



MIDLANDS

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R & D Manager

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**Hemp – can it live up to the hype?**





MIDLANDS



**2001 - 2021**



# Midlands Hemp Innovation Program

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- General Agronomy
- Pesticide Free Grain
- Food Grade Grain Specs
- Product Development
- Cannabinoid Profiling
- Biomass Evaluation
- Certified Seed Production
- Promote regulation review



# HEMP 101

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- Annual crop sown from Oct – Dec & harvested from Feb – April (Fibre vs Grain)
- Best on free draining, well structured soils, 10°C +
- Requires moderate fertility (similar to Canola)
- Good WUE but grown in the driest part of the year
- **Flowering regulated by daylength**
- Frost sensitive
- Conventional sowing & harvesting equipment
- **No pesticide registrations in NZ**
- Grain requires drying
- **A favourite with birds (Pigeon Feed Market)**
- **Relatively short shelf life due to high polyunsaturated oil content**



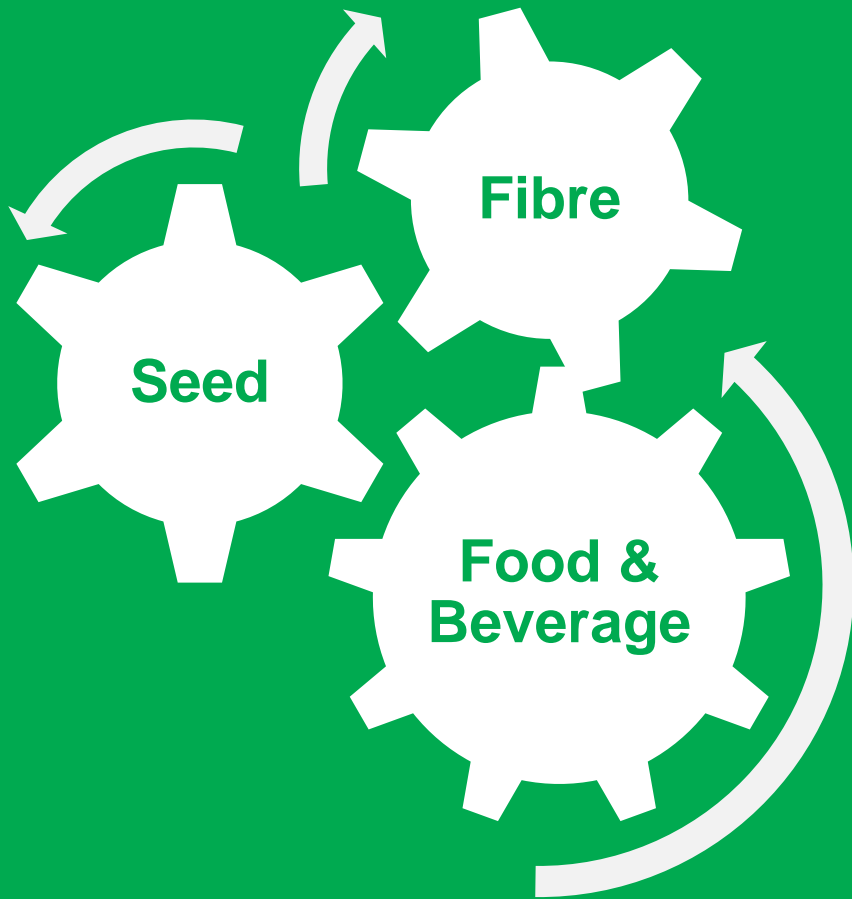


# What makes Hemp different?

- *Cannabis sativa* L. (*C. indica*, *C. ruderalis*)
- Industrial Hemp <0.35% THC plant material
- Seeds do not contain cannabinoids including THC & CBD
- **Regulated by Ministry of Health in NZ**
  - MODA (Zero THC)
  - Ihemp Regulations 2006 & 2018
- **Licences required for cultivation, processing, importing and exporting of iHemp**
- Not allowed to harvest leaves, flowers or roots
- Not permitted as an Animal Feed or Supplement
- Medicinal Cannabis production permitted under licence in 2019-20
  - THC & CBD
  - Prescription only medicines
- Recreational Cannabis referendum 2020 (48.7% to 50.7%)

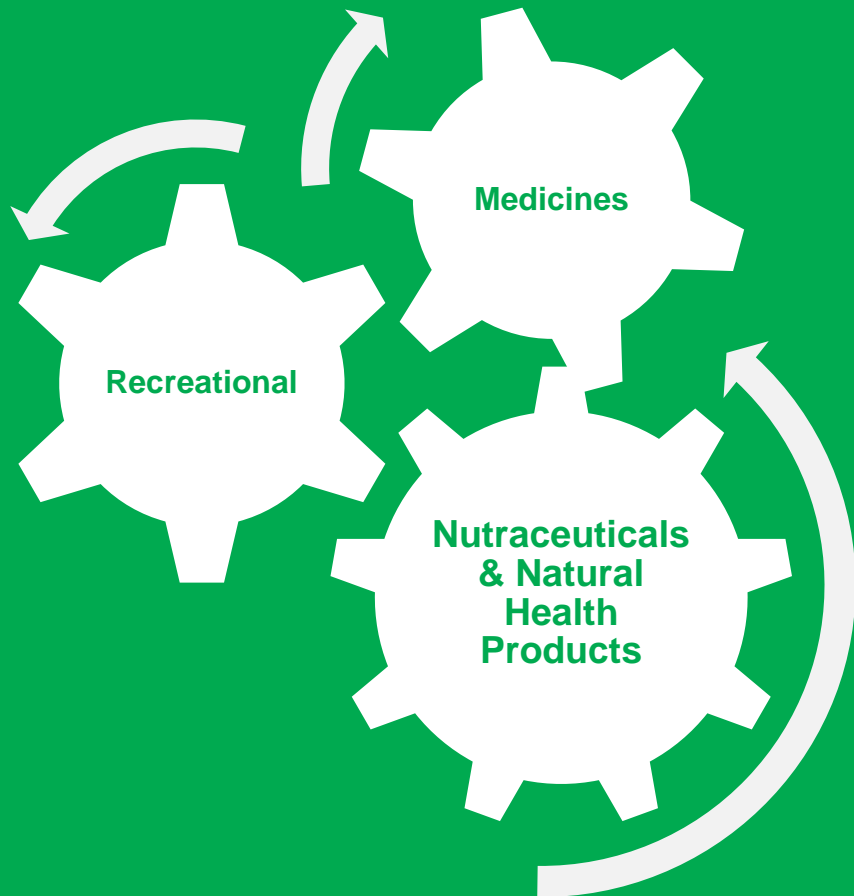


# Hemp Markets



- **Seed for sowing**
- **Grain for food & beverage**
  - Gluten free
  - High protein content
  - Contains Essential FFA
  - Oil
  - Dehulled seeds
  - Protein powders
  - Flour
  - Fibre
  - Milk
  - Beverages
- **Fibre – hurd & bast fibres**
  - Paper
  - Rope
  - Textiles & apparel
  - Carpets & soft furnishings
  - Bio-plastics
  - Composites
  - Building Materials
    - Insulation
    - MDF board
    - Hempcrete
  - **Animal bedding**
- **Animal Feed**

# Medicinal Cannabis Markets



- **Prescription Medicine**
  - Full spectrum CBD
  - THC/CBD combinations
    - Anxiety
    - Inflammation
    - Epilepsy
    - Pain Relief
    - Anti-nausea
- **Nutraceutical & Natural Health Products**
  - OTC supplements
    - Human supplements
      - CBD/CBG/CBN
    - Animal supplements
      - Pet Food
  - Beauty Products
    - Cosmetics
    - Hair Care
    - Body Lotions
  - Tinctures
- **Recreational**

**OUTDOOR = USD 712 MILLION**

## USDA National Hemp Report 2021 - Summary

**NON FLORAL = USD 89 MILLION**

USE TYPE (Outdoor Production)	AREA HARVESTED (Ha)	PRODUCTION (kg/ha)	VALUE (USD)
GRAIN	3,300	530	\$5.99 Million
FIBRE	5,080	2620	\$41.4 Million
SEED	1,405	530	\$41.5 Million
FLORAL	6,400	1,235	\$623 Million
INDOOR (VARIOUS)			\$112 Million



## Deloitte Analysis - 2021 CANNABIS ANNUAL REPORT

Figure 6 Government tax revenues supported by Canada's cannabis sector | 2018-2021



## NZ Hemp Export Driven Investor Report – Next Corporation

### Scenario 1

- **No Regulatory Reform**
- Food & Fibre Products Only
- **NZD 500 Million by 2030**
- 5,000 new jobs

### Scenario 2

- **Regulatory Reform**
- **Food NZD 183 Million**
- **Fibre NZD 317 Million**
- **Nutraceuticals NZD 1.5 Billion**
- 20,000 new jobs

## Sapere Report for MPI – 1<sup>st</sup> June 2021

	Driver of future global growth	Global market CAGR*	2020 value	NZ market share %
Scenario 1	Fibre	13.7%	\$3.6b	0.1%
Scenario 2	Food	22.0%	\$3.9b	0.1%
Scenario 3	Food	22.0%	\$3.9b	0.5%
Scenario 4	Food	34.0%	\$4.2b	1.0%

**Scenario 2 was valued at 30.2 Million**

# Industry Challenges

- NZHIA recently facilitated an independent industry review
- Completed by Magic & Science Consulting
- Three key actions required to enable industry

New Zealand's Hemp regulatory framework is not fit for purpose, impeding industry enablement, growth and benefit realisation.  
50%

Public, stakeholder and investor ignorance, confusion and stigma about hemp is impeding demand, investment and innovation.  
30%

New Zealand's Hemp industry is fragmented and not aligned under a common industry strategy or roadmap, impeding industry maturity, cohesion, capability development and economies of scale.  
20%




## With the right legislative framework and industry coordination ....

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### Hemp - CBD, Fiber & Grain

“Hemp is the sleeping giant of the cannabis industry. I am sometimes quoted for saying, "cannabis is sexy, but hemp is transformational." The amount of product innovation around hemp is staggering, and the appetite for hemp-based industrial products continues to grow. In the global marketplace, as is the case in U.S. markets, hemp innovation is challenged by an immature supply chain, which spans the entire industry, from cultivation, processing and manufacturing, to retail and ultimately the consumer's willingness and enthusiasm for adopting hemp-based products.”

Whitney Economics - [whitneyeconomics.com](http://whitneyeconomics.com)



The seed has been sown, its time to action and realise this opportunity ....

# Thank you



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