

Workflow: Production – Basic Farming Practices

Toolkit 3.9

Environmental Management and Community Impact

target audience

Farm owners and managers

what it is

Citrus farming introduces one dominant plant species at the cost to diversity of natural vegetation. Furthermore, citrus is not an indigenous species. Both these factors have an environmental and ecological impact.

Secondly, large scale farming not only shapes the environment, but also shapes the economy and society of an area.

This toolkit summarises the most important actions and considerations to minimise the negative impact on the environment and to enhance benefits to the community.

why it is important

Your orchards depend on a healthy environment and ecosystem. Erosion, poor storm water management, loss of bio-diversity, poor soil management, excessive chemical use and run off into rivers and other water sources, and poor spraying practices which may damage beneficial insects and fail to comply with regulatory and market requirements, will all damage your business and its sustainability.

Poor environmental practices may directly affect surrounding communities, e.g., polluting rivers and water sources, or aerial spraying without taking the necessary safety measures.

With high levels of unemployment, farmers also must consider their employment practices and impact on the community. Increasingly, significant demands are being made upon farmers to demonstrate that they recruit from all sectors of the community in an equitable manner, e.g., not just one village, or one church affiliation etc. Disenchantment from the community towards the farmer or farm community can have dire consequences such as increased theft and even sabotage, resulting in significant costs to the farmer.

success factors

➤ Environmental and Ecological

- Understanding of the Environmental Impacts of Citrus Farming -- You would do well to list all the environmental and ecological risks you may be imposing on the environment due to your farming activities. The most important ones are listed below Refer to the [Environmental and Ecological Risk Checklist resource](#).
- Maintaining Soil Health – Apart from benefiting your orchard health and your key asset, soil health is a key environmental success factor and depends on you taking the necessary actions regarding:
 - Protecting the biome.
 - Soil structure, stratification, depth, permeability (hydraulic conductivity, and overall levels of degradation).
 - Chemical composition and the careful use of supplementary nutrients and inorganic fertilisers.
- Erosion – Erosion is a key risk due to the reduction in biodiversity and the inherent risk of large orchard design and layout, and resultant amount of open topsoil. Risks in this regard are:
 - Water erosion, including storm water impact, gully, rill, and topsoil erosion etc.
 - Wind erosion.
 - The factors that influence levels of erosion, including the slope, lack of windbreaks, soil structure and the terrain unit (structure and composition of the soil as one moves down the slope from crest to bottom), levels of vegetation cover, and organic material.
 - Firebreaks.
- Water Management – The factors requiring careful management include:
 - Irrigation practices.
 - Protecting water sources and water bodies such as wetlands.
 - A sound water runoff plan.
 - Rainwater harvesting.
 - Water quality.
- Use of Pesticides and other Agrochemicals – Key considerations are:
 - River and ground water contamination.
 - Toxic impact on wildlife and beneficial insects.
 - Pest control and the risk of resistance and decreasing efficacy.
- Invasive and Alien Plants – A key success factor is the ongoing management of invasive and alien plant species, e.g., Lantana.

➤ Social

- Health Risks of Poor Environmental Management – Communities in the area can be directly affected by poor management practices which result in damage to the environment, in particular pollution or excessive chemical and fertiliser run off.

- Aerial Spraying – Great care needs to be taken when engaging in aerial spraying to ensure that neighbouring communities are not at risk.
- Employment Practices – Social sensitivity regarding employment practices, especially regarding mass recruitment of seasonal workers, is becoming increasingly demanding. It may be necessary to do rotational recruiting for limited time periods rather than hiring one large team for the whole picking season. Good community relations, and the ability to communicate effectively with them, are vital to the wellbeing and security of farm and its employees.
- Community Forums – Best use of community forums, including traditional leaders, should be fostered, and maintained.
- Security – All of the above have an impact on the security of your farm, its assets, people and produce. Physical security measures are only one part of the solution; the social and community climate is equally important.

execution steps

See success factors above.

assessment questions

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

1.	Do you have a list of all the environmental impacts and risks on your farm and their respective levels of severity/risk?
2.	Do you deal with soil erosion (whether through water or wind) effectively?
3.	Do you actively monitor and promote soil health?
4.	Do you manage storm water run-off?
5.	Do you monitor and manage chemical (fertiliser and agrochemical) run-off and potential pollution risk to water sources, wetlands, and wildlife?
6.	Do you ensure the safety of people and communities at all times (e.g., aerial spraying, pollution, driving and transport practices etc.)?
7.	Are you sensitive and knowledgeable regarding the social impact you have on the communities of the area?
8.	Are your labour and employment practices conducive to good community relations?
9.	Are your security measures adequate, including both physical prevention and community communication/relationships?
10.	Do you contribute to the social wellbeing of your community (supporting schools or clubs, provide internships, etc.)?

resources

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| 1. | Citrus Academy AV module – Orchard Layout and Planning |
| 2. | Citrus Academy production learning material – Conservation |
| 3. | Citrus Academy production learning material – Enterprise Selection and Establishment |
| 4. | Conservation and Ecological Impact checklist |