

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

THE NZHIA

iHEMP

DISCOVERY & INVESTMENT

TOUR ²⁰₂₂

FOOD • FIBRE • HEALTH



GORE

Exploring hemp's
economic and
sustainability potential:
**Alternate land use and
industry potential**

SPONSORED BY:

AGMARDT



Croydon Lodge

Monday 15 August 2022
PRESENTED BY RICHARD BARGE

THE NZHIA

iHEMP

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TOUR 2022

FOOD • FIBRE • HEALTH

SPEAKERS



RICHARD BARGE
(NZHIA)

The NZHIA Chair presents a history of hemp in Aotearoa New Zealand and a new iHemp industry for Southland and Otago.



MACK MCINTOSH
(HEMPSEED HOLDINGS LTD)

Discussion 1) The development and approval of 5 generic landrace Aotearoa NZ iHemp cultivars and where to now. Discussion 2) Southland Otago West Coast Industrial hemp collective: what why when and where.



TONY VAN DER LEM
(VDL ACCOUNTANCY SERVICES)

An update from NZHIA Government Liaison Officer, regarding the history of the 2006 iHemp Regulations.



BLAIR DRYSDALE
(HOPEFIELD HEMP)

iHemp farming in rotation and becoming vertically integrated in the iHemp seed industry, from soil to oil.

THE NZHIA

iHEMP

DISCOVERY & INVESTMENT

TOUR 20
22

FOOD • FIBRE • HEALTH

PROGRAM

- 1.30 Welcome
- 1.35 NZHIA Introduction and History
- 1.50 Mack McIntosh Hempseed Holdings Ltd
- 2.10 Tony Van Der Lem VDL Accountancy Services/HILG
- 2.25 Blair Drysdale Hopefield Hemp
- 2.40 NZHIA Business plans - Why
- 3.00 Panelists Question & Answers
- Till Close

NZ Hemp Industries Association iHemp and History



Growers and Cultivators



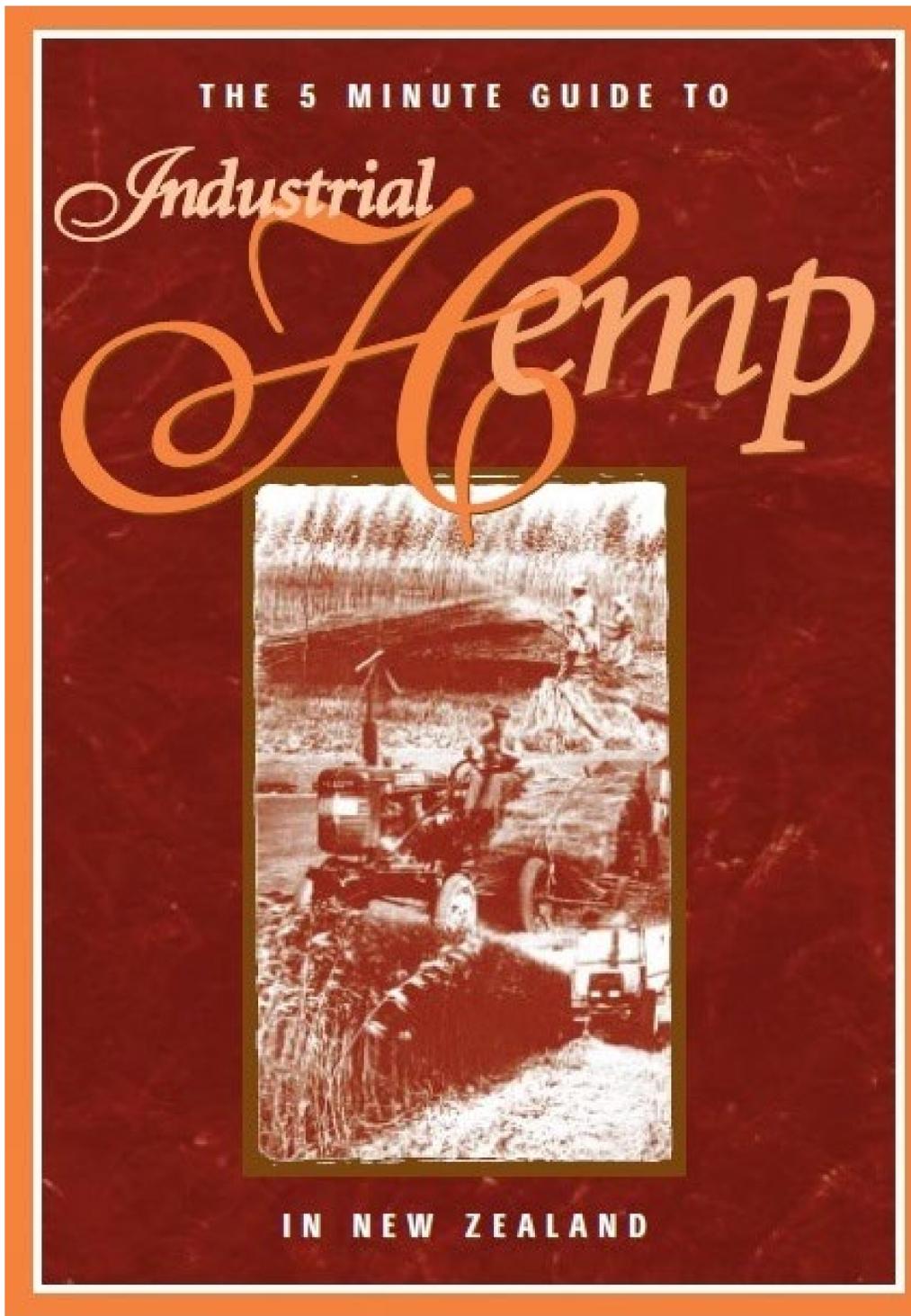
Testing and Development



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...



G R O W T H

FULL REPORT





SATIVA



INDICA



RUDERALIS



SATIVA



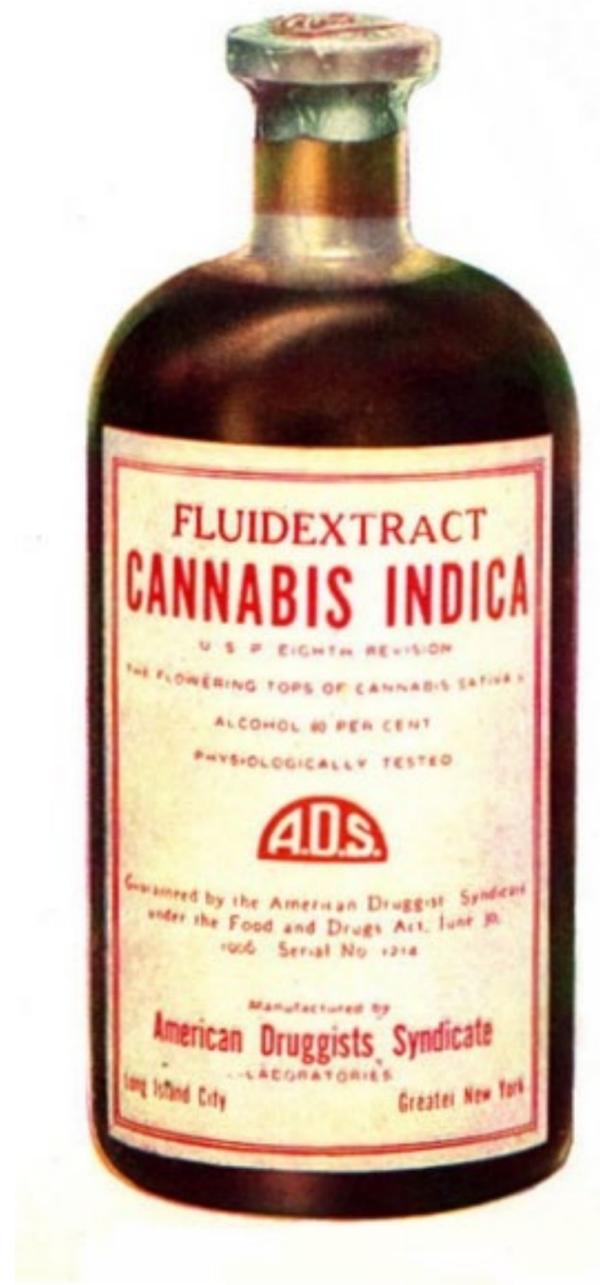
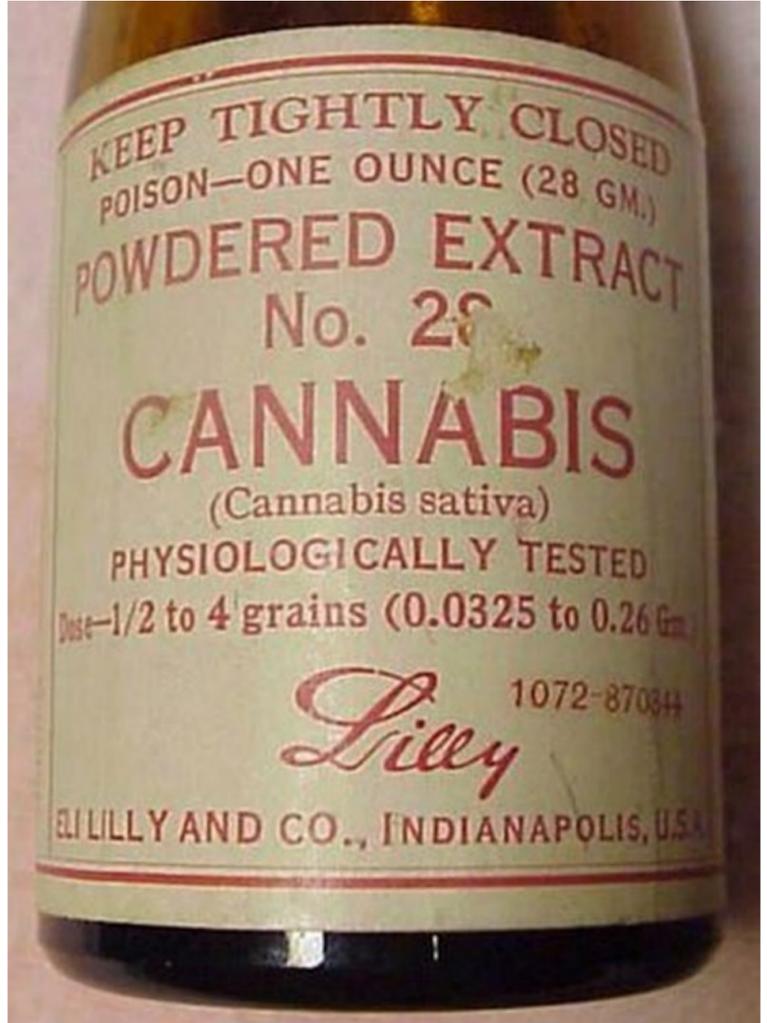
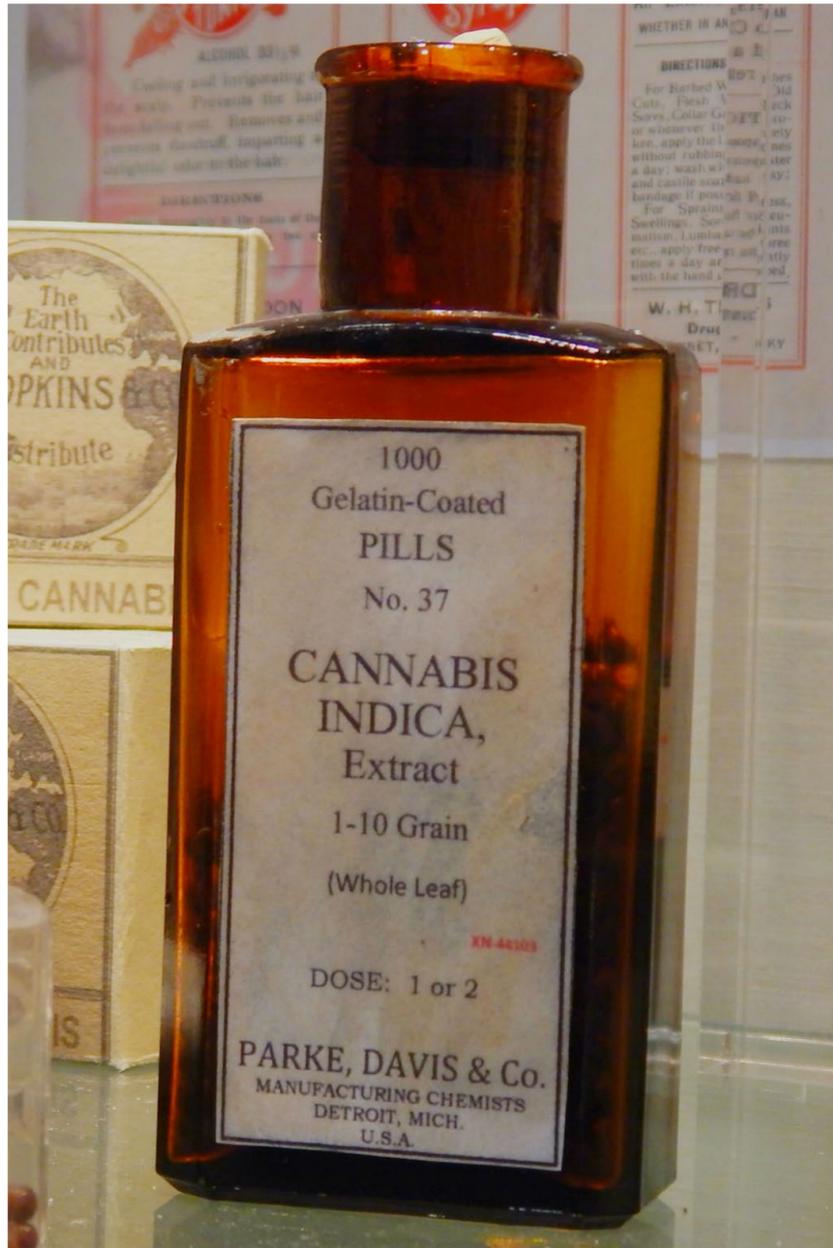
INDICA



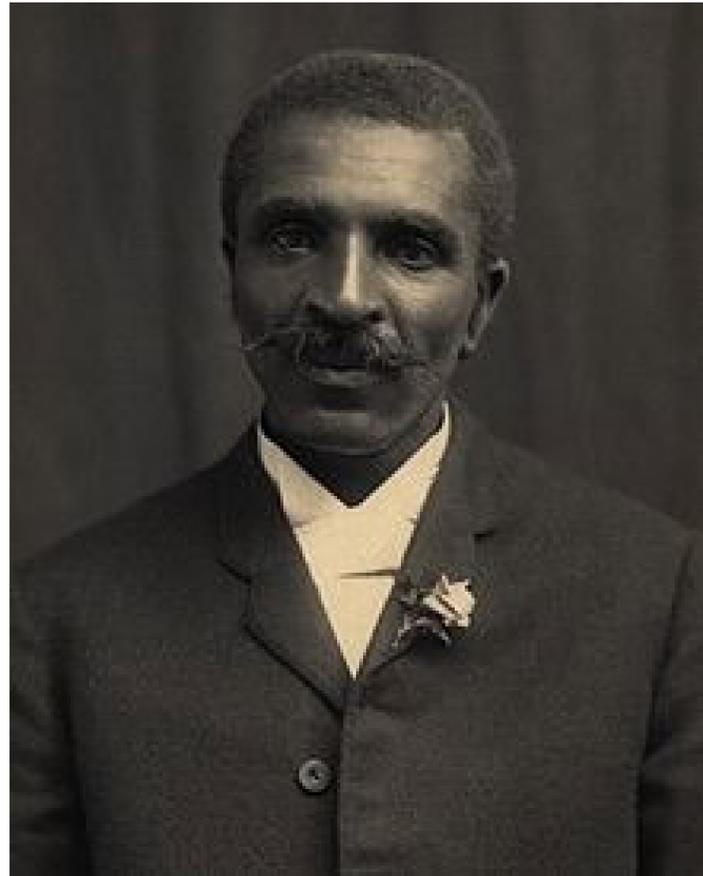
RUDERALIS







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

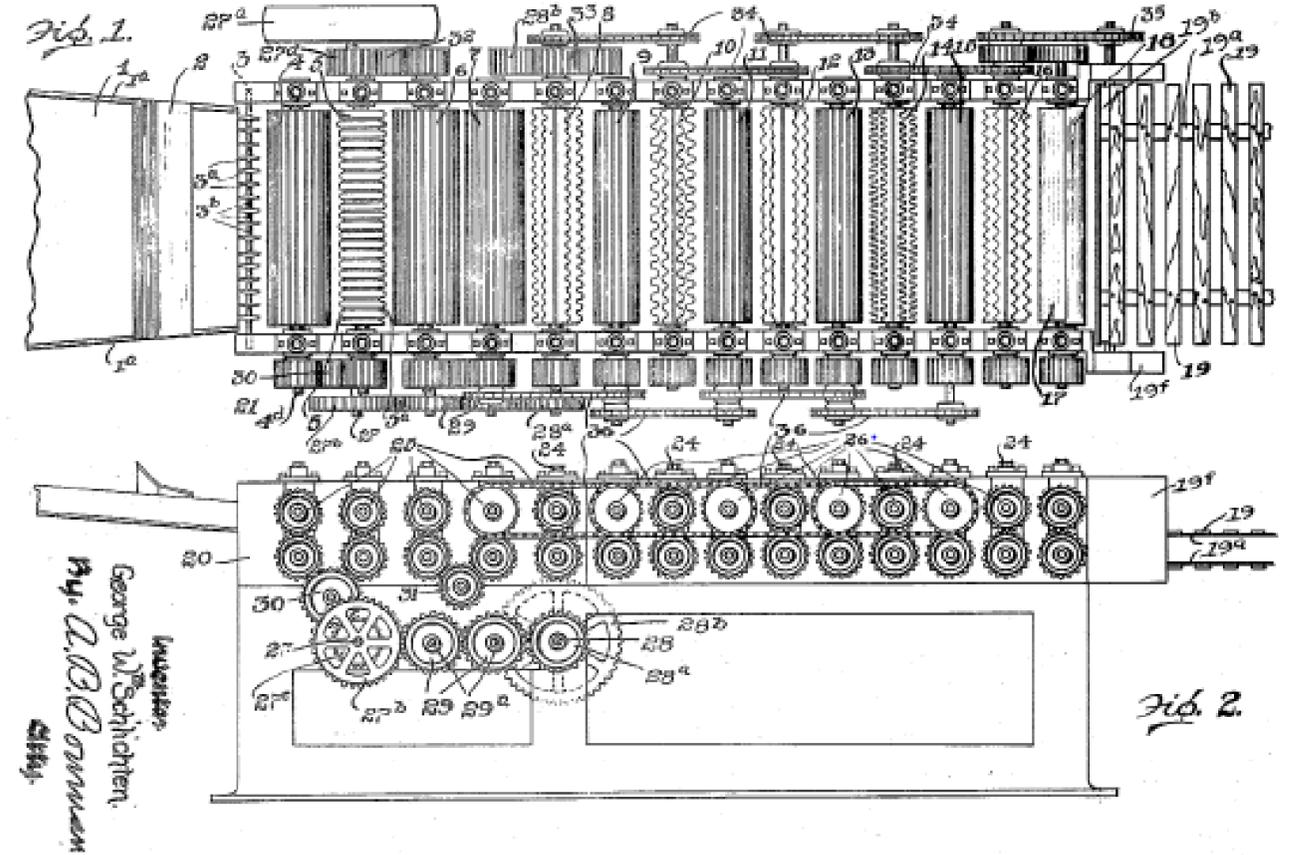
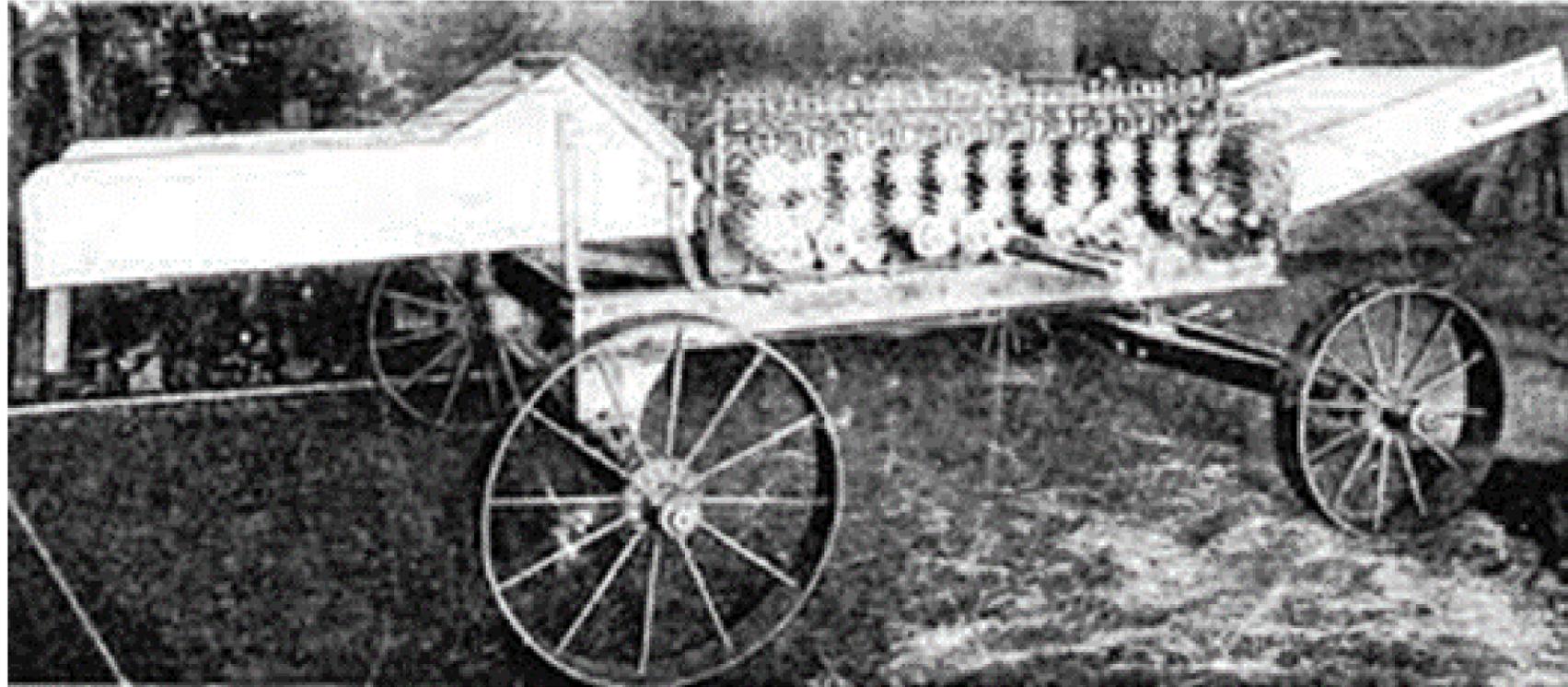


George Washington
Carver c1910



Henry Ford c1930





G. W. SCHLICHTEN.
MEANS FOR TREATING FIBER BEARING PLANTS.

APPLICATION FILED DEC. 27, 1916.

1,308,376.

Patented July 1, 1919.

8 SHEETS—SHEET 1.



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

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The Production and Handling of Hemp Hurds, by Lyster H. Dewey :	The Manufacture of Paper from Hemp Hurds, by Jason L. Merrill :
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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 bank 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 Catalpa thistles or scrub grass.

Under old methods, hemp returned to paper plant

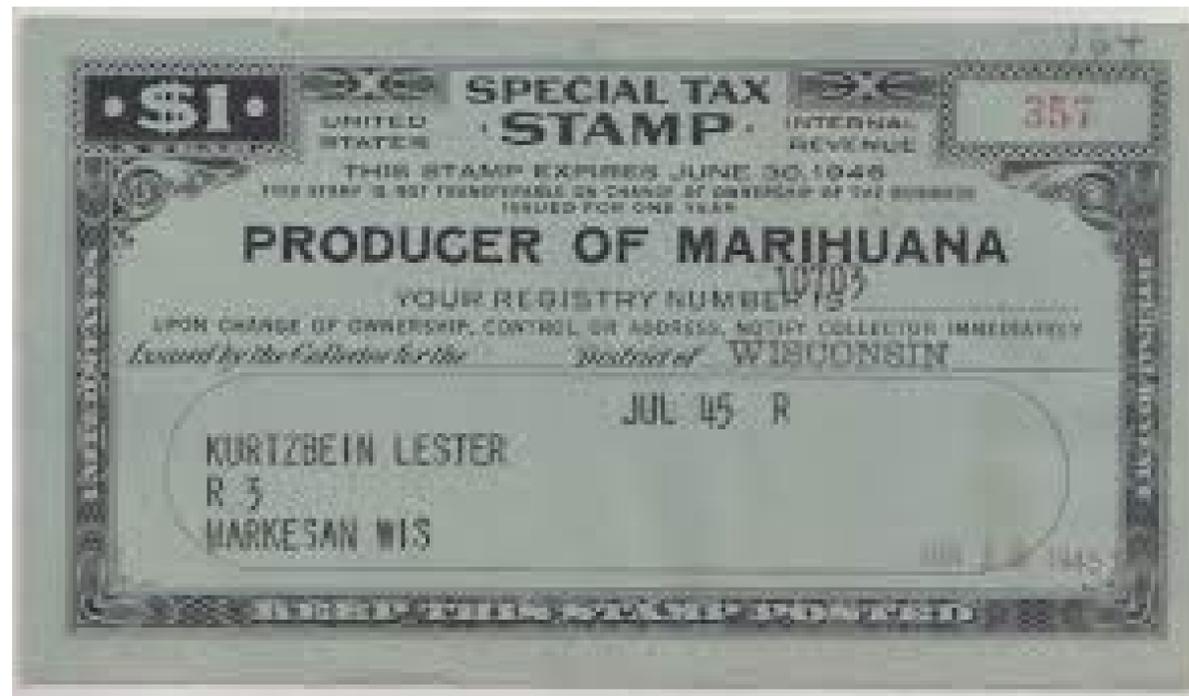
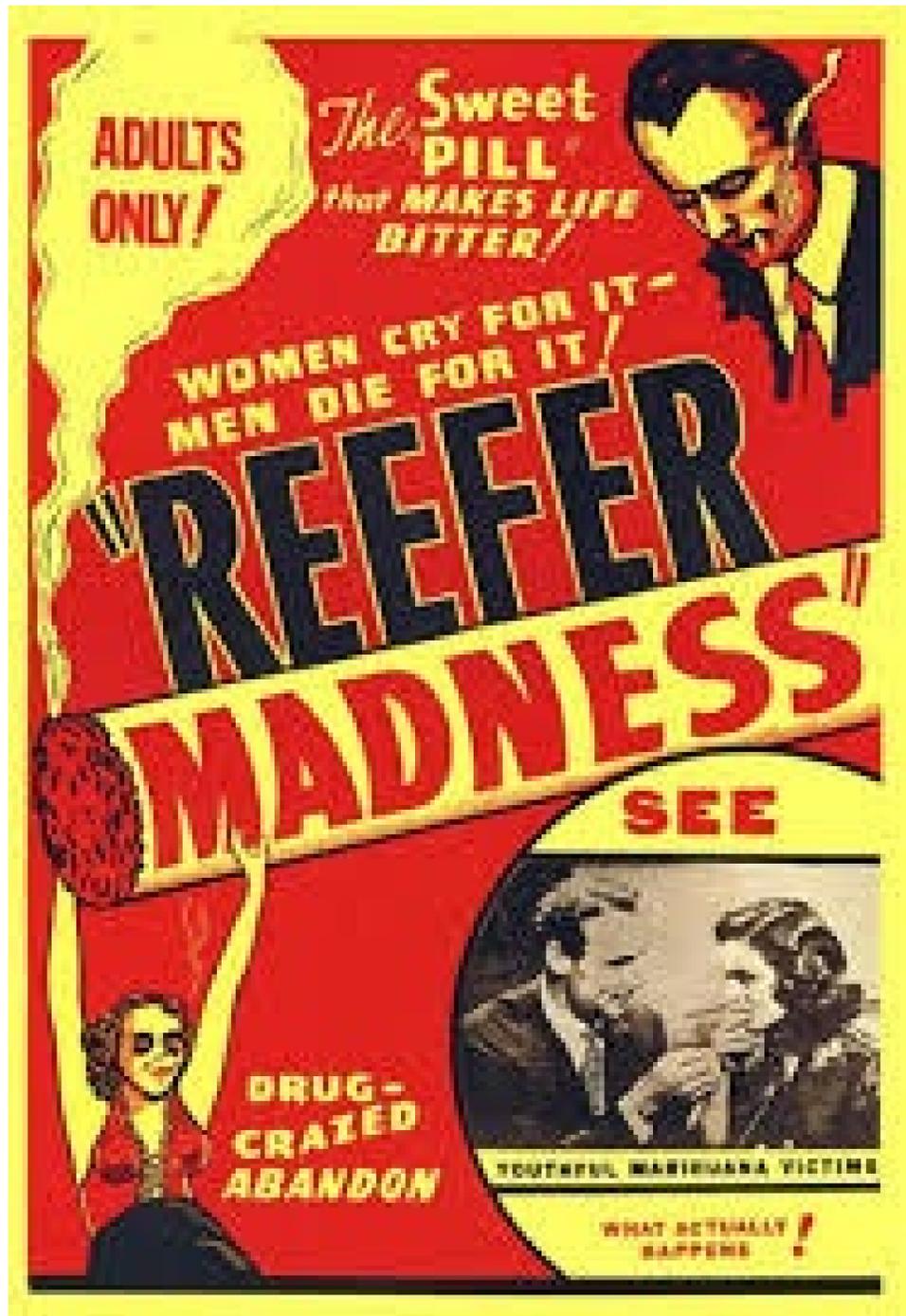


Fig. 1. Machine method of hemp plant seed from hemp. Bottom, horizontal hemp with a grass blade. Hemp grows luxuriantly in France.



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.

Prim
impo
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form
doub
hemp
the n

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

Reich
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Tran
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The Lustrous HempFiber

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that Germ
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is reprod
with Eng
Steinhau



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.



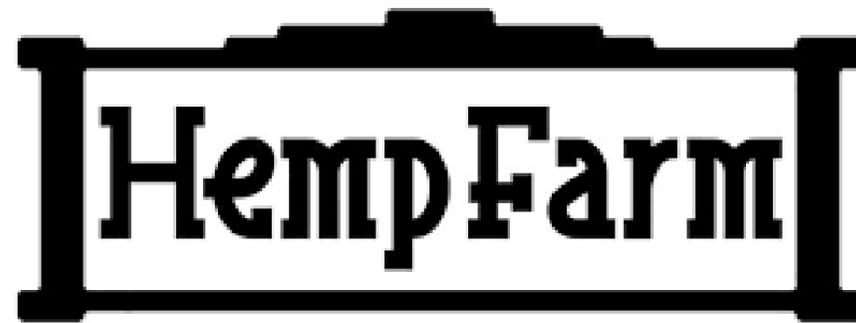
Misuse of Drugs (Industrial Hemp) Regulations 2006

(SR 2006/163)

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.





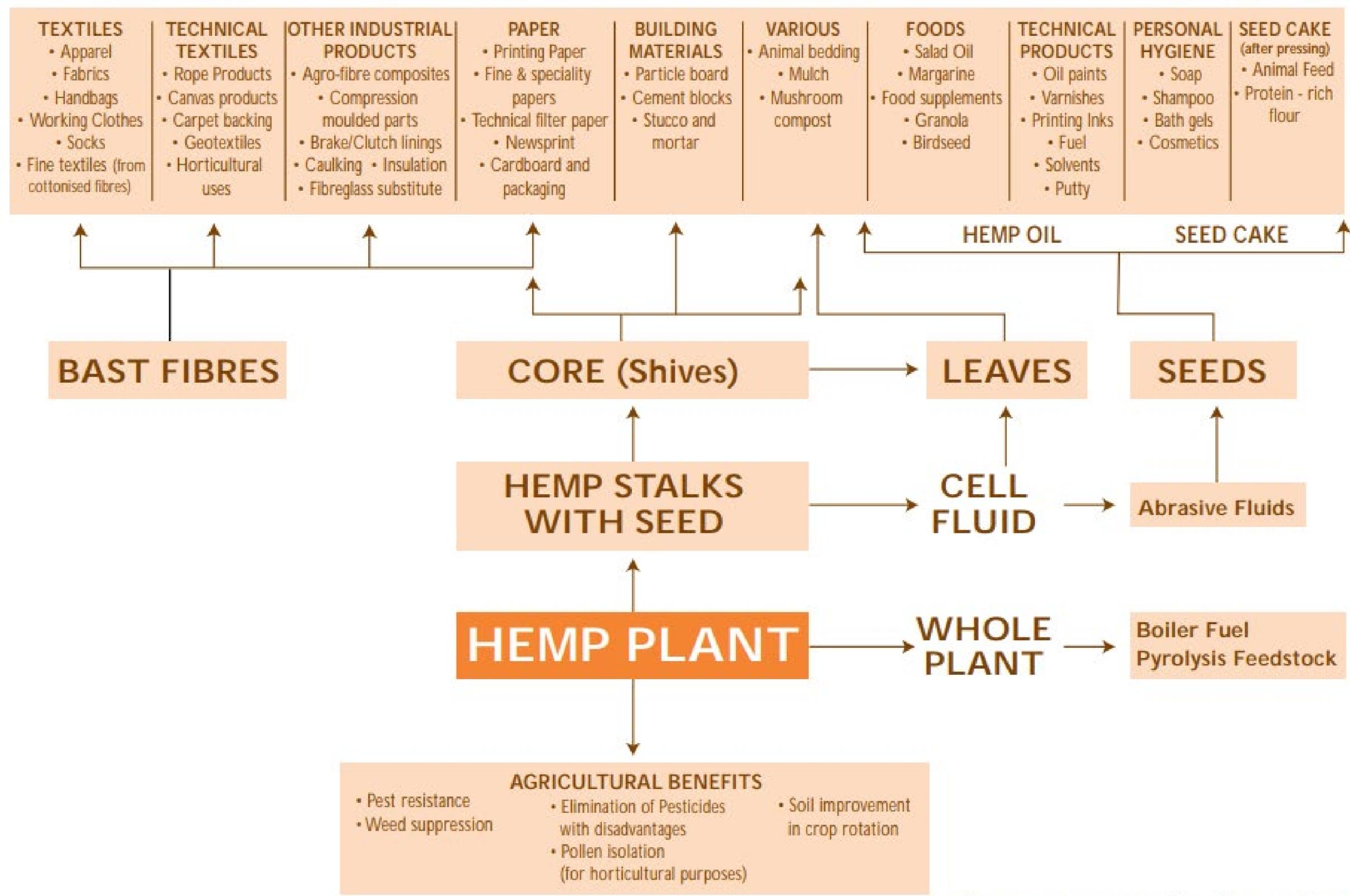
hempfarm.co.nz





Hemp Construction Materials





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AOTEAROA 1

Pure NZ Industrial Hemp
Cultivar Creators

Aotearoa1 (NZ Industrial Hemp Cultivar)TM



HEMPSEED HOLDINGS LIMITED

Aotearoa 1 (NZ Industrial Hemp Cultivar)[™]

www.hempseedholdingsnz.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 New Zealand Gazette 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
Canda	31 July 2020	https://gazette.govt.nz/notice/id/2020-go3545
CFX-1	19 November 2014	https://gazette.govt.nz/notice/id/2014-go7220
CFX-2	19 November 2014	https://gazette.govt.nz/notice/id/2014-go7220
CRS-1	19 November 2014	https://gazette.govt.nz/notice/id/2014-go7220
Fasamo	7 September 2006	https://gazette.govt.nz/notice/id/2006-go6107
Fedora 17	25 March 2010	https://gazette.govt.nz/notice/id/2010-go2217
Ferimon 12	15 October 2009	https://gazette.govt.nz/notice/id/2009-go8390
Finola	7 September 2006	https://gazette.govt.nz/notice/id/2006-go6107
Futura 75	19 November 2014	https://gazette.govt.nz/notice/id/2014-go7220
Joey	31 July 2020	https://gazette.govt.nz/notice/id/2020-go3545
Katani	26 October 2018	https://gazette.govt.nz/notice/id/2018-go5507
Kompolti	7 September 2006	https://gazette.govt.nz/notice/id/2006-go6107
Sirius	26 February 2019	https://gazette.govt.nz/notice/id/2019-go897
USO 31	7 September 2006	https://gazette.govt.nz/notice/id/2006-go6107

WHY!?

- create a Generic Landrace Aotearoa New Zealand Industrial hemp Cultivar (s)

Mack imported the majority of trial seeds and toured the country viewing most but not all trials. In simple terms two things became obvious

- 1) The imported seedstock were for want of better words crap.
- 2) Trialists could grow hemp but had no idea what to do next.

It became Macks mission to create great Aotearoa New Zealand Generic Landrace cultivars which he has ie 5 of the 20 listed are macks creation's vis a vis 25%

It started with my friend Associate Professor John Mcpartland: Massey Uni Fruits Crops Unit Co Author Hemp Pests and Diseases et al.

On average once every two years since inception some good folk have attempted to dispossess me of the cultivars apparently having the view this has never occurred previously 😊 They appear in cases to believe this all just happened and cost sixpence or nothing to achieve.

Its predictable and humourlessly tedious.



There were others prior to this I was offered Vietnamese cultivar by another well known in the early Industry with heaps of by rote instructions. Unfortunately he could not follow instructions and the documents all arrived in Vietnamese so MPI kindly destroyed. For myself MM or DJM or Mack or @\$%^&*^^%\$# this has been a common theme. I often get asked : What security do you have Mack = currently the legislation – eventually Genetic sequencing.

IM NO EXPERT BUT HERES WHAT I THINK I KNOW!!

**Aotearoa1 and subs are an entirely different strain and unrelated to
all other cultivar's currently available in Aotearoa New Zealand.**

Ive been promoting ihemp since 1988 lived in the crop for 4 years; been creating great
new Generic Landrace cultivars since 2004 and believe me im still learning every year

so:

Do not be overwhelmed by instant Experts; there's heaps of them. Learn for yourself
or take what others freely give & build upon it 😊 QUESTION EVERYTHING – Einstein!

**Somehow often these days things just happen or appear to that previously were a
mystery to me !**

BE PREPARED

Ill say it AGAIN

BE PREPARED

AS I WAS NOT RFEPEATEDLY 😊

**WHAT HAPPENS WHEN YOUR NOT PREPARED AND
GET 10 X MORE THAN YOU EXPECTED TOO! 😊
This is only a small part of it I had bedframes &
seeds everywhere**

2006 4 13

Outcomes Sought!?
HOW!?
QUALITY QUALITY QUALITY

Aotearoa New Zealand prides itself re quality yet still wee are currently failing from my perspective. The Chinese hemp heart pressed oil in the complete absence of Light and Oxygen is superb as are their hulled hempseed.

Wee have fantabulicious innovative on to it farmers & business folks, so wee can do it! we just have to want too 😊

HSOil and hulled hempseed some tell me are TANGY.

NO!!!!!! Theyre Not😊

Ive been banging ON RE THIS FER DECADES WEE must get it right!!!

Cant expect folk to loyally buy local if its not top notch 😊



**NEW ZEALAND
INTELLECTUAL
PROPERTY OFFICE**

CERTIFICATE OF REGISTRATION TRADE MARK

TRADE MARK REGISTRATION NUMBER: 1161564

In accordance with the Trade Marks Act 2002 this trade mark was entered on the register of trade marks on **15 April 2021** with a deemed registration date of **14 October 2020**. The details of registration are:

Aotearoa1 (NZ Industrial Hemp Cultivar)

Owner(s): **Donald James McIntosh, 767 Catlins Valley Road, RD 2, Owaka 9586, New Zealand**

In respect of the goods and services that follow.

Ross van der Schyff
Commissioner of Trade Marks

Issued on 15 April 2021







HEMPSEED HOLDINGS

Hemp Cultivar Creators **Ltd**



AOTEAROA1 Cultivar description plus sub cultivars

Owned by Hempseed Holdings Ltd Shareholders

Mack has already created the only five Generic Landrace approved New Zealand cultivars,

1. Aotearoa 1, 31st July 2008 and
2. A1 Monopurp 26 February 2019.
3. A1 Comseed 30th June 2020
4. A1 MACMONO 30 June 2020
5. A1 HCFX 22nd September 2021

Deep Green and Hi seed still to be developed to approved status.

PROGRESS TO DATE!

OUTCOMES SOUGHT

The desired outcomes are:

- To create better cultivar's for Aotearoa NZ ie Super Cultivars.
- For the seedstock and sub cultivars generically called Aotearoa 1 or subs to be entirely owned by Aotearoa NZ grower/farmers ie the industry via shareholding
- That future generations in say 100 years time just might recall it all commenced here.

It is the breeders intention to finish off **A1 HCFX** as it is the highest seed producer by a long way and bulk up **A1 Comseed** and **A1MACMONO** for shareholders to grow when/if they wish in conjunction with others. Hopefully if possible **A1 Monopurp** as well.

The preceding has been achieved in part by the 5 currently approved cultivars in the main. However there remains Deep Green and Hi Seed under development.

Points worthy of noting.

- 1. The higher the planting density the lower the yield. Ref McIntosh 2002 -4 Massey University Wagon Wheel trial.) ie 10- 20- 80 kg pha maximum yields app 1.4 - 1.6 t.**
- 2. The lower the plant density to 1-4 psm the higher the yield. Ref McIntosh Nichols Massey University 2002 -03. Tawanui/Mcintosh x a factor of up to x 10 😊**
- 3. The higher the yield ie lower density, the more plant variation observed in field specifically broad acre McIntosh Tawanui 2004 2005 2006 Massey 2001 - 2003 Wagon Wheel trials.**

HOW?

7. Until Genetic markers SNPS (SNIPS) are available and hard contracts growing by non shareholders will not be allowed nor will cross contamination be tolerated until such time as the following is available.: SNPs (single nucleotide polymorphisms), which belong to the last-generation molecular markers, occur at high frequencies in both animal and plant genomes. The development of SNP markers allows to automatize and enhance tenfolds the effectiveness of genotype analysis. this should be a priority but may well be costly @ 30K – 50 K + The Canadian Dr Ernest Small who states Ihemp is genetically separate from MJ, has a max thc of 0.9 – 1.1% which has no psychoactive effect. If that can be proven to politicians ihemp just might get to where it belongs, ie separate from misuse of Drugs act et al, not the current nonsense.

PLEASE NOTE WELL

If you choose to become a shareholder in the Aotearoa 1 seedstock and the A1 series of subcultivars you do so under exactly the same conditions as Donald James (Mack) McIntosh IE there is Always a risk that wee will all lose everything equally there's an expectation that at sometime in the future these cultivar's may well become the mainstay of the Aotearoa NZ ihemp industry.

DJM does not oversell the cultivars **AND ALWAYS WARNS POTENTIAL SHAREHOLDERS THERES STILL MUCH WORK TO BE ACCOMPLISHED SPECIFICALLY REGARDING THE TRUE TO FORM NATURE OF THE 4 A1 SUB CULTIVARS.**

Irrespective at times humans are likely to only hear what they desire too. Only relatively small amounts of the 4 new approved A1 series of subcultivars are fully homogenized. That work is ongoing.

All the required background is in here somewhere. ☐

HOW!?

Aotearoa1 and subs: The IP is entirely owned by D J Mack McIntosh and will not be shared here as this is a public domain document. 2 separate data book's are under construction and should be available to appropriate entities/for sale this year 2022/2023. Plus a pictorial of "Macks Hemp Journey" – 😊 They will be provided to all shareholders.

AOTEAROA 1 is the Base breeders selection all other A1 cultivars arise from.

During the 2001 – 2002 Trials the author creator of the A1 seedbank noted all the cultivars imported were in the main quite crappy, further enhanced by a further 3 years observing. It became clear that a generic Aotearoa NZ cultivar breeding programme creating something, entirely unique and new was necessary; and so the journey began. **Aotearoa1 and subs are an entirely different strain and unrelated to all other cultivar's currently available in Aotearoa NZ.**

During a hideous divorce (is there any other kind?) app 2003 – 2005 Mack tried to sell or give away. No one wanted it ☐

The finally approved Aotearoa1 has little in common with the original except the thc profile and took a long time getting too. A1 Monopurp took even longer as the author continued to "learn"

These days the author is confident seeking certain traits etc and the process is much swifter although still costly. Aotearoa 1 and all sub cultivars denoted by the prefix A1 are currently **SUPER CULTIVARS. But of course the author would say that.** ☐

There is no hard sell; shareholder's make up their own minds whether ☐ they are indeed Kiwis and support locally created or if they prefer to rely on imports created and owned offshore ☐ and of course they take exactly the same risks as the original creator. There is of course a 1 off initial cost for a minimum of 1% shares (10,000 shares) and a requirement to only supply to shareholders. for sowing purposes et al. Its exciting. Finally. The author thinks but does not know for certain HSHL is the only one doing this. **There is a shareholders agreement also.**



WHAT!!!?

AOTEAROA 1

AOTEAROA1

Cultivar Characteristics

Cannabis Sativa – approved 31 July 2006

Dioecious Seed Fiber production.

Great seed producer.

Aotearoa1 is the base seedstock for all subsequent cultivar's

It is a better than average cultivar in the breeders view

However it shows more variation than all other A1 cultivars.



NB: The colours of plant leaves in the image are actually 3-4 levels deeper green than the image shows. The height is an optical illusion. Density 40pm²

2005 2 9



4 – 40 ppms = up to tenfold increase in seeds produced; providing humic acid is fed in the last 3-4 weeks.

2005 2 25



A1MONOPURP

A1 Monopurp
approved 26
February 2019

Mildly Monoecious very
hardy
Good seeds but not
volumous
Probably only useful for
specific outcome sought ie
specific stearidonic acid oil
profile et al.



AOTEAROA1

Subcultivar A1

Monopurp. Approved.

Cultivar Characteristics

Cannabis Sativa – Dioecious/mildly
Monoecious

le A1 as its derived in whole from Aotearoa1

Mono as its mildly Monoecious
only about two male flower heads
smallish per plant. Purp as it goes
deep purple to black throughout
the growing season.

Very hardy and disease resistant.

Breeder likely spent way to much time on this one because “he liked its look
☐”. Still needs work to homogenize in large commercial quantities



A1 COMSEED

**continuous single seed
all the way up stalk
low 1.5m max**

Cannabis Sativa – Dioecious

A1 COMSEED ie Commercial seedstock for broad acre farmers. ***Seed - Fibre***

production

Suitable for traditional Broad acre Farmers

Breeder has not grown in broad acre context however it should be very useful in that it has one stalk only, low ie 1.2 m – 1.5 m at ie 20 – 40 ppms, breeders location very heavy seeder

Ideal for broad acre seed farming.



***Cannabis Sativa – Highly
MONOECIOUS***

A1 MACMONO ie

Commercial seedstock for broad
acre farmers and market Garden
regime of cultivation. *Seed -
Fibre Oil production*

**A fabulous multi purpose multicrop
high producing cultivar ie seeds and or
fibre all related to days to harvest ie
fibre approx. 70 days. for traditional
Broad acre Farmers but specifically
suitable for Market Garden Regime of
production.**

**High seed yielding multi-branched
Very useful due to plant uniformity
re stalk fiber farming /cultivation or
multi seed fiber .**

All female seeds.

A1 MACMONO/HCFX specifically bred for high seed production and fibre. In the breeders view 2 magnificent cultivar's well worth the effort to create.

NB A1 MACMONO & and A1 HCFX look very similar the only difference is A1 MACMONO has large quantities of male flowers through the seed heads. Some images re these are similar or exactly the same. The productivity is different!





A1 MACMONO
overall as good as
HCFX. ☐ For
different reasons.

A1 MACMONO (left) & A1 HCFX (right) ie they're very similar and apart from male flowers could easily be mistaken for the other .



Sample Type: Hemp Flower (dry)					
Sample Name:		A1 Mac Mono 19-Mar-2022		Specified Limit	Outside Limit
Lab Number:		2926406.1			
Hemp Tetrahydrocannabinol Analysis					
Total Potential Tetrahydrocannabinol (THC)	% (w/w) dry wt	0.071 ± 0.028		0.35	No
Δ ⁹ -Tetrahydrocannabinol (THC)	% (w/w) dry wt	0.021 ± 0.020		-	-
Δ ⁹ -Tetrahydrocannabinolic acid (THCA)	% (w/w) dry wt	0.057 ± 0.022		-	-

A1 MACMono showing low thc thca results. Most often all Aotearoa 1 come back combined around total 0.056% thc thca combined.

Some of the higher readings often heard are most often related to one open source cultivar and folk attempting to grow females only as a cheap way of producing **the misnamed MEDICAL CANNABIS. I SAY MISNAMED AS CURRENTLY WERE IMPORTING IHEMP TEA FROM Australia** which is tea not medicine and always was and remains a revenue stream that's been stolen from the ihemp industry. NB wee will get it back!! 😊

A1 MACMONO approved 30 June 2020

This is a Christmas tree shaped cultivar with a large number of heavily seeded seed heads'. The seeds produced are all females which means it's a very stable subcultivar; plus this subcultivar is heavily monoecious with male flowers interwoven with the seed heads meaning there's incredible fertilization and good seed productivity.

Stature

Tall plant stature, (2m at my location @ Tawanui with a large, compact tightly seeded seed heads, and many of them.) This plant is what I've been working toward and hugely satisfying to see in full growth.

Uses seed oil with a wide spectrum of essential amino acids and fatty acids, making it suitable for many cosmetic products. Farmers are harvesting seed and then recovering fibre so both seed, oil and fibre but focusing on seeds in the first instance.

Growing parameters

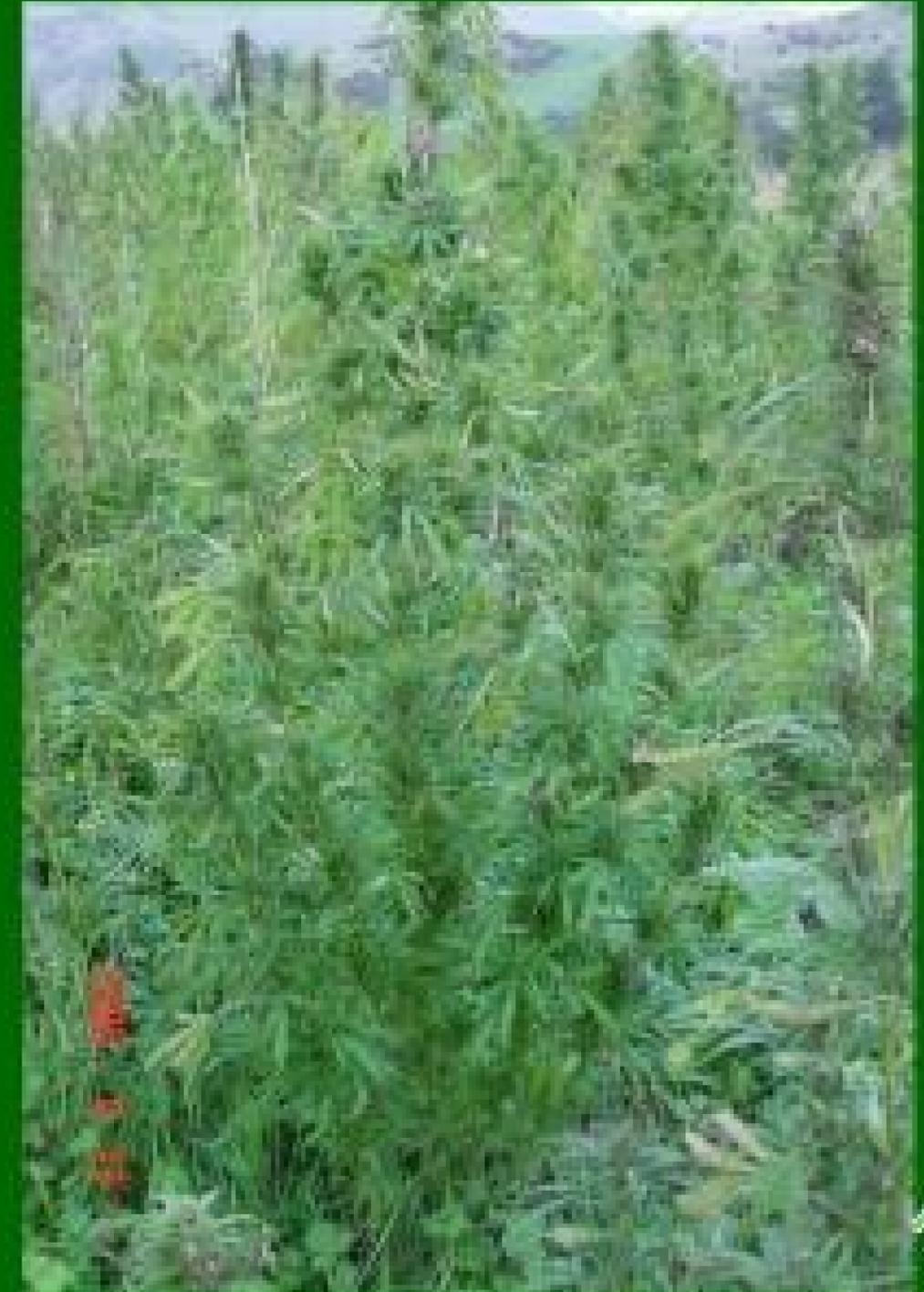
Grows to max height @ Tawanui of 2 + m fortitude to grow at 45 degrees latitude. Given they're all subcultivars of Aotearoa1 they should grow well and consistently throughout most of New Zealand

AOTEAROA1 SEED BREEDING LINES

A1HCFX

A1 HCFX the A1 super cultivar height stated relates to 46.28 South branches = average but as the cultivars has been developed opted for less branches heavier seed weight should easily produce 1 kg of seed If fed humic acid et al.

- Large multi-branched heavy seeding plant. Frost, disease, pest resistant. Goes deep green with feeding.
- Large heavy well-aerated seeds. Vigorous growth continuously creating new branches average 50 +
- Seed weight per plant is significantly above all other potential lines in MGR spacing.
- Very consistent look. Consistent 1.8 – 2+m. Up to 1kg per plant





A1 HCFX the super cultivar

mg/gram of sample

NO.	Type	CBC	CBD	CBDA	CBDV	CBG	CBGA	CBN	THC	THCA	THCV
1	A1	1.052	44.031	5.349	1.534	1.427	0.502	0.013	1.855	0.06	0.102
2	A1	0.651	30.508	3.992	0.198	1.309	0.375	0.01	1.313	0.04	0.081
3	A1	1.358	47.508	6.607	0.329	1.721	0.499	0.018	2.051	0.065	0.08
4	A1	1.187	46.603	5.197	1.408	1.568	0.337	0.017	1.92	0.041	0.098
5	A1	1.198	48.487	5.535	0.958	2.02	0.485	0.015	2.019	0.041	0.05
6	A1	1.421	44.99	5.143	2.011	2.011	0.43	0.019	1.679	0.04	0.122
7	A1	1.875	58.198	6.492	2.572	2.517	0.638	0.02	2.606	0.057	0.266
8	A1	1.109	39.084	4.9	0.98	0.55	0.116	0.024	1.419	0.036	0.057
9	A1	1.289	48.067	5.088	1.637	1.397	0.261	0.028	1.63	0.049	0.149



2005 2 25

SPEAKERS



RICHARD BARGE
(NZHIA)

The NZHIA Chair presents a history of hemp in Aotearoa New Zealand and a new iHemp industry for Southland and Otago.



TONY VAN DER LEM
(VDL ACCOUNTANCY SERVICES)

An update from NZHIA Government Liaison Officer, regarding the history of the 2006 iHemp Regulations.



MACK MCINTOSH
(HEMPSEED HOLDINGS LTD)

Discussion 1) The development and approval of 5 generic landrace Aotearoa NZ iHemp cultivars and where to now. Discussion 2) Southland Otago West Coast Industrial hemp collective: what why when and where.



BLAIR DRYSDALE
(HOPEFIELD HEMP)

iHemp farming in rotation and becoming vertically integrated in the iHemp seed industry, from soil to oil.

Presentation to Ihemp Tour meeting , Gore 15 August 2022

Presentation from Tony van der Lem, Government
Liaison Officer, NZHIA

And former MAF Senior Policy Analyst representation
on the Joint Agency Hemp Licensing Trial

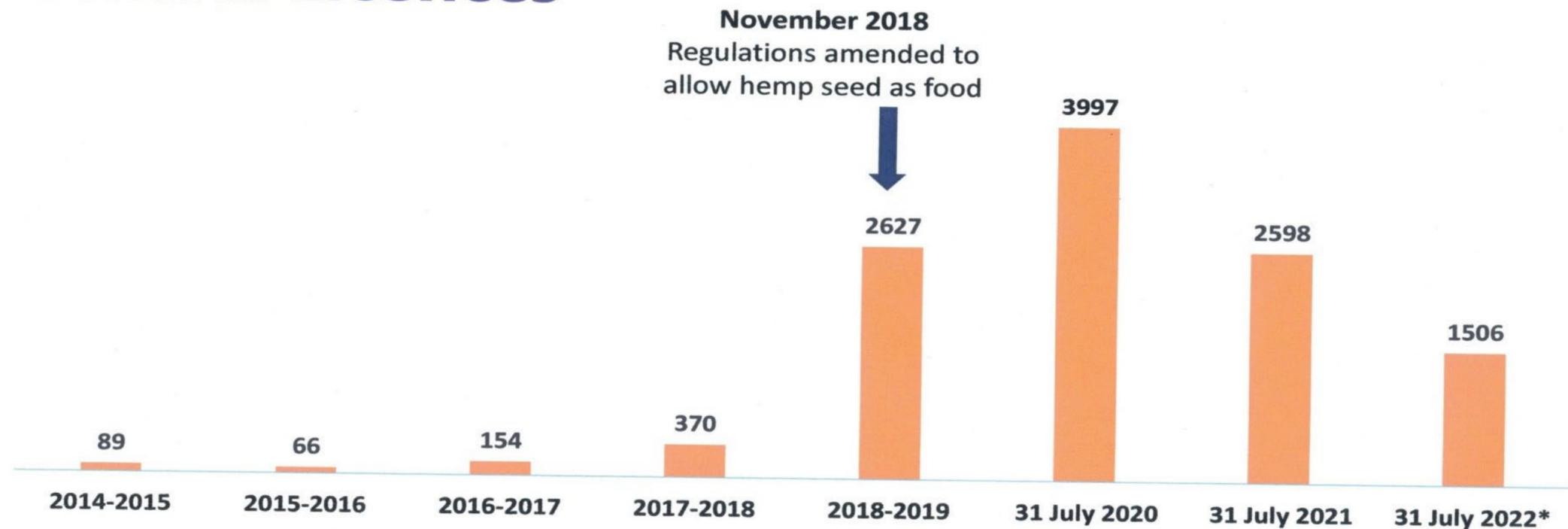
- Good afternoon Ladies and Gentlemen, today you get two for the price of one, my wife, Clare van der Lem has joined me today and she was the Manager of Medsafe during the Hemp trial and had responsibility for the drafting and implementation of the 2006 industrial hemp regulations.
- I have attached to my presentation signed affidavits from both of us outlining our understanding of the regulatory thinking that underpinned the Hemp regulations.

- What our affidavits highlight is that the regulatory environment, now, is very different to what was envisaged by officials at the time the hemp regs were written, the most important point being that the hemp regs were intended to facilitate the hemp industry not put it in a regulatory straight jacket.
- MAF in the early 2000's was very focussed on regulations having a scientific base, of particular relevance was the Australian ban on apples because of a plant disease that was already endemic in Australia. This is clearly no longer the regulatory approach of MAF's successor organisation MPI which refuses to reconsider the ban on hemp on animal food, even for pets where there is no trade basis for the exclusion of hemp in pet food.

- Medsafe undertook the function of regulator purely to facilitate the industry getting established, the intention was that within ten years a regulatory structure would be put in place more appropriate to hemp's status as an agricultural product with virtually no psychoactive properties.
- In effect the only reason that Medsafe was the regulator of the 2006 Hemp regulations was because hemp had been made illicit under the Misuse of Drugs Act 1975 there being no compelling human health risk that justified using health regulatory resources.

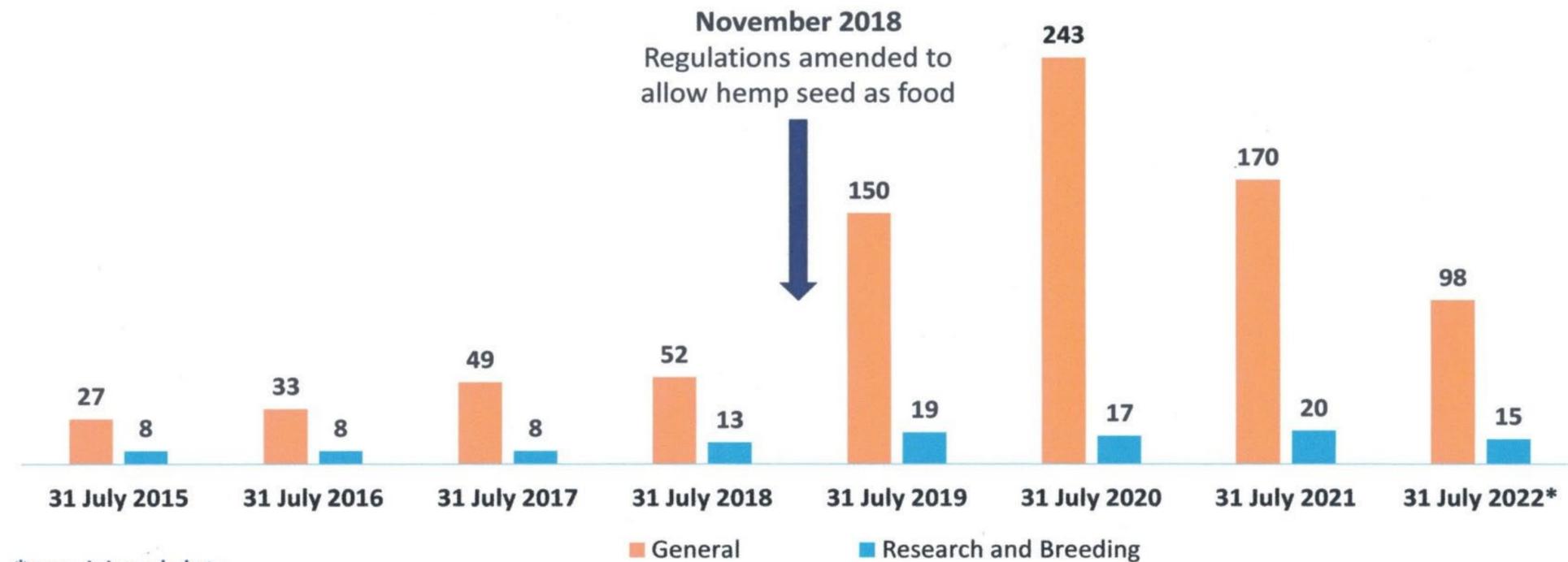
- As to why the regulation of Hemp was not reviewed and updated at the ten year mark, the most likely explanation is that socially conservative governments, both National and Labour led, have succeeded the Fifth Labour government and there has simply been no political appetite to facilitate the hemp industry.
- The farce that was the referendum on cannabis in 2020, highlights the social conservatism of the current government, the referendum offered the most unpalatable regulatory option possible against continued criminalisation, decriminalisation wasn't even offered as an option.
- Hemp as an agricultural product should have been carved out of the Misuse of Drugs Act many years ago, there is simply no reason why this crop should be over regulated in the manner that it currently is. My next slide is a copy of the latest hemp cultivation figures provided by Medsafe.

Licensed Cultivation Area (hectares) General Licences



*provisional data

Active Licences



Presentation to Ihemp Tour meeting , Gore 15 August 2022

- What these Ministry of Health slides highlight is a significant decline in the area under cultivation and licenses over the last two years.
- The concerning thing is that such figures do not appear to have triggered a concern for Medsafe that a review of the hemp regulations should be initiated, the Health spokesman at the Hemp Liaison meeting indicated that no such review was intended.
- This represents a dereliction of duty on the part of the regulator, this decline should have been brought to the attention of both the Minister of Health and the Minister of Agriculture, it is a clear indication that of regulatory failure, and reinforces the conclusion that the current regulatory regime is not fit for purpose.
- To be a bit provocative if you extrapolated out what a continuation of current declining trends in cultivation and licenses would mean if continued for the next 5 years, essentially there will no longer be a NZ hemp industry.

- In conclusion, if the NZ hemp industry is to have a viable future, the current regulatory environment must be changed, this would require hemp regulation to be carved out of the Misuse of Drugs Act and for hemp to be regulated by MPI under its own Act, and as an agricultural product.

Presentation to Ihemp Tour meeting , Gore 15 August July 2022 – Appendix 1

Affidavit:

I Mary Clare Frances van der Lem swear:

This is my recollection of events that took place during the drafting of the industrial hemp regulations of 2004 under the Misuse of Drugs Act 1975.

In my role as Manager, Medsafe I was assigned the role of overseeing drafting and the implementation of the 2006 industrial hemp regulations. From August 2005 onwards this work was completed by my successor Dr Stewart Jessamine.

The purpose and intention of the government at the time for implementing these regulations was explained in the media release 2006. The government's goal was to clearly specify that the regulations applied to low Tetrahydrocannabinol (THC) industrial hemp with almost negligible amounts of controlled drugs in products and plants.

The regulations provided a framework for the industrial hemp industry to expand into a range of industries with no restrictions on what processes and or industries this plant could adapt to. Products derived in part or in whole from industrial hemp do not pose any threat of being used as an illicit drug with associated public health harm. The intention was to provide a regulatory framework to enable this non drug plant be used in New Zealand agricultural systems.

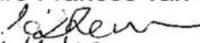
It was consistently argued that Industrial Hemp both the seed and whole plant has no drug value and could not be misused in any way. It was decided that the regulation of hemp required regulation under the Medicines Control Act due to its compatible likenesses to the illegal marijuana plant it did not stop those licensed in the industry developing products.

During the term of the Fifth Labour Government 1999-2008, hemp licencing trials were conducted with associated testing of THC levels, the regulations for a hemp industry were drawn up on the basis of the industrial hemp trial. There should not be any confusion over the legality of hemp and hemp products. Based on the reports I received I am not aware of any health harm from industrial hemp. ESR had no issue with the Cannabidiol (CBD) levels in industrial hemp.

Industrial hemp was intended as an agricultural product. The industrial hemp working group's intention was that hemp be used as a food first and foremost for animals and then as legislation allowed human food.

Based on my experience as the manager with oversight of the hemp trial the subsequent exclusion of hemp as an animal food would appear to be a regulatory oversight, as this exclusion was not envisaged by the working group managing the hemp licensing trial.

Mary Clare Frances van der Lem, former Manager Medsafe 1996 to 2005.

Signed: 
Date: 26/6/19

In presence of: 
Signed:
Date: 26 June 2019

Gillian Heslin
Deputy Registrar
Invercargill District Court

Presentation to Ihemp Tour meeting , Gore 15 August 2022 – Appendix 2

Affidavit:

I Anthony van der Lem swear.

During the time the hemp regulations were drafted I was a Senior Policy Analyst at the Ministry of Agriculture (MAF), one of my duties was to represent MAF on the Joint Agency Hemp licensing trial. In November 2018 I was invited to attend a meeting with Med Safe, The Ministry of Primary Industries (MPI), on behalf of the NZHIA to hear how the regulations were being interpreted by officials. It was during this meeting the Hemp Industry representatives were informed that Industrial Hemp was being banned from the environment of food producing animals and plants.

I advised the MPI officials at the time that this was clearly a regulatory oversight and needed to be corrected as soon as possible. There would have been little point in conducting a hemp growing trial and setting up a hemp licensing regime, if the products of the industry could not be legally used.

I made these comments based on my experience as a MAF official on the Industrial Hemp working group of which I was deputy chair.

Industrial Hemp has less than 0.3% Tetrahydrocannabinol (THC), it is considered to be a safe product and is exempt from the prohibitions in Article 28 the UN Single convention on narcotics and drugs.

Scientific testing has shown that as long as Industrial Hemp has a THC level less than 0.3% and limited Cannabidiol (CBD) it was safe to cultivate and use in agriculture as a food fibre and horticultural crop, as per those exemptions to do so in the UN Single Convention on Narcotics and drugs. Compliance with these Regulations was considered important to maintaining our international obligations to the UN, and protecting our export sector from possible issues that may arise.

Any concerns regarding THC and CBD levels of industrial hemp were easily mitigated by short stand down periods, following harvest, due to how rapidly cannabinoids are naturally excreted with in 48hours.

MAF and FSANZ have done residue and tolerated daily dose testing and the data showed there was no way any food product or product derived in part or in whole could be used as a drug. This was proven by scientific testing of a range of products through the trials.

As a former MAF official with experience on the original hemp licensing trial, I am very concerned that MPI is now adopting a regulatory position which will undermine the basis of the hemp industry, and which is not based on a proper scientific basis.

Anthony Peter van der Lem, former MAF official 1996 to 2005

Signed: 

Date: 26/6/2019.

In the presence of 

Signed: Gillian Heslin
Deputy Registrar
Invercargill District Court

Date: 26 June 2019

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S.O.W.HEMP Collective

Southland Otago West Coast Hemp Collective

NO 1

GET THE LEGISLATION SORTED ASAP

Un single treaty convention:

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.

UN SINGLE TREATY CONVENTION NZ

is a signatory and based our legislation incorrectly ignoring this
Presented in this order as its considered important to highlight its importance ie our Object is mutually beneficial
collaboration our focus is this aspect first and foremost!

Un single treaty convention:

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So whats wrong and how does it get fixed!?

So Whats required?

1. Legalize ihemp immediately and totally remove from MODA and any influence whatever from MOH.
2. ENSURE no dual licences promoted by NZMCC are allowed to interfere with ihemp but that it has stand alone legislation totally outside MOH MODA and allowing all revenue streams including sales OF RAW MATERIAL TO ANY COMPANY FOR ANY PURPOSE THAT'S LEGAL.
3. Define it in separate legislation as legal with a the limit not above 1%
4. Ensure all contents naturally occurring are legal INCLUDING BUT NOT LIMITED TO CB'S TERPENES FLAVONOIDS
5. Ensure the appropriate Ministry in fact administer its suggested MBIE because its got all required and currently lacking ie business, innovation, enterprise.

So whats wrong and how does it get fixed!?

Is everything a waste of time resources and energy if the legislation is either incorrect corrupted or been reduced by worthy but unhelpful in terms of structure, outside influences such as medical cannabis et al.

So how does this get unblocked?

By demanding that Hemp is totally legalized as per the UN Single Treaty Convention Given the UN single Treaty Convention clearly and precisely states

The Convention shall not apply to the cultivation of the cannabis plant exclusively for industrial purposes (fibre and seed) or horticultural purposes and that none of foods drinks protein powders etc are illicit (article 28.3) Hempseed Holdings Ltd call on the NZ government to immediately with haste:

Legalize ihemp immediately and totally remove from MODA and any influence whatever from MOH.

S.O.W.HEMP Collective

Southland Otago West Coast Hemp Collective

NO 1

GET THE LEGISLATION

SORTED ASAP

- Immediate Objects: NO 2 😊
- *That the collective is focused on commonality of purpose ie all members pointing in the same direction ie Revenue streams info sharing and collaboration. That the collective has no interest in distracting events such as personality/business conflicts the wart on my nose et al but simply focused on beneficial outcomes for all participants*

1) To create better and better NZ ihemp cultivar's based on but not exclusively, on the Aotearoa1 seedstock via collaborative ongoing efforts of all participants.

a) To ensure the collective seedstock is defended and protected

*b) To ensure the industry is not captured by the corporates vis a vis seed certification and other issues that have as their outcome "control over participant's." Currently the thc testing protocols have been changed ie included thca which appears to have increased that measured by 200% without raising the thc limit to accommodate et al. However I should acknowledge post receiving the OIA et al that this could simply be location and conditions. Re the high tests related to another cultivar, its growingly apparent that folk are growing medicinal under ihemp licences and personal interference could be the cause. Irrespective I strongly recommend Hills, not just re price it's a more accurate test in terms of informing you (to dates total results exactly the same thankyou Larrys Creek) ie not simply what the govt requires. Nothing against ESR simply a different **test same result but contents clearly identified.***

- 2) *Specifically and exclusively non profit and non politically aligned.*
To identify and assist each other find new and innovative revenue streams that benefit all.
- 3) *To foster the development of business opportunities assist where possible “start-up” business’s, share non ip info et al*
- 4) *To provide information re machinery best practices and “what’s worked for me/us.” Contractors et al.*
- 5) *Provide seedstock and assistance to shareholders if they desire to grow ihemp, assistance re licencing application’s registers and legal requirements,. As required.*
- 6) *To encourage the commencement of local aligned groups to ensure all are heard and supported.*
- 7) *To support each other as a true collective and grow.*
- 8) *To encourage best practice and compliance and get legislation changed where unsuitable and or unworkable in real terms.*
- 9) *Work toward being totally excluded from both MODA and the medicines act.*
- 10) *Others’ as they’re identified or become obvious ☺*

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BLAIR DRYSDALE
(HOPEFIELD HEMP)

iHemp farming in rotation and becoming vertically integrated in the iHemp seed industry, from soil to oil.

Growing Hemp in NZ

Why are you wanting to grow Hemp?

What infrastructure do you need to grow Hemp for seed?

What are the challenges of growing Hemp?

Why are you
wanting to
grow hemp?

Is it for fibre?

Is it for seed?

Is it for a dual-purpose crop?

Is it as a commodity crop?

Is it for value add?

Is it simply for \$\$\$\$\$?

What
infrastructure
do you need
to grow Hemp
for seed?

A direct drill

A combine harvester

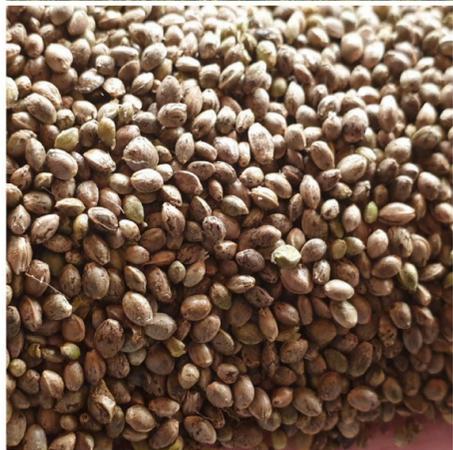
A grain drying trailer for in paddock

A batch grain dryer

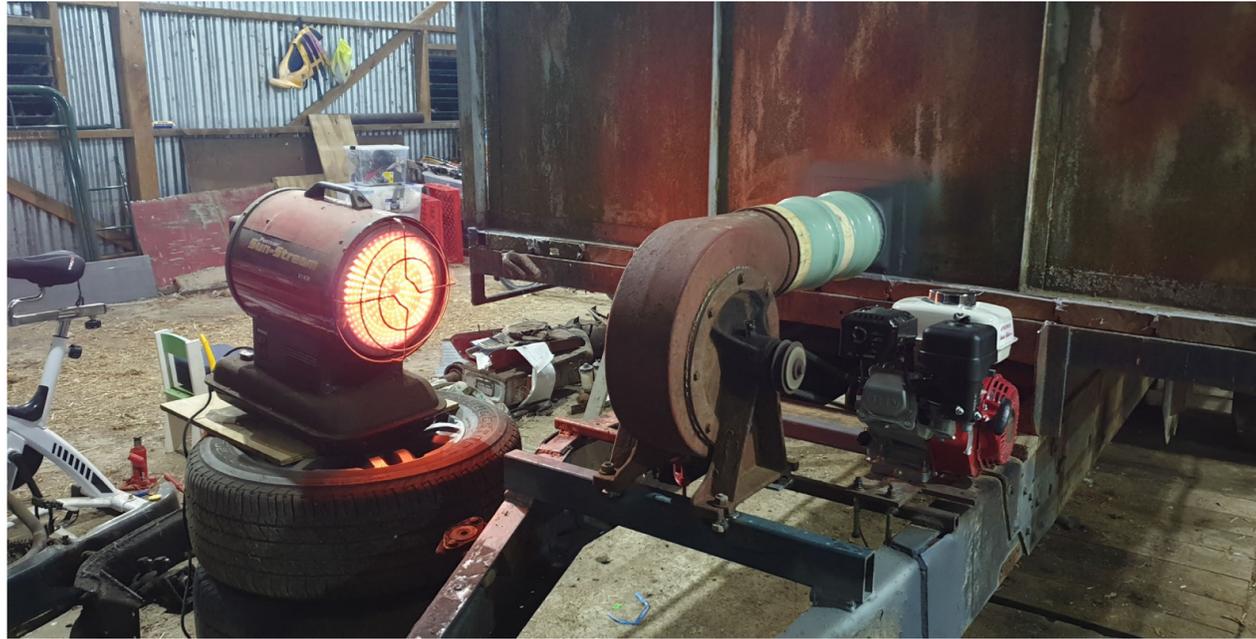
Silo

Bird deterrent equipment

In the field



Must have equipment



What are the challenges and risks for growing Hemp?

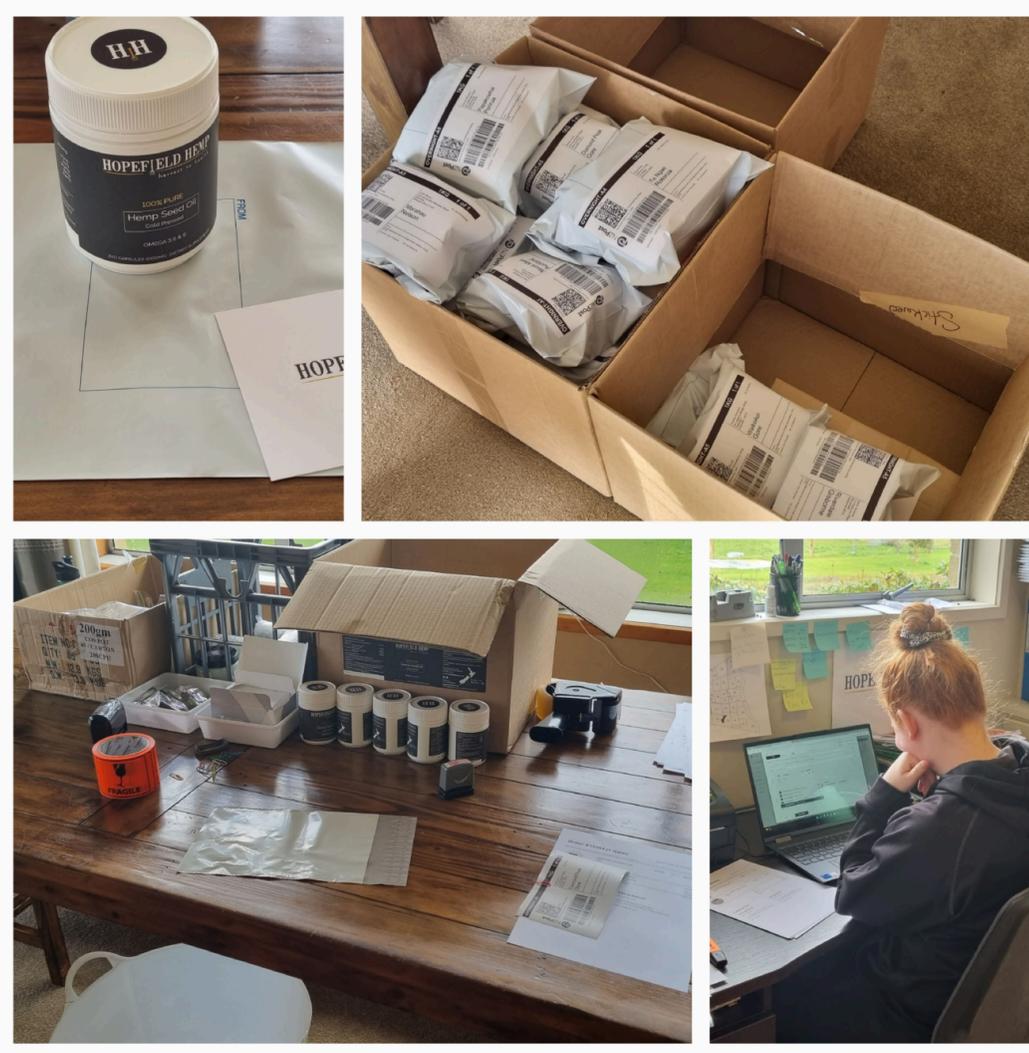
Legislation

Crop establishment

Soil type and climate

Birds

Value add is another beast altogether



Thank you

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.

Value Chain



Growers and
Cultivators



Testing and
Development



Processors and
Manufacturers



Distributors and
Consumers

Matching Supply with Demand, to Scale the Industry

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22

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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 change 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

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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

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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



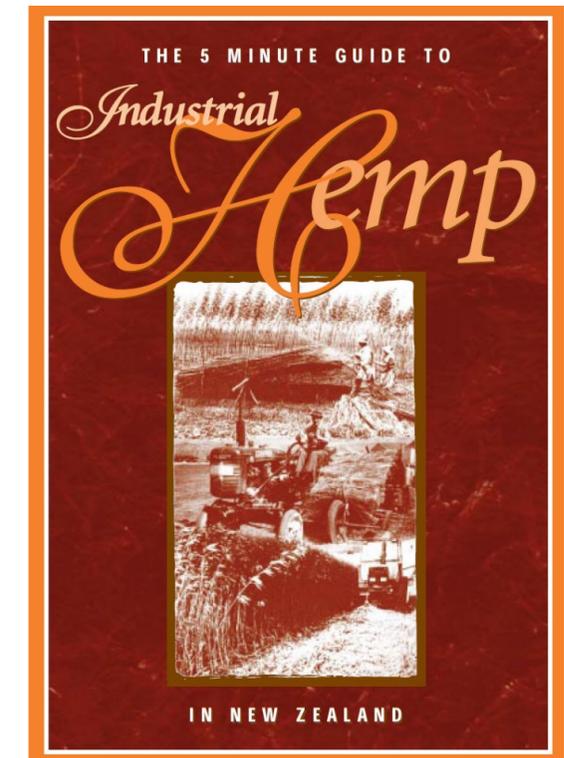
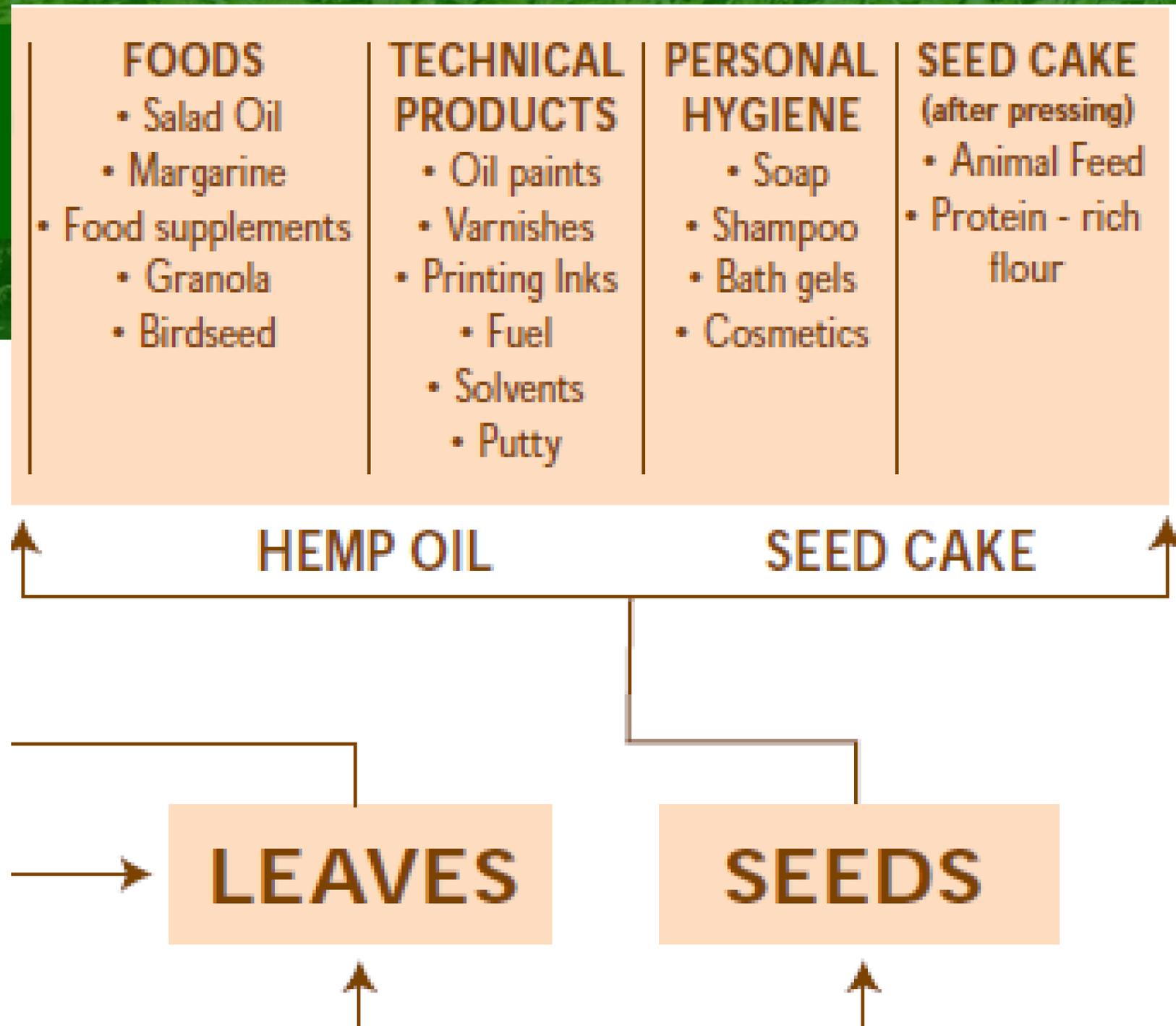
products. Hemp seed nutritional products for humans and animals as well as seed multiplication for northern hemisphere hempseed companies.



Future uses of hemp leaf, sprouts and roots.



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



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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.

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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.

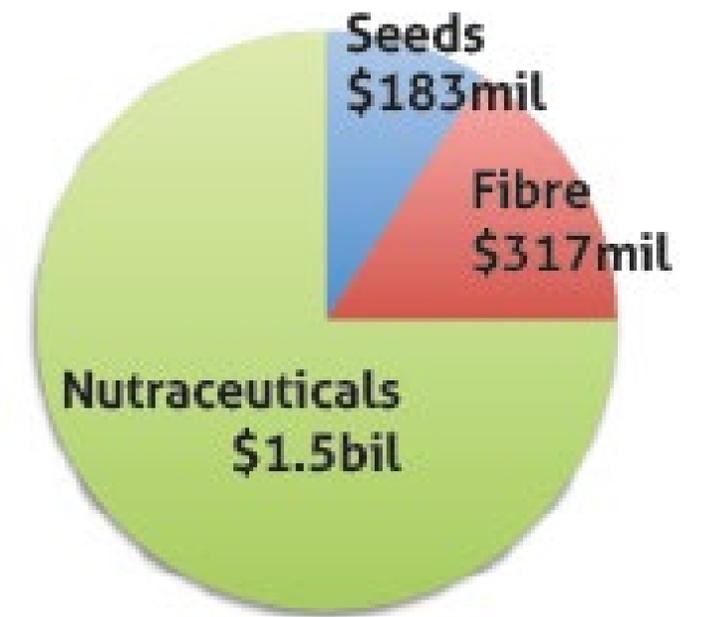


Working with Mānuka, Kawakawa and other native botanicals grown in New Zealand.

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

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tour &
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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



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NEW ZEALAND

pure heart
AOTEAROA
hemp's golden gift

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BE IN TO WIN

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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.

RESOURCES

The Next Step

Join the NZHIA so we can keep in touch

- We need a:
 - Hemp Industry Strategy Reset
 - Capability Development Program

Callahan Innovation:
[Capability Road Maps](#)

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

CallaghanInnovation
New Zealand's Innovation Agency

 **Te Puni Kōkiri**
MINISTRY OF MĀORI DEVELOPMENT

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

SUSTAINABILITY



NUTRITION



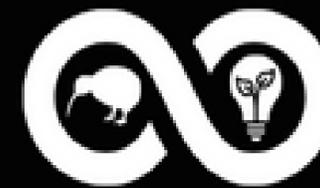
BIOMATERIALS



HEALTH



INNOVATION



**Aotearoa New Zealand
Hemp Alliance**

Coming soon ... a new community building portal

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WITH THANKS

With thanks to our speakers from



HOPEFIELD HEMP
harvest to health

Region support

GREAT SOUTH



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and a special thank you for tonight's spot prize sponsors



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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.

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Cultivators



Testing and
Development



Processors and
Manufacturers



Distributors and
Consumers