

Provincial Growth Fund Position Paper | Tier 2: Sector Investments

Hemp-growing Investments

Purpose

This paper outlines the Provincial Growth Fund's (PGF) position on assessing applications for hemp-growing projects. The position has been guided by the vision, objectives, approach and priorities set out in the overarching [Tier 2: Sector Investment position paper](#). Overall, the paper provides a high-level assessment of the potential for hemp growing projects to contribute to the Tier 2: Sector Investment vision.

This paper does not include discussion on medical marijuana. The PGF would not be in a position to consider investing in medical marijuana projects until a scheme that will enable domestic commercial cultivation and manufacture of medicinal cannabis is in place.¹

Further reading

This paper draws on the following reports by the Ministry for Primary Industries:

- An Overview of the New Zealand Hemp Industry, Regional Economic Development Unit, May 2019;
- Global Hemp Markets: Product and Consumer Landscapes, Economic Intelligence Unit, February 2019.

Background

Growth potential

Hemp is a versatile and non-psychoactive *Cannabis sativa* plant species that has many commercial uses.² The growth potential may be high for the sector. Nationally and internationally the demand for hemp as a food and fibre product is increasing. There is now very high interest in the opportunities the hemp industry offers. For example, the number of new hemp retail products launched globally has increased consistently from just over 100 in 2012, to 654 in 2018. Snack products are the dominant category for hemp products, followed by bath and shower products, protein supplements and hair products.

However, claims made for the growth potential of the New Zealand-based industry are more speculative than empirical. There is some concern that the current high-levels of interest in hemp

¹ The Ministry of Health is leading work to develop a scheme (the Medicinal Cannabis scheme) that will enable domestic commercial cultivation and manufacture of medicinal cannabis. It is expected that the Scheme and Agency to administer the Scheme will not be operational until the first quarter of 2020. The PGF would not be in a position to consider medical marijuana projects until this scheme to be in place. Medicinal cannabis projects will therefore be unable to be considered by the PGF within its timeframes.

² Industrial hemp (hemp) describes varieties of *Cannabis sativa* that are bred to have a tetrahydrocannabinol (THC – a cannabinoid that has psychoactive effects) content generally below 0.35% of the dry weight of the plant and is not above 0.5% or seeds harvested from a plant of that kind. Medicinal cannabis products contain between 2% and 49% CBD (a cannabinoid that has no psychoactive effects).

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may contribute to a 'gold-rush' mentality, leading to over-production of hemp and a consequent slump in the market. As the hemp industry is in a state of change, with many new producers coming online, the export value of hemp is highly uncertain.

s 9(2)(g)(i)

To compete globally it is likely that hemp products need to achieve a reputation similar to other areas of production New Zealand is renowned for. This implies a significant amount of work needs to occur before New Zealand hemp will be competitive in export markets.

For the immediate future it is reasonable to describe entering the hemp industry as risky if the participants are under-capitalised. New Zealand-based firms will likely require investments of scale to be competitive in the market. Between 2013 – 2018, the average size of a sample of 1000 investments was approximately \$61 Million USD.

Achieving competitive scale will be a challenge for the New Zealand hemp industry. It is likely that, due to market forces, dominant players will emerge and smaller operators either withdraw from the market or occupy small local niches. However, competitive scale may be able to be achieved through the creation of hemp-growing collectives, which PGF funding could have a role in supporting through investment in hemp processing plant.

Regulatory environment

Growth in production is also constrained by existing regulation. There is significant regulatory compliance required to gain and maintain a hemp growing licence, which is not likely to change in the near future.

Cultivation of approved hemp cultivars for fibre and seed oil (only) has been legal in New Zealand since 2006. But with legislative change amending the Misuse of Drugs (Industrial Hemp) Regulations 2006 and the Food Regulations 2015, it is now legal to sell hemp as food (from February 2019).

As hemp continues to sit at the intersection of medicine and food, the Ministry of Health continues to regulate hemp, and issue and monitor licenses to grow it. s 9(2)(g)(i)

The Zero Carbon Act and the Emissions Trading Scheme reform will mean a higher carbon price, which may incentivise farmers to consider converting land to hemp production due to its low emissions.

³ s 9(2)(b)(ii)

Current activity

In June 2018 there were around 40 hemp farmers in New Zealand. The areas with the most production are the East Coast, Northland and Canterbury.

The hemp industry has two major players: s 9(2)(b)(ii)

s 9(2)(g)(i)

s 9(2)(g)(i)

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Other government support

The MPI Sustainable Food and Fibre Futures Fund supports innovative food and fibre production projects that will create more value from these industries. Hemp projects are eligible for funding which can exceed \$5 million for long-term partnerships between firms and government. To date one hemp project has received funding from MPI. The project is run by Ngati Kahungunu Tamaki Nui a Rua, who have begun scaling up hemp production in the Hawke’s Bay for export.

Callaghan Innovation has been actively researching opportunities in the hemp and medicinal cannabis sector. They offer process development and design advice including advice on equipment selection and specification, costings for investment proposals, process design and research strategy development. For product development they offer experimental development and testing of process options and product formats including extraction, pre and post processing formulation. They can also support on-site research and development, plant installation, commissioning and operation and training.

Alignment with Sector Investment objectives

Sector Investments aim to sustainably increase the productivity potential of regions, by enabling an increase in the volume and value of regional economic activity that would otherwise not occur. The potential for an increase in the “volume” of economic activity is assessed in terms of increased use of un- or under-utilised resources (such as land or people). The potential for an increase in the “value” of economic activity is assessed in terms of increased productivity of resources.

Potential for hemp investments to increase the volume of economic activity

There are industry-based estimates that hemp plantings have the potential to increase significantly, ranging from 1,000 to 10,000 hectares per annum. However, these estimates have not been independently verified. Growth may be constrained by the fact that hemp requires good quality arable land that is likely already growing other crops. Marginal or poorly drained, stony soils are not

suitable. Hemp growing is also likely to require irrigation. Some crops in Canterbury have been grown without irrigation, however production normally requires it.⁴

Mainly conventional equipment can be used for harvest but certain components must be specially imported, and importers face difficulties due to the high level of regulation on hemp processing.

Potential for hemp investments to increase the value of economic activity

Employment opportunities within the hemp industry sit within “mixed skilled/medium wage employment category”. Investments in this category generate a more limited number of new jobs, but that put firms on a stronger basis for enduring economic successes by improving their productivity, thus contributing to future viability of regions’ economies, and providing higher-skilled career pathways for people in the regions.

Jobs in the hemp industry are similar to regular farming jobs on arable land, requiring moderate physical labour with seasonal peaks in hours, but providing year round employment. However due to the use of combine harvesters to harvest hemp products, these jobs tend to be higher-paid with lower health and safety risks.

Callaghan Innovation have produced some high level models to cost setting up plants to process 10, 100 and 1000 tonnes of hemp per annum. The small scale option requires one operator. The larger scale operations require 2-3 operators per shift and generally operate 24/7. These models confirm that workforce requirements to support hemp processing are likely to be for small numbers of technically trained staff.

As well as the potential to directly create decent jobs in the regions, sustainable hemp-growing investments have the potential to incentivise down-stream value-added processing investments, in line with global hemp product trends. Hemp-growing investments therefore have the potential to create domestic value chains that can generate better paid jobs, greater regional productivity, and a stronger foundation for future prosperity.

There are industry claims the crop can be grown pesticide-free (thus reducing input cost) in New Zealand but, while there are cases of pesticide-free production, it is rare and normally not on a commercial scale.

Relationship to broader PGF objectives

Environmental Sustainability and Climate Change:

- Hemp fibre traps carbon as the plant grows and requires little water to grow comparative to cotton, as such it is a more sustainable fibre, creating less environmental damage and contributing to climate change mitigation.

Māori Development:

- s 9(2)(g)(i) [Redacted]

⁴ For more detail on conditions required to cultivate hemp, see *The New Zealand Hemp Industry – An Overview, Regional Economic Development Unit, MPI, May 2019, p12.*

- s 9(2)(b)(ii)
- s 9(2)(b)(ii)

Policy position

Hemp-growing investments have the potential to contribute to the Sector Investment vision by capitalising on a growth industry that can increase the value and sustainability of regional economies. In particular, hemp investments could generate higher paid jobs in a sustainable industry that helps secure a region's future prosperity, for example by:

- directly creating jobs that are higher paid than comparable farming jobs on arable land; or
- indirectly catalysing the creation of down-stream employment in value-added product processing.

However, given the challenges and uncertainties facing the industry, the PGF has a narrow remit for considering applications for hemp projects. In line with the approach set out in the Tier 2: Sector Investment position paper, the PGF is interested in projects proposed by well-established growers, or groups of growers.

Established growers are best placed to have the expertise and relationships to navigate the complex regulatory environment (they must), successfully grow hemp that is commercially viable, and understand the challenges posed by market uncertainties.

In particular, applications must:

- confirm possession of all relevant licenses;
- demonstrate strong market research, and knowledge of the challenges of growing hemp commercially;
- confirm access to necessary skills, and linkages with industry experts;
- confirm that they have applied for the MPI Sustainable Food and Fibre Futures fund, or explain why they have not;
- demonstrate that they can scale up their operations, or begin project, within PGF timeframes.

This position builds on the standard principles for Sector Investment set out in the Tier 2: Sector Investment position paper, which will also apply to all applications for hemp-growing projects. These are:

- projects will be considered in the context of regions' comparative advantages, challenges and opportunities;
- projects will not be funded where other appropriate sources of government support are available;
- projects will not be invested in where the primary firm involved is an early stage or start-up firm (not including situations where experienced applicants establish a new company for trading purposes, for example, when a new venture involves collaboration with a number of parties or a new partnership);

- firms will have already sought private sector funding, and provided a clear explanation as to why it was not approved;
- projects will be supported by a clear and compelling proposal, confirming long-term viability (including understanding and management of risks);
- projects will not be funded until appropriate levels of due diligence on funding recipients is carried out;
- the project will include clearly identified public benefits relating to, in particular, Jobs and Sustainable Economic Development, Māori development; Social Inclusion and Participation; Climate Change and Environmental Sustainability; or Resilience (infrastructure and economic);
- projects will begin within the timeframes of the PGF;
- projects should have a minimum 50% co-contribution.

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