

ADAPTED FROM A VERSION BY RURAL INDUSTRIES RESEARCH & DEVELOPMENT CORPORATION, ACT AUSTRALIA

THE NZHIA

iHEMP

DISCOVERY & INVESTMENT

TOUR 2022

FOOD • FIBRE • HEALTH



Exploring hemp's
economic and
sustainability potential

SPONSORED BY:

AGMARDT



GOLDEN BAY

SPONSORED BY:

AGMARDT



Thames War Memorial Civic Centre

Tuesday 21 June 2022

PRESENTED BY RICHARD BARGE

NZ Hemp Industries Association iHemp and History



Growers and Cultivators



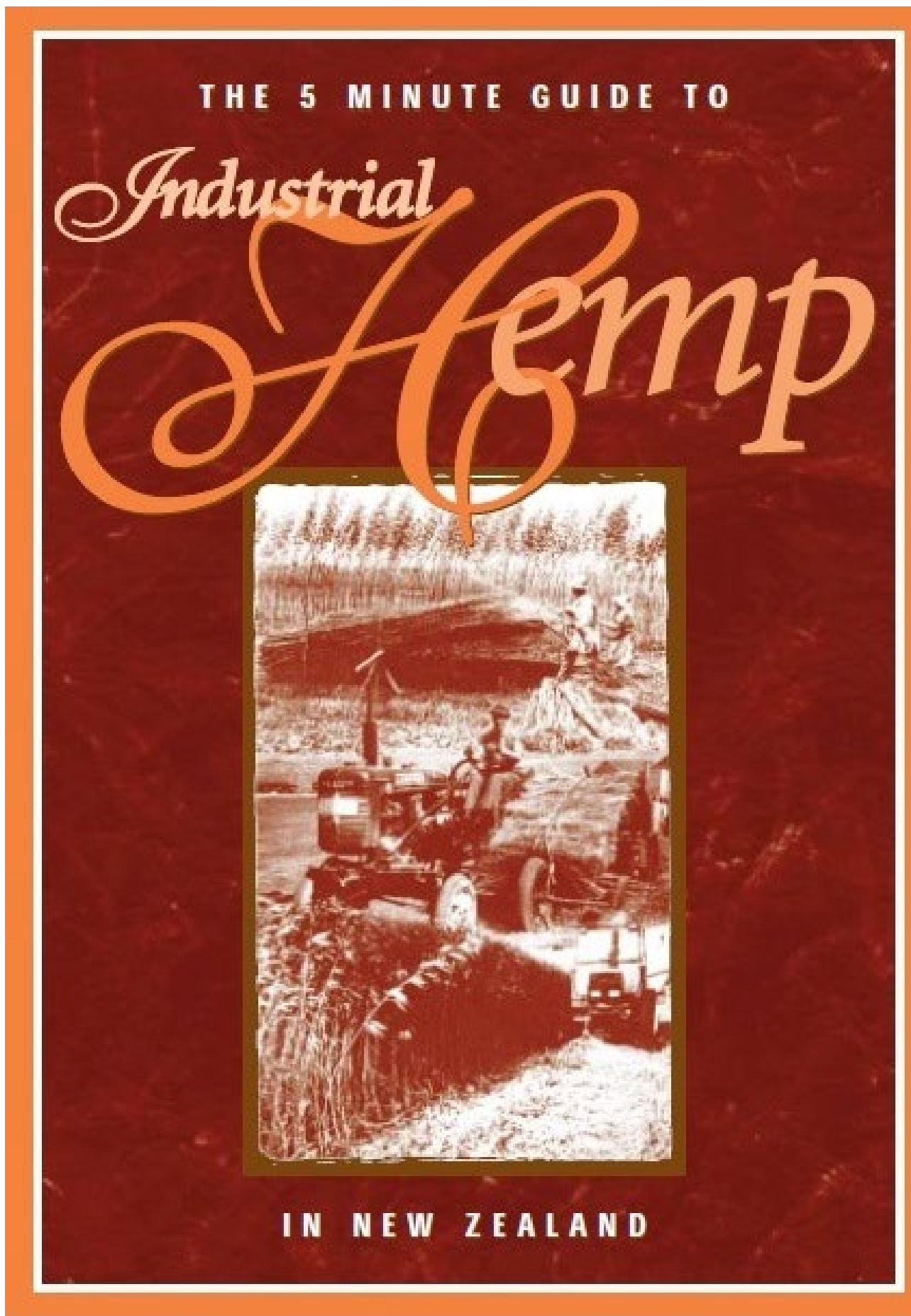
Testing and Development



Processors and Manufacturers



Distributors and Consumers



NZ HEMP EXPORT DRIVEN INVESTOR REPORT:
\$2 BILLION AND
20,000 REGIONAL JOBS BY 2030
JUST NEEDS THE NOD...

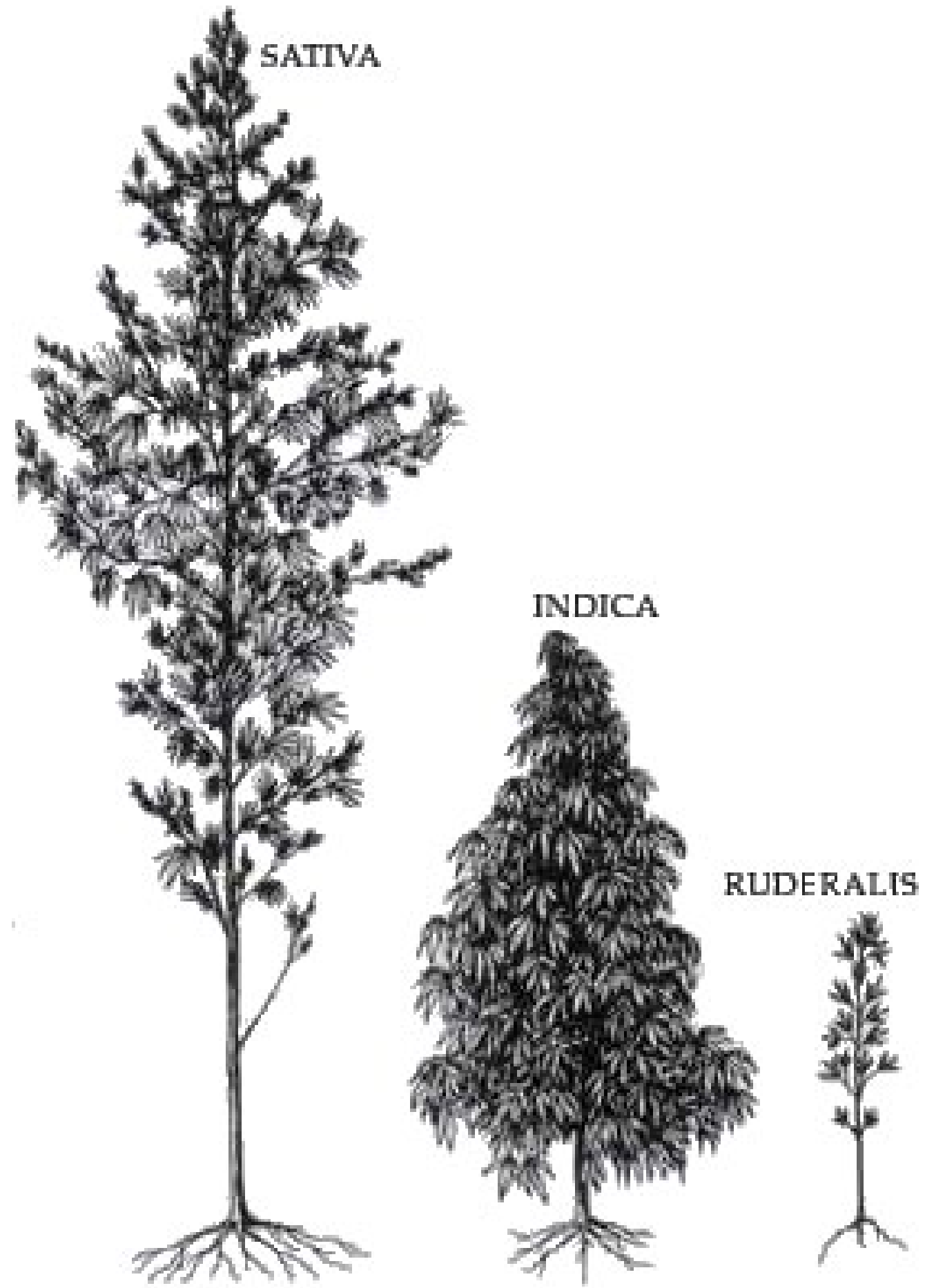
EUROPE CHINA NORTH AMERICA SOUTH AMERICA
INDIA AUSTRALIA NEW ZEALAND

G R O W T H

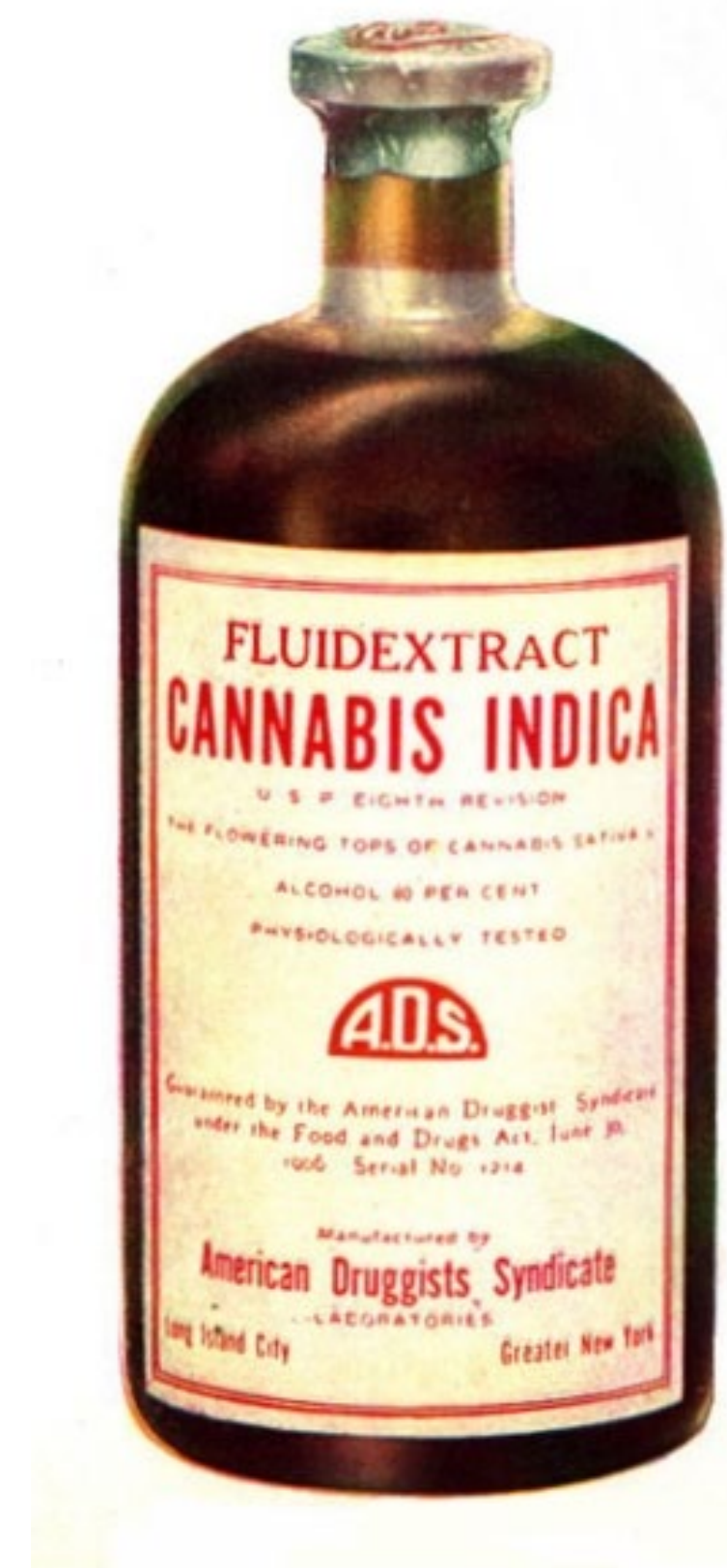
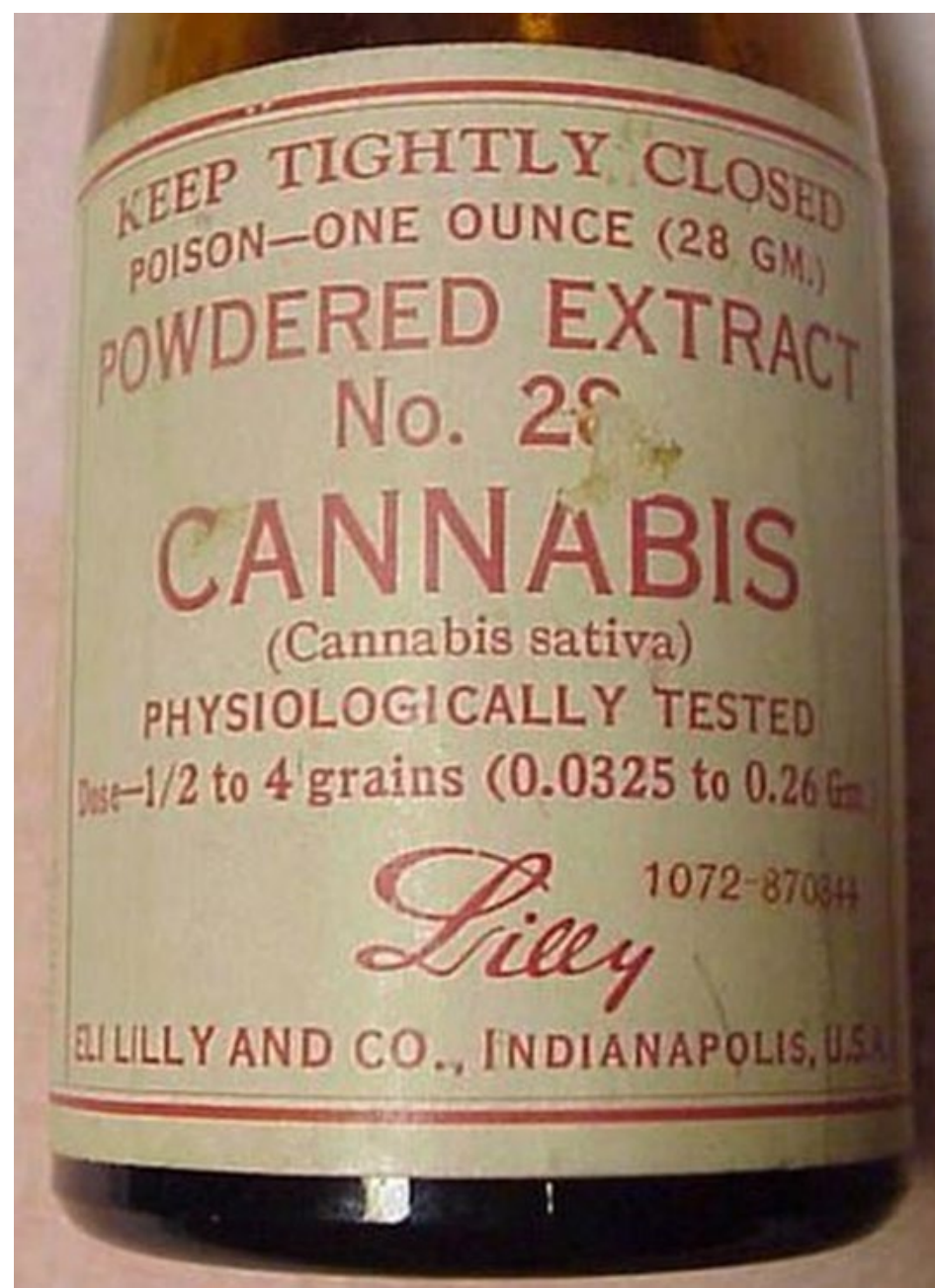
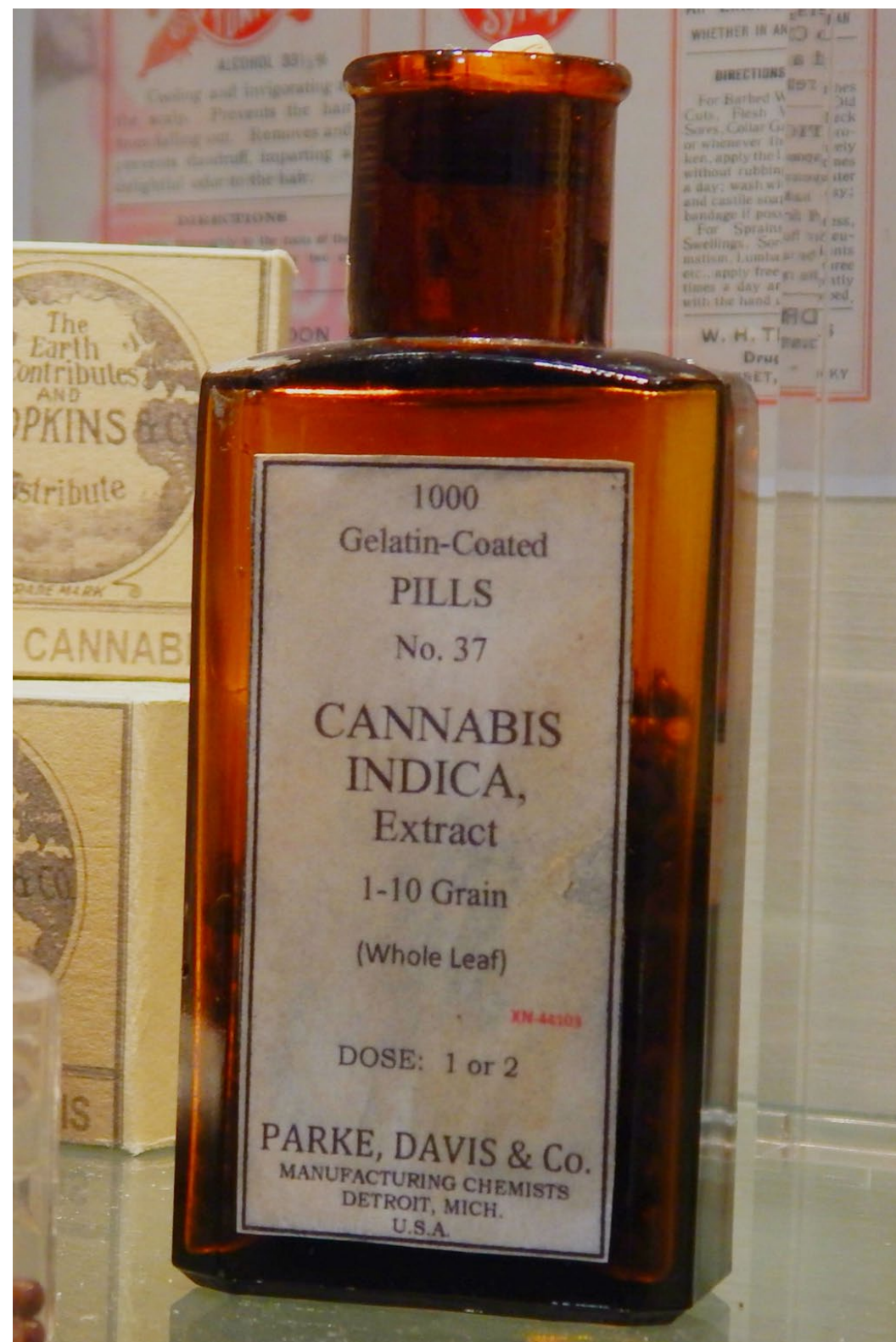
FULL REPORT

The graphic features a world map with yellow dots and dashed lines connecting New Zealand to various global markets: Europe, China, North America, South America, India, and Australia. Below the map, the word 'GROWTH' is spelled out using wooden blocks. A hand is shown placing the letter 'H' on the block. At the top, there are three small images: a field of hemp, a person in a kitchen, and a bowl of hemp-based food. A 'FULL REPORT' button is located at the bottom right.

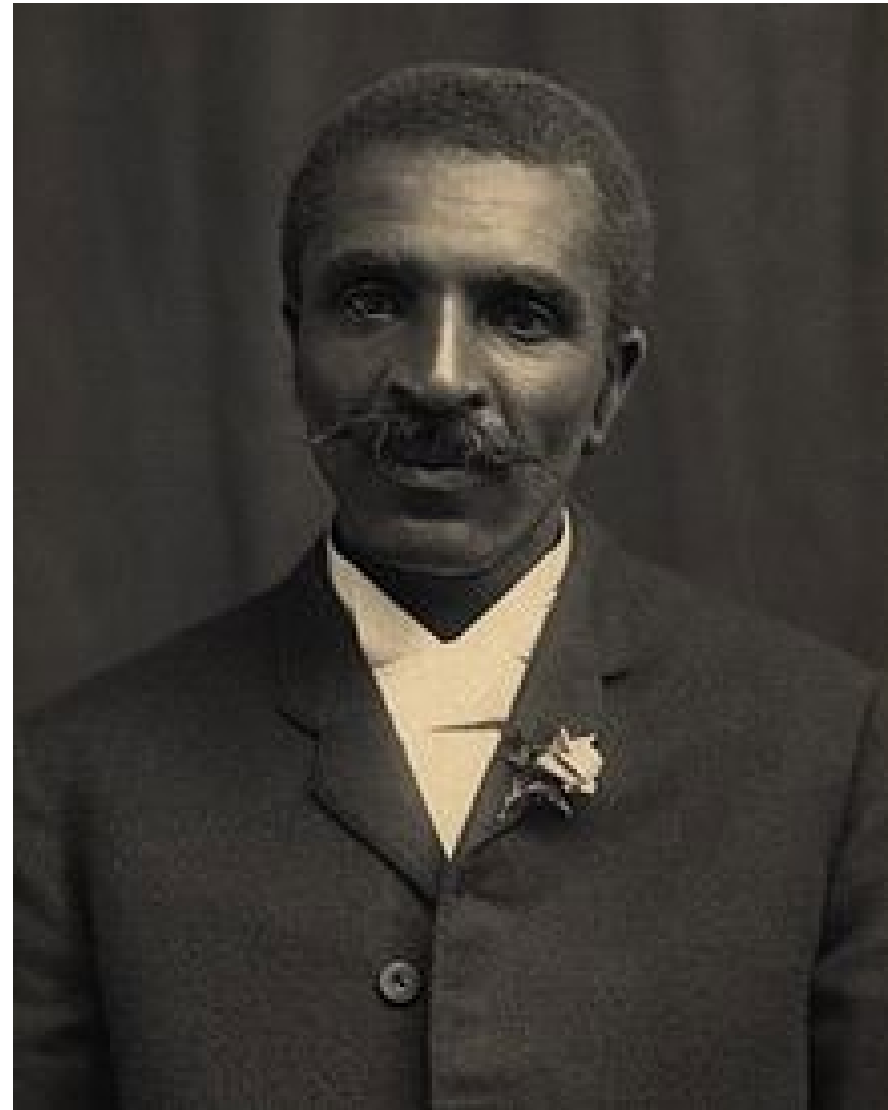








Chemurgy is a branch of applied chemistry that is concerned with preparing industrial products from agricultural raw materials



George Washington
Carver c1910



Henry Ford c1930



UNITED STATES DEPARTMENT OF AGRICULTURE
 BULLETIN No. 404

Contribution from the Bureau of Plant Industry
 WM. A. TAYLOR, Chief

Washington, D. C. PROFESSIONAL PAPER October 14, 1916

HEMP HURDS AS PAPER-MAKING
 MATERIAL

By
 LYSTER H. DEWEY, Botanist in Charge of Fiber-Plant Investiga-
 tions, and JASON L. MERRILL, Paper-Plant Chemist
 Paper-Plant Investigations

This bulletin is printed on paper manufactured from hemp hurds,
 run No. 143, which is recorded on page 20

CONTENTS

Page	Page
The Production and Handling of Hemp Hurds, by Lyster H. Dewey :	The Manufacture of Paper from Hemp Hurds, by Jason L. Merrill :
What Hemp Hurds are 1	Introduction 7
Pith, Wood, and Fiber 2	Factors Justifying an Investigation of Hemp Hurds 8
Character of Hurds Affected by Retting 2	Character of the Material 11
Proportion of Hurds to Fiber and Yield per Acre 3	Character of the Tests 12
Hurds Available from Machine-Broken Hemp 3	Operations Involved in a Test 13
Present Uses of Hemp Hurds 4	Description of Tests 16
Present Supplies of Hurds Available 5	Comparison of the Tests and Commercial Practice 21
Baling for Shipment 5	Physical Tests of the Papers Produced 24
Cost of Baling 5	Conclusions 25
Summary 6	



WASHINGTON
 GOVERNMENT PRINTING OFFICE
 1916



BILLION-DOLLAR CROP

petition with multi-produced foreign fiber while paying farmers \$1000 a ton for hemp as it comes from the field. From the farmer's point of view, hemp is an easy crop to grow and will yield from three to six tons per acre on any land that will grow corn, wheat, or oats. It has a short growing season, so that it can be planted after other crops are in. It can be grown in any state of the union. The long roots penetrate and break the soil to leave it in perfect condition for the next year's crop. The dense stand of leaves, eight to twelve feet above the ground, shades out weeds. Two successive crops are enough to reclaim land that has been abandoned because of Catfish disease or quack grass.

Under old methods, hemp required to pay rent

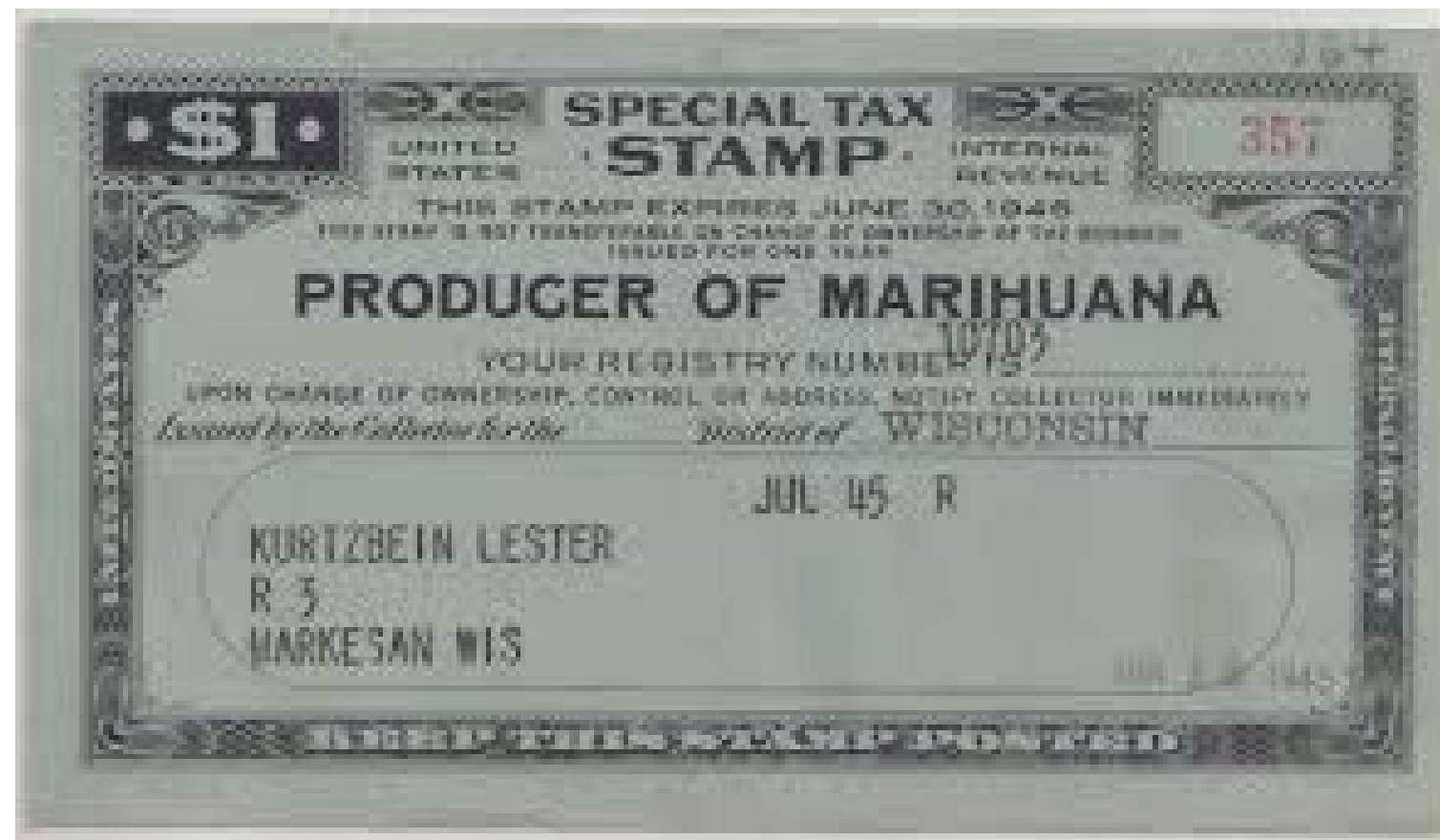
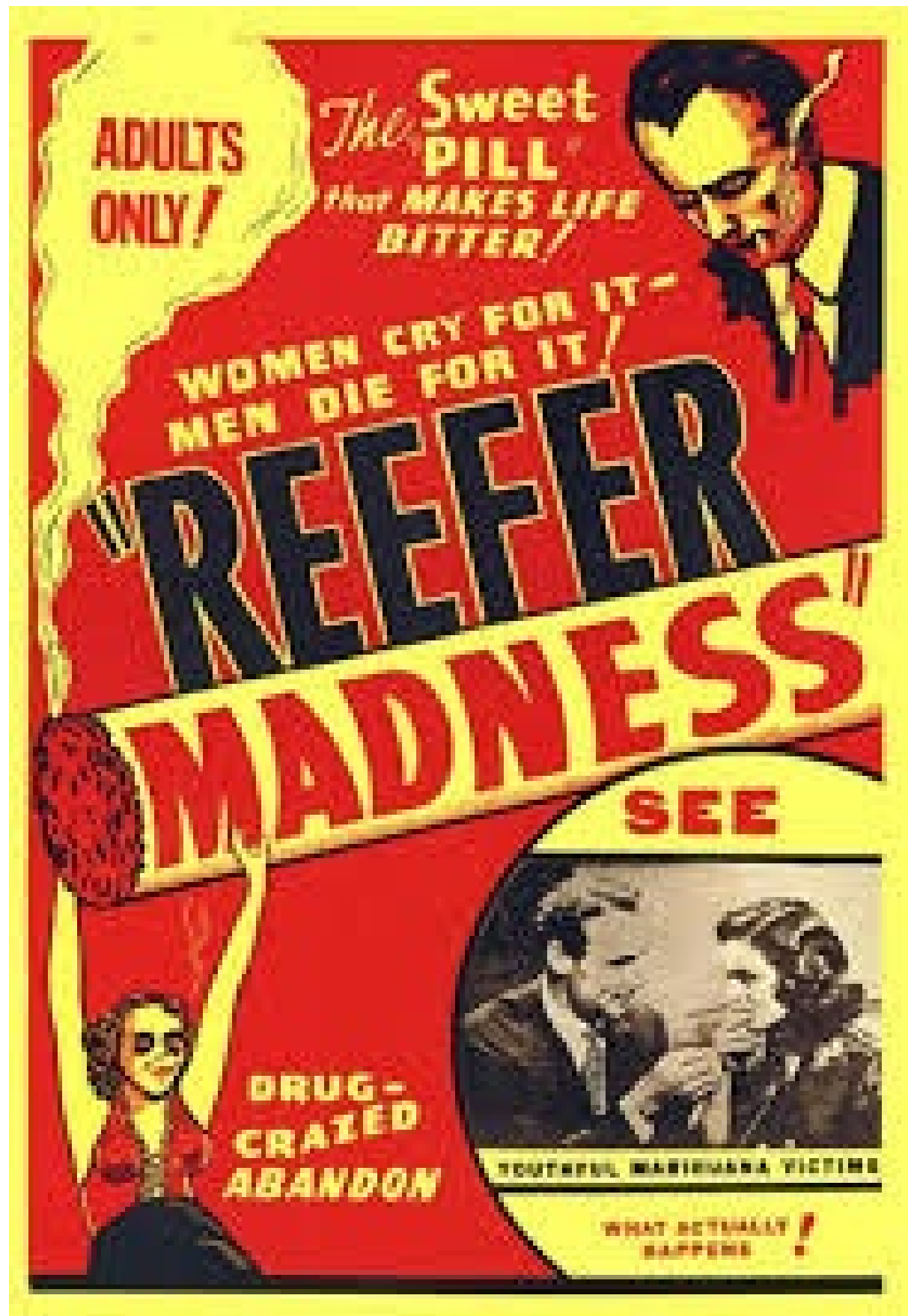


Fig. 1. Machine for breaking hemp stalks from bales. Bottom, horizontal hemp with a grade ladder. Hemp grown commercially in France.



FARMERS' BULLETIN No. 1935
 U. S. DEPARTMENT OF AGRICULTURE







All the hempseed available in the U. S. is stacked in this Kentucky warehouse under armed guard. Next year, USDA hopes, there'll be enough to grow 350,000 acres.

Photo: U.S.D.A. by Forney/Re

The Humorous Hemp Primer

The cover shows the male plant eager to pollenate the willing female.

The Lustrous Hemp Fiber

HERER - BROCKERS - KATALYSE
DIE WIEDERENTDECKUNG DER NUTZPFLANZE CANNABIS MARIHUANA

Hanf

EINE DER ÄLTESTEN KULTURPFLANZEN DER ERDE KÖNNTE HELFEN, DIE MENSCHEN AUSREICHEND MIT KLEIDUNG, PAPIER, ÖL, BRENNSTOFF, NAHRUNG, BAUMATERIAL UND VIELEN MEDIZINEN ZU VERSORGEN

ZWEITAUSENDEINS

Prim
impo
hume
form
doub
hemp
the n

Reich
Nutri

The
Tran
repr
Wes
Her
Th
par
sam

film "Hem
that Germ
effort to
productio
World W
"The H
is reprod
with Eng
Steinhau

Page 11

SINGLE CONVENTION
ON
NARCOTIC DRUGS, 1961,

as amended by
the 1972 Protocol Amending the Single Convention
on Narcotic Drugs, 1961



Article 28. Control of cannabis

1. If a Party permits the cultivation of the cannabis plant for the production of cannabis or cannabis resin, it shall apply thereto the system of controls as provided in article 23 respecting the control of the opium poppy.
2. This Convention shall not apply to the cultivation of the cannabis plant exclusively for industrial purposes (fibre and seed) or horticultural purposes.
3. The Parties shall adopt such measures as may be necessary to prevent the misuse of, and illicit traffic in, the leaves of the cannabis plant.



Reprint
as at 1 April 2020



3 Object

The object of these regulations is to enable the cultivation and distribution of industrial hemp under a licensing regime that ensures that other forms of cannabis are not cultivated and distributed under the guise of industrial hemp.

Misuse of Drugs (Industrial Hemp) Regulations 2006 (SR 2006/163)

Dame Sian Elias, Administrator of the Government

Order in Council

At Wellington this 26th day of June 2006



hemp means cannabis plant, seed, or fruit

hemp product means—

- (a) a product of a kind that is derived, in whole or in part, from industrial hemp; and
- (b) a hemp seed food product

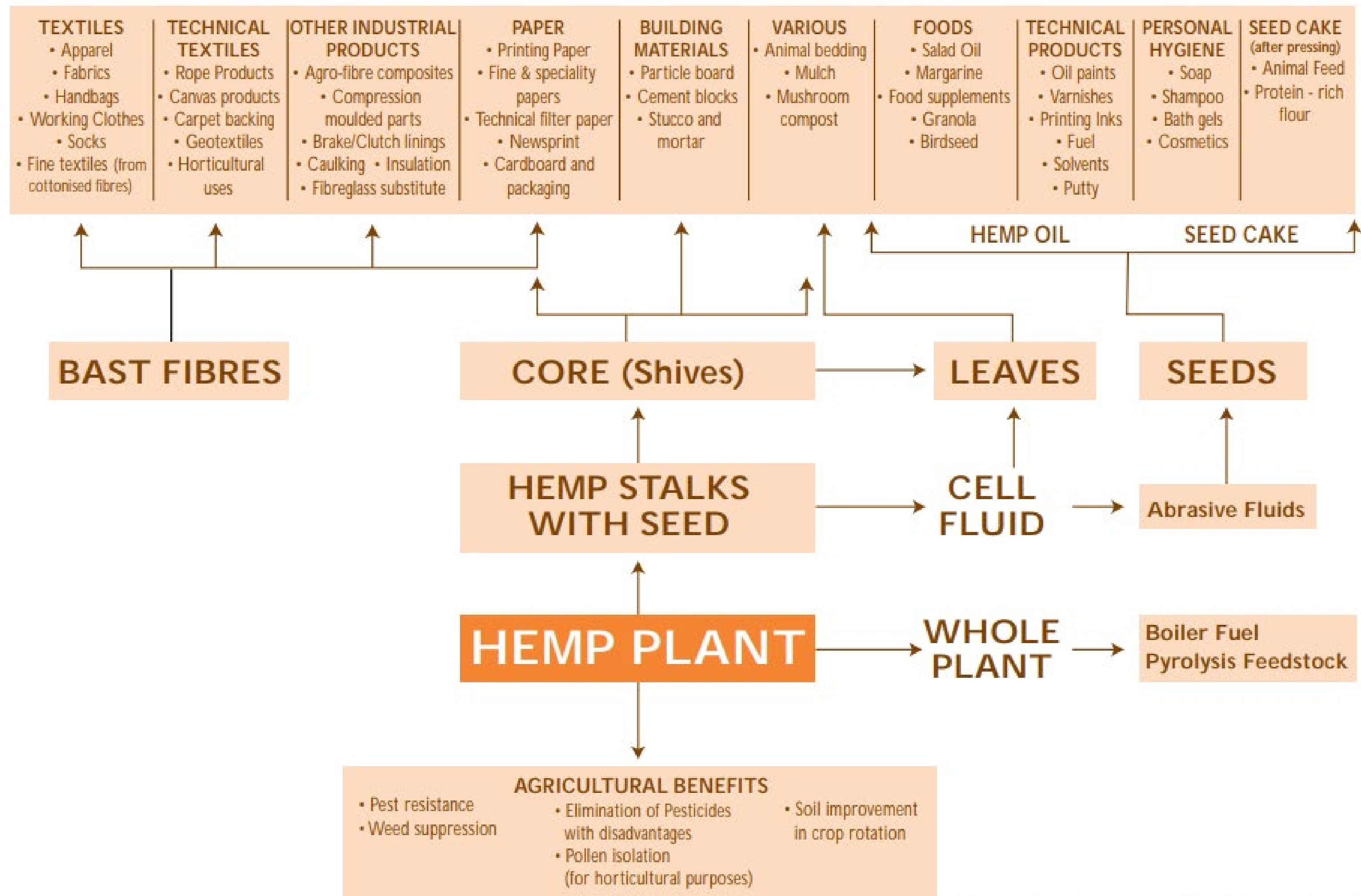
hemp seed food product means a hemp seed food product declared to be food by regulations made under the Food Act 2014

industrial hemp means hemp in the form of—

- (a) plants with a THC content that is—
 - (i) generally below 0.35%; and
 - (ii) is not above 0.5%; or
- (b) seeds harvested from plants of that kind

THC content, in relation to a hemp plant, means the content of delta 9-tetrahydrocannabinol and delta 9-tetrahydrocannabinolic acid of the plant expressed as a percentage of the dry weight of the plant





ADAPTED FROM A VERSION BY RURAL INDUSTRIES RESEARCH & DEVELOPMENT CORPORATION, ACT AUSTRALIA

WHY HEMP?

This pioneering industry is on the edge of incredible growth. We're looking for farmers, growers, entrepreneurs and businesses who want to discover how to invest, upskill and become part of Aotearoa New Zealand's next billion dollar economy.

**2018 crop Manawatu.
Grown using organic compliant
systems/inputs.**



Regenerative farming at Rehoboth Farm

They used to cultivate soil but now spray with glyphosate (mixed with fish and fulvic acid to reduce the rate) and direct drill. There is no soil disturbance and the soil is kept covered.



Fit for a Better World

Accelerating our economic potential

Ministry for Primary Industries
Manatū Ahu Matua



2 • NEW ZEALAND GOVERNMENT

The primary sector has agreed a vision for its future

In April 2018, the Minister of Agriculture established the Primary Sector Council to develop a shared direction for the food and fibres sector. The Council consulted widely, talking to hundreds of people from all parts of the sector and across rural communities to arrive at our first common vision and strategy. The vision, set out below, was launched by the Prime Minister at Lincoln University in December 2019.

Vision



Bulk from press.
Great to eat as is.



A quick squeeze
in the hand and
add to a salad,
scrambled eggs,
mashed potato,
breakfast cereal/muesli.

20 seconds in the
coffee grinder or
whizz and
you have a
32% protein
whole food powder.

Use like you would
Salt and pepper!

Add it to baking,
Meatballs/rissoles,
Dips & dressings.
Soup or stew.

Only limited by
Your
Imagination!

THE NZHIA

iHEMP




DISCOVERY & INVESTMENT

TOUR 2022

FOOD • FIBRE • HEALTH

WHY HEMP?

How can hemp be used in FARMING:

-  Farming as an alternative land use and cash crop plus phytoremediation, heavy metal removal and soil cleaning/conditioning.
-  Use for nitrogen uptake, and climate crisis mitigation.
-  Crop rotation and break cropping in collaboration with other primary industries.

Sheep & Beef? What can hemp do for you?



Regenerative
Land
Diversification



Sustainable
Revenue
Stream



Supporting a
Healthy Food
Chain

THE NZHIA
iHEMP
DISCOVERY & INVESTMENT
TOUR 20
22
FOOD • FIBRE • HEALTH

www.nzhia.com

Aotearoa NZ Hemp Statistics

NZ Hemp Industries Association Incorporated							
Aotearoa New Zealand - iHemp Licence Statistics - Provided by MOH							
Area Grown - Hectares	2015	2016	2017	2018	2019	2020	2021
Auckland	11.0	11.2	14.2	0.0	-	-	-
Bay of Plenty	-	-	19.4	0.6	12.5	0.0	0.1
Canterbury	7.2	0.2	-	130.0	168.4	813.9	446.6
Capital and Coast	-	-	-	5.0	12.0	-	-
Counties Manukau	-	-	0.2	-	0.5	0.4	-
Hawkes Bay	-	-	-	0.0	60.2	9.0	89.0
Lakes	-	-	-	-	10.0	0.0	0.6
MidCentral	-	-	-	11.0	202.8	40.4	14.9
Nelson - Marlborough	0.0	1.4	1.0	2.4	9.4	53.8	61.0
Northland	-	-	1.0	0.5	2.1	0.6	0.4
Palmerston North - Mid central	-	-	-	-	-	-	-
Rotorua - Lakes	-	-	-	-	-	-	-
South Canterbury	-	10.6	12.6	12.0	112.7	197.7	143.0
Southern	1.0	-	32.0	3.3	19.0	72.0	75.8
Tairāwhiti	1.7	2.5	0.1	10.3	26.2	0.2	7.2
Taranaki	-	-	3.7	0.5	0.5	1.1	8.3
Waikato	0.4	-	-	38.0	1.0	58.6	8.0
Wairarapa	50.2	12.1	17.9	30.0	64.3	31.5	-
Waitemata	0.0	4.1	4.0	0.0	0.5	-	0.0
West Coast	-	-	-	2.0	4.3	4.7	6.0
Whanganui	-	-	-	5.2	40.0	51.0	-
Total Area Grown	71.6	42.1	106.2	250.8	746.4	1,334.9	860.7

Value Chain



Growers and
Cultivators



Testing and
Development



Processors and
Manufacturers



Distributors and
Consumers

Matching Supply with Demand, to Scale the Industry

THE NZHIA

iHEMP

DISCOVERY & INVESTMENT

TOUR 20
22

FOOD • FIBRE • HEALTH

WHY HEMP?

How can hemp be used in FOOD INDUSTRY:



Seeds for food and utilising local circular economy by-product streams to make new and innovative



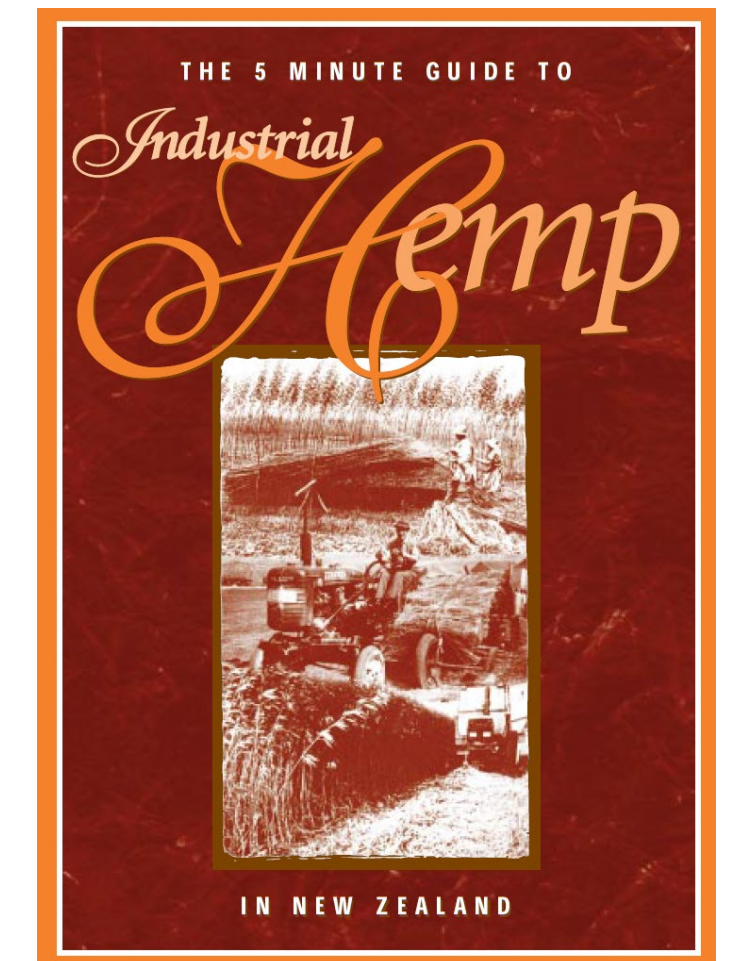
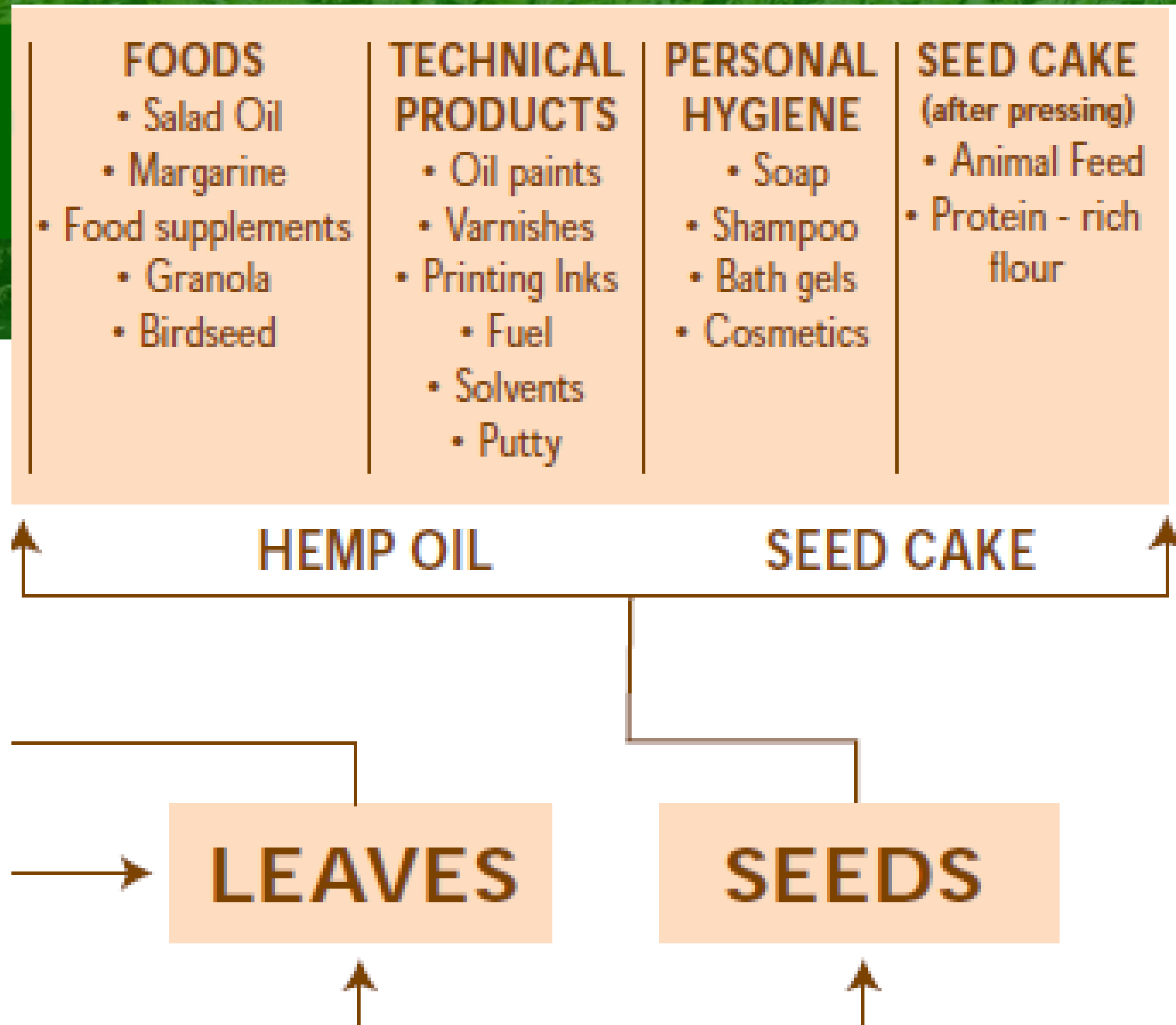
products. Hemp seed nutritional products for humans and animals as well as seed multiplication for northern hemisphere hempseed companies.

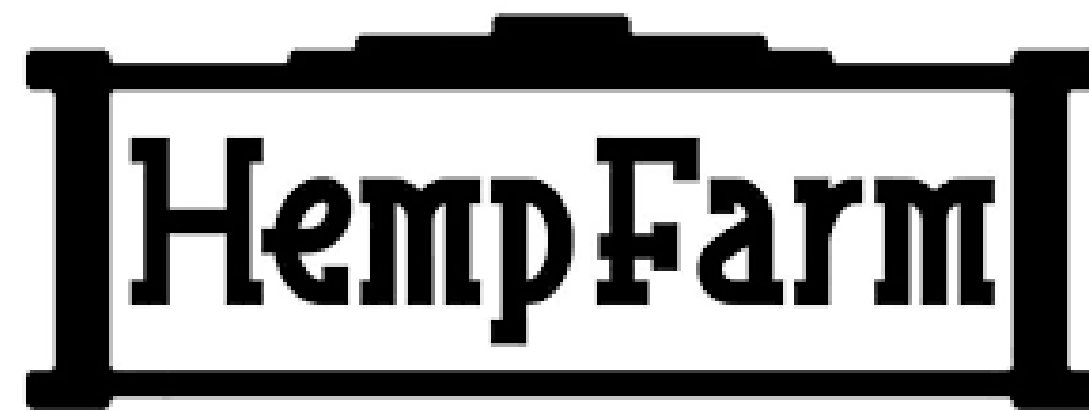


Future uses of hemp leaf, sprouts and roots.



Food grade product, the enemies are heat, light and air





hempfarm.co.nz





Mack McIntosh
Owaka

<https://www.hempseedholdingsnz.com/>
hempseedholdings@gmail.com



Approved Cultivars of Industrial Hemp

Version 1.3 (1 October 2021)

This document lists the cultivars of industrial hemp approved pursuant to regulation 5(1) of the Misuse of Drugs (Industrial Hemp) Regulations 2006.

Approved Cultivar	Date Approved	Link to Published <i>New Zealand Gazette</i> Notice
A1 COMSEED	30 June 2020	https://gazette.govt.nz/notice/id/2020-go2915
A1 HCFX	22 September 2021	https://gazette.govt.nz/notice/id/2021-go4157
A1 MACMONO	30 June 2020	https://gazette.govt.nz/notice/id/2020-go2915
A1 Monopurp	26 February 2019	https://gazette.govt.nz/notice/id/2019-go897
Anka	7 September 2006	https://gazette.govt.nz/notice/id/2006-go6107
Aotearoa 1	31 July 2008	https://gazette.govt.nz/notice/id/2008-go5518

Madmac and the flat ugly snail

https://vimeo.com/34920723?fbclid=IwAR1WPjgE-QwBP-NpoHmOUKOruJ5w1heOeZMsMpH9yN3f34o_Lvll4tEoDBg



THE NZHIA

iHEMP

DISCOVERY & INVESTMENT

TOUR 20
22

FOOD • FIBRE • HEALTH

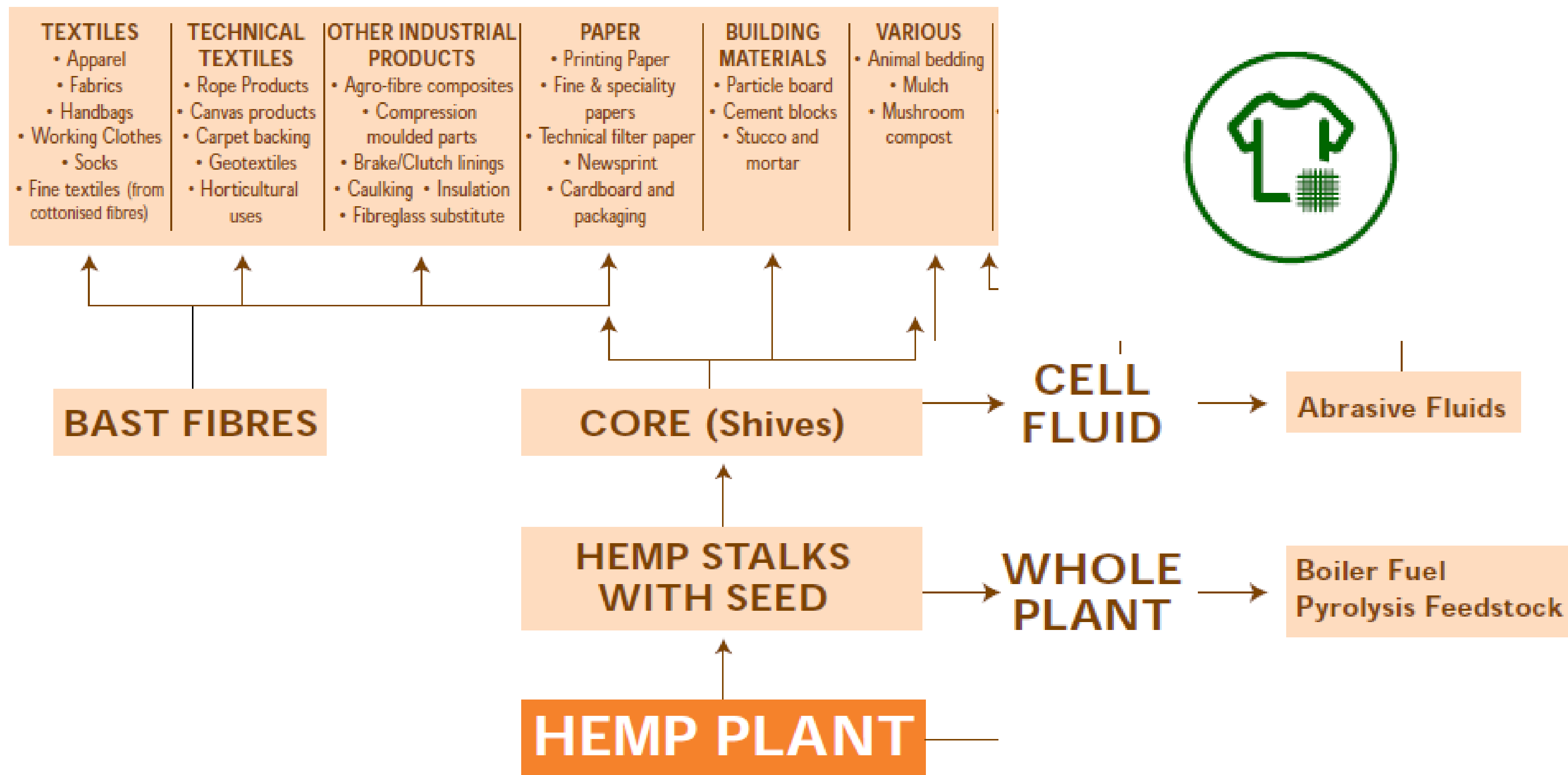
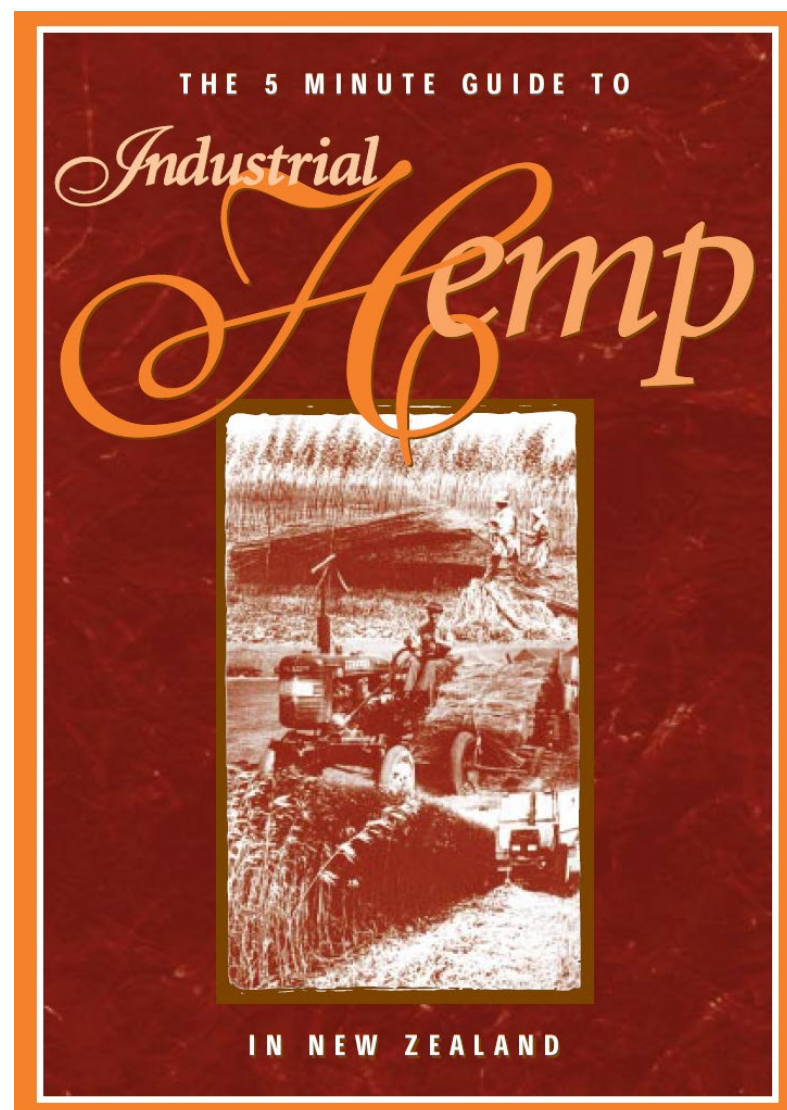
WHY HEMP?

How can hemp be used in the FIBRE INDUSTRY:

- Investment in decortication and primary processing would enable enterprises to scale and enter markets for high and low tech industrial uses.
- Collaboration with other primary sectors, such as forestry and wool.



Hemp fibre



Hemp Building & Insulation: the raw materials



Hemp Construction Materials

Naturfaer-Bauteile in der C-Klasse

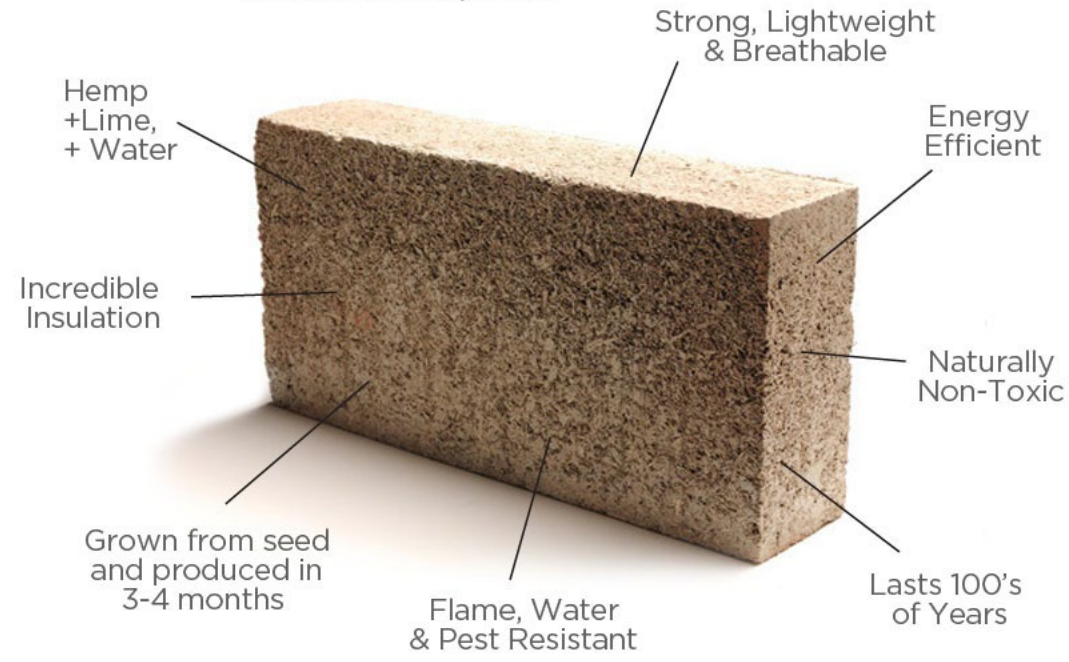




Hemp Building materials

HEMPCRETE

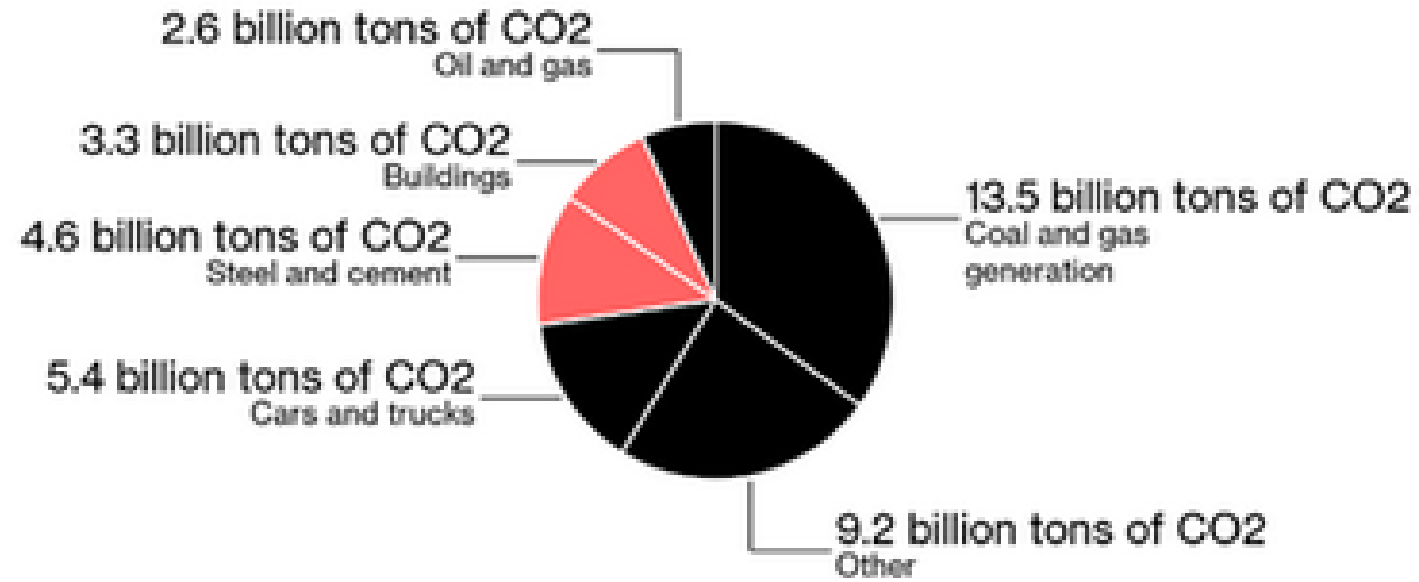
DESIGNED TO BUILD, NOT TO SMOKE.
hempforvictory.co.nz



CARBON NEGATIVE BUILDING MATERIAL.

Construction Pollution

Emissions from steel, cement and buildings outpaced cars and trucks in 2017



Source: International Energy Agency WEO 2018

Bloomberg



WHY HEMP?



How can hemp be used in the HEALTH INDUSTRY:



Female plant cultivation for the emerging health and wellness industry, utilising cannabinoids, terpenes, and flavonoids as high-value fractions from locally grown crops for global niche markets.



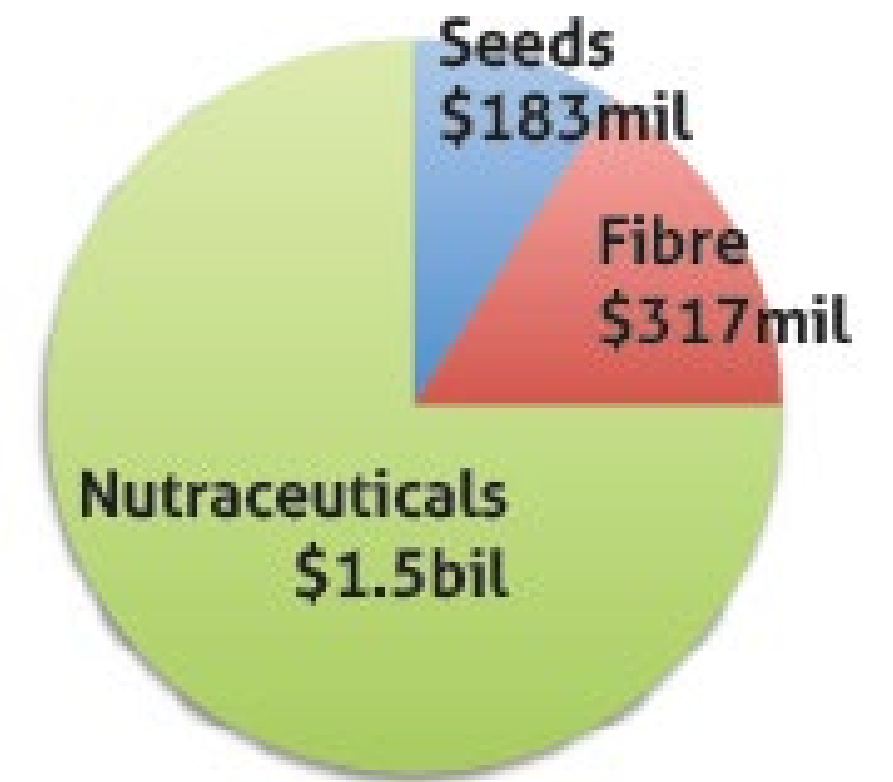
Working with Mānuka, Kakawawa and other native botanicals grown in New Zealand.



The NZHA WHY

A MPI 2021 report predicts Industry to grow from 3-5 million now to between \$11 to \$774 million by 2030. Their preferred scenario 2 gave a prediction of \$30 million by 2030

But the NZHIA's Senario 2 in our investor report highlights a \$2 billion opportunity by 2030 - We just need the right interpretation of the regulations



NZHIA Senario 2 \$2 Billion

THE NZHIA
iHEMP
DISCOVERY & INVESTMENT
TOUR 20
22
FOOD • FIBRE • HEALTH

Coming Soon

**It's time to unlock hemp's
potential for Aotearoa.**

SUSTAINABILITY



NUTRITION



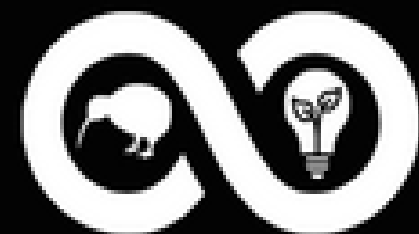
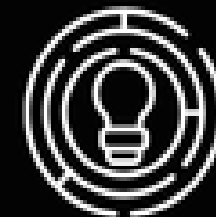
BIOMATERIALS



HEALTH



INNOVATION



Aotearoa New Zealand
Hemp Alliance
www.nzha.org.nz

Coming soona new community building portal

RESOURCES

The Next Step - We need a:

- Hemp Industry Strategy Reset
- Capability Development Program



Tupu.nz: [Fact sheets for industrial hemp](#)

CallaghanInnovation
New Zealand's Innovation Agency

Callahan Innovation: [Capability Road Maps](#)

THE NZHIA
iHEMP
DISCOVERY & INVESTMENT
TOUR 2022
FOOD • FIBRE • HEALTH

BE IN TO WIN!

Be part
of the
tour &
WIN!

T & C's apply, see nzhia.com

THE NZHIA
iHEMP
DISCOVERY & INVESTMENT
TOUR 2022
FOOD • FIBRE • HEALTH

Event
spot
prizes



Gift
basket
draw



All registered participants will go into the draw to win a hemp gift basket!

*T & C's apply, see nzhia.com

Valued
at over
\$300



HEMP
NEW ZEALAND



pure heart
AOTEAROA
hemp's golden gift

THE NZHIA
iHEMP
DISCOVERY & INVESTMENT
TOUR 20
22
FOOD • FIBRE • HEALTH

JOIN THE NZHIA

BE IN TO WIN

Sign up as an NZHIA member on the tour and go into the draw to win a Hark & Zander Luxury Gift Box

HARK & ZANDER

Hemp products valued at \$445



Terms & conditions apply. See www.nzhia.com.

THE NZHIA
iHEMP
DISCOVERY & INVESTMENT
TOUR 2022
FOOD • FIBRE • HEALTH

GET INVOLVED - JOIN



Our mission is to promote the growth and development of the industrial hemp industry in New Zealand in all aspects. Now is the perfect time to become a member and be part of this growing industry.

Join at www.nzhia.com



Growers and
Cultivators



Testing and
Development



Processors and
Manufacturers



Distributors and
Consumers

THE NZHIA
iHEMP
DISCOVERY & INVESTMENT
TOUR 20
22
FOOD • FIBRE • HEALTH

WITH THANKS

To our sponsors

AGMARDT



NZHIA
Food. Fibre. Health.