm liner. From our own costings, we estimate that plugs are at least 1.5 times more profitable for us to produce than 9-cm liners. This includes the cost of transport, crop turnaround, all labour costs, and the costs of the raw materials.

Seed Quality. The other aspect that has been a feature of our business from the start is that we collect a lot of our own seed. Many of the items are not available to buy in commercial quantities or at a reasonable price. This gives the business a significant edge over its competitors.

Most seed is collected within a short radius of the nursery, but increasingly I have developed my own stock beds. This makes it easier to collect the seed at the right time. I have learned much from the many past I.P.P.S. conference papers and workshops on seed collecting and propagation. In particular, I.P.P.S. member Dennis Fordham has been a great friend and mentor. We discuss seed regularly and exchange seed surpluses to mutual benefit. Depending on the year, seed that is plentiful in Ireland may be sought-after in the U.K. and vice-versa. It is advisable to have a “plan B” when it comes to seed sourcing.

The importance of seed quality cannot be underestimated. Seed that is home-collected is generally easier to germinate, in good physical condition, true to type, and doesn't vary much from year to year. Commercially purchased seed can be very expensive and cannot be guaranteed for trueness to type, and many problems can occur if it is a species that requires treatment to break dormancy. Very often, a dormancy-breaking treatment that worked one year will not work the next because the seed may originate from a totally different source or could even be dead.

Plant Range. The range of plants grown has been influenced by my own personal preferences, but as a business owner, I am acutely aware that profit is the primary objective. The list offers items that growers cannot find easily, including some that are not well-known.

For example the nursery propagates many New Zealand natives, which are generally very suited to the Irish climate. It lists many grasses, such as *Stipa tenuissima*, *Anemanthele lessoniana* (syn. *Stipa arundinacea*), *Stipa gigantea*, and *Uncinia rubra*, and these are among our best-selling products.

Woody species include *Eucalyptus*, *Acacia*, and *Fatsia japonica* and South African species such as *Melanthus major*, *Watsonia pillansii*, *Zantedeschia aethiopica*, and *Dierama pulcherrimum*. Unusual items include *Cordyline indivisa*, *Dianella* species, and *Mandevilla laxa* (a Chilean climber).

Having grown up in a coastal area I also have a great love for seaside plants. *Euphorbia mellifera* is naturalised in the part of East Cork where I grew up. I now find this shrub surprisingly popular in the U.K. I have also added *Echium* species to the nursery list.

There is an increasing demand for natural species such as cowslip, primrose, fox-gloves, and yellow flag iris. Last year, one customer was looking for a large quantity of western gorse (*Ulex gallii*) for a very exposed site. This is the low growing gorse that flowers in autumn. Sourcing seed required us to climb the Wicklow Mountains in search — interesting and exciting but ultimately a loss-making exercise since I had miscalculated the seed count. Very few germinated, so I only got 10% of what I had expected. This is a trap that you can easily fall into if you become too engrossed in the botanical aspects of the business.

In the past I have tried to grow *Romneya coulteri*. There have been many I.P.P.S. discussions on this subject. I was successful to an extent. Then one day I did the sums. A quantity of 10 g of seed had cost about €100. According to the supplier, this was supposed to be enough for 5,000 seedlings. I was pleased when I saw a fair number germinating. However, the final number was just 1,000 seedlings. The actual number of plugs sold from this batch was less than 500 because of the various wastes that seem to affect *Romneya*. The cost per seed escalated from 2c per dry seed to 20c per sold seedling.

It is nice to be different, but offering unusual ranges is not necessarily profitable. Time, growing area, money, and labour can be wasted. Experimenting with new lines has to be done in a controlled fashion, and costs have to be carefully monitored.

STRATEGIES FOR FUTURE DEVELOPMENT

Mechanise as Much as Possible. As with most nurseries, one of our biggest costs is labour, and we are currently at the upper end of the recommended range for labour costs as a proportion of total costs. One reason for this is the amount of labour required for seed collection and cleaning.

We have a tray filling machine that has earned its keep and a seed-sowing machine that is underused because seed must be spotlessly clean to work well in it, so it is not very well suited to home-collected seed.

We are considering purchasing a plug-making machine from the Danish company Ellegaard as an alternative to buying-in preformed Fertiss™ plugs, which are very useful for subjects that do not form a good root mass or have a tendency to stick to the side of a plug tray. A plug-making machine would enable plugs to be produced for a fraction of the buy-in price (0.5c compared with 8c each). Home-made plugs can be handled at a much earlier stage of growth, and there is no problem with roots adhering to the plug trays. This would greatly improve the speed of grading prior to sale.

Increase Turnover. I would like to increase the turnover as much as possible without increasing the numbers of staff. In the past season turnover has increased by 20% with the same number of staff-hours as the previous season. Turnover could be increased further by increasing prices and expanding the heated propagation facility, which is now a very crowded area for 4 months of the year.

Concentrate on the Best Sellers and the Best Buyers. Eighty percent of the sales should be coming from 20% of the product lines; 20% of the customers should be purchasing 80% of the sales. Those lines that make up the bulk of the sales should be the ones that can be grown and sold with very little trouble. Similarly, the customers that buy 80% of the output need to be looked after. It is easy to get side-tracked by spending too much time with small customers that visit you in per-

son, have a good chat and spend lots of time walking around the nursery. Very few of our larger customers have visited the nursery more than once. Some significant ones have not visited at all. In a small market place, be careful not to be selling too much of the production to any one customer. We try to ensure no single customer buys more than 10% of our output.

Introduce New Lines. Despite the risks associated with spending too much time meddling with botanical obscurities, one of the ways the business will grow is by offering different plants, and customers will expect us to have them. Items being trialled at present included some members of the Proteaceae, the Tasmanian mountain flag iris (*Diplarrhena latifolia*), and several bulbous plants.