Maximising Output from a Propagation Unit

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INTRODUCTION

Output can be maximised by making a system as efficient as possible, especially by analysing and planning the various processes in order to achieve the greatest possible efficiency in production. Greater efficiency is the key to greater profitability although too many growers still believe profit comes from screwing the supplier on price (Coutts, 1997). Growers will also need to improve their labour efficiency, by as much as 10% year on year (Rowe, 1997), because labour costs won't come down, more labour is likely to be used as you expand, and there are few other areas left to improve.

In terms of direct costs labour can account for between 25% and 60% of net sales and is therefore the single biggest cost.

PHYSICAL FACTORS INFLUENCING OUTPUT

The major physical factors are:

- People — their abilities, speed and motivation;
- Handling systems;
- Ergonomics;
- Batch volumes — as these increase, down-time decreases;
- Facilities — as capital investment increases management time for the crop and percentage losses should decrease;
- Type of crop grown, e.g., rooted cuttings or direct struck crops.

The people who are actually doing the work, taking the cuttings, for example, should be responsible for monitoring these points and producing the monitoring information required by management.

FINANCIAL FACTORS INFLUENCING OUTPUT

The key here is to compare all costs against a common base-line, for example (pounds or dollars) per square metre, remembering that so-called variable costs turn out generally to be fixed and fixed costs are variable. The aim is to reduce costs, increase output, and decrease losses. This is demonstrated well by an example from nursery stock adviser, Will George (pers. comm.) (Table 1).

Costings, work rates, etc. are often treated with suspicion by the staff in the propagation unit as a divisive management tool to get people to work harder. It has to be made clear that it is purely an aid to make the business run more profitably, which should benefit everyone.

Key parameters worth looking at are:

- Labour usage and efficiency is probably the most variable factor, so for budgeting purposes look at gross margin/1000 h. This is then translated into cuttings per hour or per labour unit.
- Gross margin per square metre.
- Net sales per 1000 h (do you have a target?).
- Number of square metres per 1000 h of labour.
- Return on capital.

Table 1. Comparison of effect of increases in yield or price on profitability.

	Initial position	Increase price 5%	Increase yield 5%
No. of plants produced	1000		
Cost	£1.40 each		
Selling price	£2.00 each	£2.10	£2.00
Yield	85%	85%	90%
Sales value	£1700	£1785	£1800
Cost of production	£1400	£1400	£1400
Margin	£300	£385	£400
Increased profit		28%	33%

Gross profit margin can be maintained by:

- Controlling variable costs.
- Maintaining production costs of facilities and overheads in ratio to sales.
- Setting pricing to maintain the margin by allowing for discounts and wastage before negotiations on price.
- Ensuring, where competition is less intense, that prices do not come under pressure.

The industry does not have available sufficient information about pricing. Countrywide realistic costings are needed to help nurseries achieve prices based on unit costings which in turn would generate a better margin and "profit". It is difficult to understand how 9-cm liners of *Buddleia, Escallonia, Euonymous, Lavender, Lavatera, Penstemon,* and *Pernettya* can all be found priced with only a 1% to 2% difference when they have such vastly different production costs. When these plants are sold on, 8 to 10 months later, as the final product there are price differences between the species of around 25%.

CONCLUSION

Nursery operators must monitor costs in order to maximise output from propagation units. It doesn't matter what is monitored as long as monitoring is regular — the discipline of doing this will have many benefits for your propagation unit.

LITERATURE CITED

Coutts, S. Rubbish in, rubbish out. The Grower, 20 March 1997.

Rowe, M. The Management paradox. The Grower, 31 July 1997. p 11.