

Workflow: Production – Basic Farming Practices

Toolkit 3.10

Orchard Replacement Planning

target audience

Farm owners.

what it is

Orchards have a lifespan of up to 30 years, with the first 3-4 years being unproductive or marginally commencing production, the 4-15-year period being the prime years, and then incrementally losing production capacity to the end of its lifespan. Naturally, cultivar types and the health of an orchard have a direct bearing on the lifetime and production.

Whether it is to expand the number of orchards by establishing new orchards, or whether you need to replace poor rootstock and cultivars due to market trends, or you need to replace orchards due to age or other factors (poor performance due to many years of neglect or stress), you need to plan for long term sustainability of both production and, subsequently, of your income.

why it is important

Orchard replacement planning ensures long-term enterprise development and continuity.

Through good citrus production practices, you can extend the period during which you can extract value from your asset (trees), but not indefinitely. Farmers who are maintaining their competitive exporting position by relying on current orchards may easily believe that they are doing well; and they may be doing relatively well at the present time, but citrus is a very long-term game.

It is important to plan long term. Proper orchard replacement planning is more than just a vague or undefined desire to replace or expand. It is an expensive endeavour, demanding rigorous planning, technical support, informed decision making, funding, and budgeting.

success factors

- **Historical Record and Projections** – A written record of each orchard, the cultivar, the tree ages, and their yields per hectare. Taking these trends and the orchard age, you can project the productivity curve for the next 10 years. This will give you an indication where the pinch points are that you need to anticipate and plan for. If you do need to replace orchard, do you have a sound projection of income loss without that production, the time and cost required to

nurse a new orchard to the point of production, and how remaining production will fund and absorb that cost?

- **Market Knowledge and Input** – Further to the above, market demands and preferences also play into these considerations. Are you clear on what cultivar will yield the best return over its lifetime? How will a higher yielding cultivar (in terms of quantity, quality, and price) influence the equation? You may require specialist advice in this regard.
- **An Orchard Replacement Schedule** – The above exercises will enable you to draw up a 10-year+ schedule of what you ideally need to replace and/or establish. This is only the starting point of a full plan, but it is your first step, i.e. your ideal setup (given the best information you have at that time).
- **Technical Input** – Test your high-level plan and elicit specialist advice if needed, e.g. which cultivars will thrive in your region and specifically on your farm. Refer to [Toolkit 3.1 – Land Preparation, Orchard Layout and Infrastructure](#) and [Toolkit 3.2 – Cultivars and Rootstocks](#).
- **A Detailed Orchard Replacement Business Plan** – Only now are you in a position to develop a detailed plan which includes all the elements required, such as an orchard replacement schedule, financial implications of removing old orchards and forfeiting that production capacity, sourcing certified and healthy trees, capital investment and working capital costs of the establishing and nursing new orchards before they earn a cent, implications on infrastructure (water demand, irrigation, machinery, buildings, roads), human capital costs, and the financial implications of funding additional debt.
- **Funding** – Special mention should be made about funding. In many instances, especially for the farmer who is trying to establish himself, funding is a challenge. This funding challenge is even more difficult when the institutional structure presents its own challenges, such as CPA, cooperative, and PTO arrangements. A fundamental success factor that changes a dream into a plan is funding.
- **Project Planning** – A plan is only as good as the execution of that plan. Orchard replacement and/or new establishment is a big project. Such big projects happen infrequently, and you cannot really afford to learn from your mistakes through trial and error. Good project management is fundamental and may need to be paid for.

execution steps

See above.

assessment questions

Please Note: There is no minimum / maximum amount of questions you can add

1.	Do you have an accurate record of your historic performance per orchard and a projections of future performance?
2.	Do you have a clear idea of when you will have to invest in orchard replacement?
3.	Are you well informed about both product the market will prefer and what cultivar options you have, and have you requested the necessary technical advice?
4.	Do you have a formal orchard replacement schedule?

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| 5. | Do have a complete orchard replacement business plan, including funding? |
| 6. | Do you have the necessary project management skills to effectively manage the orchard replacement project? |

resources

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| 1. | Citrus Academy AV module – Orchard Layout and Planning |
| 2. | Citrus Academy AV module – Citrus Type and Cultivars |
| 3. | Citrus Academy production learning material – Enterprise Selection and Establishment |
| 4. | CRI cultivar fact sheets |
| 5. | CRI maturity graphs |