Ngā Mahi a Wai Māori

Northland Water Storage and Use Project

Growing Avocado

- Avocado production is well suited to the Northland climate and soil types when reliable irrigation water is provided.
- New Zealand Avocado has evaluated the potential market and is very positive about the potential for growth.
- Although slow to reach maturity, an avocado orchard offers very positive returns.
- From a social and environmental perspective, the avocado industry offers very positive outcomes.

Avocado Requirements

By far the most avocados grown in New Zealand are of the Hass variety.

Avocados grow best in climates with warm day temperatures and few frosts, as in Northland. To achieve the optimum production, daytime temperatures during summer should average around 20 to 24°C, with temperatures greater than 10°C during flowering in spring.

Avocados are best grown on free draining soils as they are prone to phytophthora root rot when grown in water logged soil conditions. A soil pH of 5.5 – 6.0 is best for growing avocados as phytophthora thrives in soils with a pH above 6.5.

Avocados also require shelter from wind, regular fertiliser applications and grow well in fertile soils with good organic matter content. The free draining and sandy soils in Northland can grow avocados successfully, so long as they are well managed. Part of this management will include regular irrigation to minimise soil moisture deficits, which sustains growth and productivity of the orchard.

Avocados require excellent management all year round with additional labour during the pruning and harvest seasons.

The Investment Outlook

Avocado growers are represented by New Zealand Avocado, which has an industry strategy to quadruple sales to $280M and to triple productivity by 2023.

PROVINCIAL DEVELOPMENT UNIT
Far North District Council
Te Kaunihera o Tai Tokerau ki te Raki
KAIPARA DISTRICT
Northland REGIONAL COUNCIL

The industry has carried out an evaluation of the potential opportunities in the international market and is concentrating on growing the Australian market and opening-up the Chinese and wider Asian markets to achieve a sustainable industry growth rate.

The long-term success of the marketing of avocados is based around a differentiated story with evidence based on sustainability, environment and nutrition.

Possible Financial Returns

The ANZ bank estimates that a greenfield development of an avocado orchard could incur establishment costs of between $45,000 to $60,000 / ha, without considering the cost of the land and fixed costs such as infrastructure like building, power and water supply.

Greenfield developments are aiming for yields of between 16 and 24 t / ha, or around 3,000 to 4,400 trays / ha, and to reduce the inconsistency in annual yields that the industry has experienced to date. Gross returns have increased over the last few years with the weighted average returns averaging $28.80 per tray over the last five years, which provides gross yields of approximately $85,000 to $125,000 / ha. Post-harvest costs (grading, packaging freight and marketing) have averaged $9.90 / tray leaving an orchard gate, returning an average $18.90 / tray.

Orchard operating costs vary from $3,500 to $5,500 / ha in the initial years to $19,000 to $20,000 at maturity.

	Mature Orchard (Year 10 0nwards)
Orchard yield (kg)	18,500
Tray equivalents (TE)	3,364
Average $ per tray	18.9
Income	63,573
Less picking cost	5,592
Total orchard costs	1,050
Total tree mgmt. costs.	13,460
Total expenditure	14,510
Cash Surplus	**43,471**

Mature Orchard Returns (ANZ) ($ / ha)

The net result, operating under these assumptions, is that a mature orchard would return a cash surplus of $43,500 / ha.

The orchard is relatively slow to achieve the mature orchard returns and doesn't return a positive cash flow until year five but can repay the initial establishment costs and the financing costs in year eight.

This level of return offers a very satisfactory Internal Rate of Return, even when including the cost of the land, of approximately 19%.

It should be noted that some growers are spending up to $120,000/ha developing more intensively planted orchards on the Aupōuri Peninsula, excluding the purchase price of land.

Social and Environmental

Avocados will have a very positive impact on the local population with two to three permanent staff required for every 10 planted hectares and more seasonal labour required for pruning and harvesting. The processing, packaging and marketing all require additional capital and labour to service this growing industry. These are all positive impacts on the local community.

Whilst significantly different to traditional livestock farming, and typically requiring a reliable water source for irrigation, the environmental footprint of avocados is relatively low compared to traditional livestock production.

Possible means of affordability of the investment.

The initial cost of developing an avocado orchard, and the skills required to make it work at optimum productivity, may seem daunting to the traditional farmer. Other than upskilling yourself, alternative ways to transition to irrigated horticulture and realise the potential of your land include:

- contracting a turnkey orchard developer;
- forming a joint venture partnership;
- leasing your land to another operator; and/or
- selling the land to an orchard developer.

Sources of Information

- New Zealand Avocado - source of excellent practical information here.
- ANZ's excellent review of the state of the avocado industry here.
- Your local horticultural consultant.

Information prepared by Williamson Water and Land Advisory, October 2019.