Initial Planning

Intensive production systems offer the advantage of earlier production than traditional low density systems and better efficiencies in harvest and management operations. These advantages come at some cost because intensive systems are more expensive to establish and therefore have a higher financial risk associated with crop loss or failure.

There are many interlinked decisions that need to be made during initial planning for an intensive system that are critical to ensuring success. These decisions will be influenced by a range of site, economic and management factors. The factors vary from orchard to orchard.

Making the right choices about intensive system establishment and management depends on growers having a good understanding of the financial commitment and risks associated with intensive pear production. Management commitments need to ensure maximum potential for high annual yields beginning as early as possible in a new orchard's life. Growers must understand the importance of integrating technical aspects (variety x rootstock x planting system x management regime) for best orchard outcomes.

Financial Commitment

Before moving ahead with establishment of an intensive orchard, it is essential that growers have a good understanding of the financial commitment required and the capacity of their business to meet this commitment for intensive system options.

The higher costs of establishing an intensive system are due to:

- higher tree numbers
- installation of trellis/support systems
- more intensive management during establishment years
- possible cost of interest on borrowed money to establish systems

Often establishment and annual overhead costs can only be reduced to a certain threshold and not enough to have a significant influence on profitability. Cost cutting in the establishment phase may also impact on the long term performance of the orchard.

The key to making money in a new planting is to have these costs paid off as soon as possible. This means early production with high yields of good quality fruit that the market desires.

Management Commitment

Intensive orchards require more careful management during the early establishment years to ensure good growth and early fruit production. This means paying attention to the quality of planting materials, ensuring optimal site preparation and tree planting, tree nutrition, irrigation, pruning and training.

Growers need to consider what management commitment they are able or prepared to make to an intensive system and choose a system that will suit their situation. A whole range of different skills

or technologies may need to be learned and adopted in order to ensure maximum potential for early and sustained high annual yields of good quality fruit.

Choosing the Right Combination

When planning an intensive system, it's critical to choose the right combination of rootstocks, varieties, planting systems and management options. It's also important to understand inherent location characteristics such as soil fertility and climate, and analyse their impact on system choice. Mistakes like spacings that are too wide for vigour of the site and/or rootstock, will have long term impacts on production.

It is important to recognise that each orchard is unique and has a characteristic set of influencing factors; there is no easy recipe for success. Technically efficient and productive planting systems may not be practical for all orchards.

Risks

The biggest financial risk with an intensive production system is crop failure, particularly in the early years of establishment. There may be a range of reasons for crop failure including extreme weather or poor management decisions. Failure to produce early yields will not only have an immediate financial impact but may also affect yield production in subsequent years.

It's crucial that orchards have risk management options in place from the beginning. This is particularly important for risks that growers have less control over, e.g. extreme weather events associated with on-going climate change.

Any planning for an intensive orchard should include provisions for managing the risk of crop loss, such as hail netting, frost fans, overhead irrigation for evaporative cooling or even crop insurance. This could mean that establishment costs are further increased and the break-even point further delayed. It's important to assess the likelihood of these events occurring and weigh-up the cost of risk management options versus the cost of crop loss.

Key Planning Questions:

- How much will the system cost to establish?
- Do I have access to the funds needed to cover this cost?
- If I choose to borrow money can I afford the cost of interest?
- What impact would crop loss or failure have on the ability of the business to cover costs of establishment? What management tools will I need in place to minimise the risk of crop loss?
- What management skills and tools are required to ensure the system achieves early and sustained yields to help pay off establishment costs? Can I afford to commit to these?
- Do I have access to all the required resources for an intensive system (e.g. varieties, rootstocks, nursery trees, support materials)?

References (Note full access may incur a fee)

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