

Farm, Feedstock, Fly



Connecting Agriculture to Aviation

- Agriculture is Scale
 - Millions of acres
 - Billions of gallons
 - Millions of tonnes CO₂ capture
- Aviation needs Scale to Achieve Global GHG Reduction Goals:
 - Carbon neutral growth from 2020
 - 50% emissions reduction by 2050
 - Industry-wide agreement
 - Biofuels provide the solution



Oilseeds: A Canadian Solution

Advanced Crop Platforms

- Biotechnology platforms that provide non-food, true “drop-in” crops that farmers can use to grow oil in an environmentally and economically sustainable fashion.

Value Proposition

- Provide farmers the yield-opportunity to profitably produce a commodity scale product to service demand for high quality, economical feedstock for biofuel manufacturing.

A Winning Synergy

- The Aviation Industry needs a scalable feedstock to supply biojet manufacturing: quality, reliability, and sustainability for environmental benefits.
- Farming needs new opportunities to enhance farm economics: better land use, lower costs, and new revenue opportunities.



Our Resonance™ Product: Elite Crop Seeds for Growing Oil

Agrisoma Commercial Seed Production, Los Angeles, Chile



*A “drop-in” advanced crop based on
Brassica carinata*

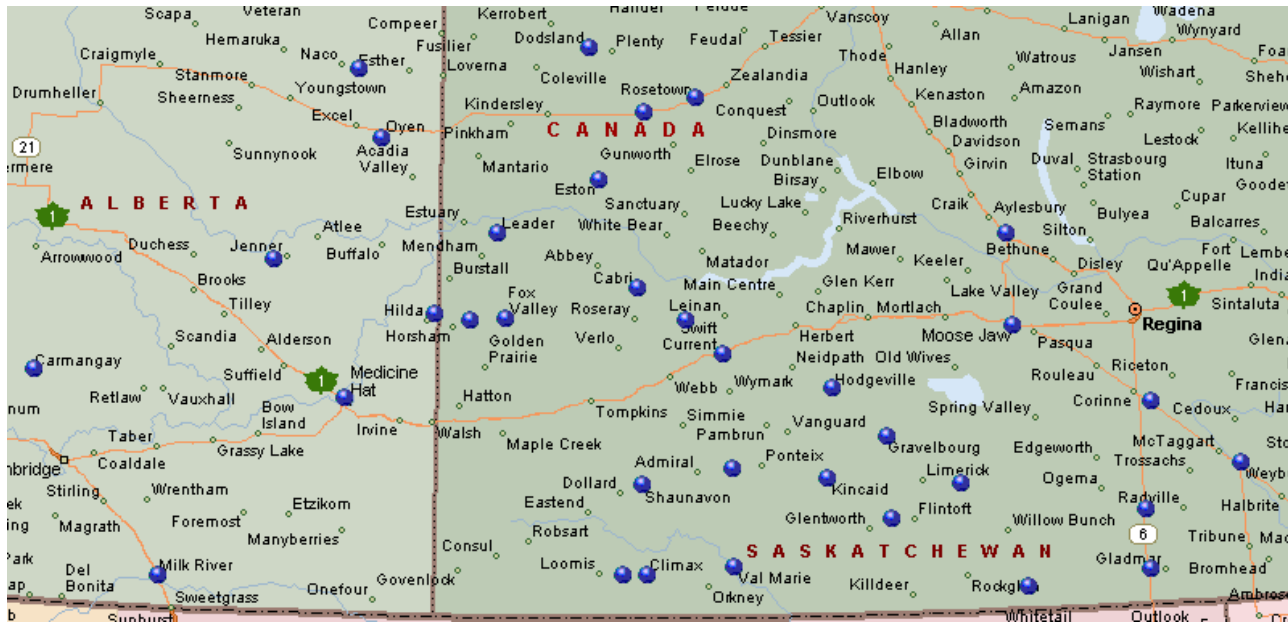
Commodity scale production

*Links biofuel volume needs with
farming capacity to deliver scale*

2012 Commercial Launch: Sold Out Smooth Allocation Process



- 6,700 acres of initial commercial production
- Excellent distribution across target geography of more than 3MM acres of potential production capacity
- Provides basis for rapid expansion



Resonance Crop Walk Series



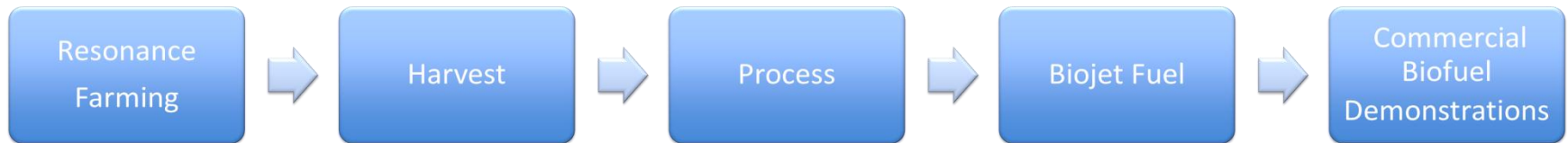
- Farmer focused, field walks of production sites
- Opportunity to meet with the producer and see real world results
- Total summer tours reached >500 growers



Harvest at Scale



Resonance™ *Brassica carinata* Bio-derived Synthetic Paraffinic Kerosene



 **ReadiJet™**



Resonance™ Biojet Emissions



“particulate emissions, including aerosols of black carbon, sulphates and by-products of the combustion of aromatic compounds, are significantly lower”

In-flight trailing emissions testing in six independent flight segments using Honeywell Green Jet Fuel™ including above the 50/50 blend ratio¹

¹As reported by the National Research Council Aerospace at the Farnborough Airshow July 9, 2012

Biojet – “Above the Fold”

Canadian Biofuel Probing Experiment Is World First

FARNBOROUGH AIR SHOW » JULY 9, 2012

by NIGEL MOLL

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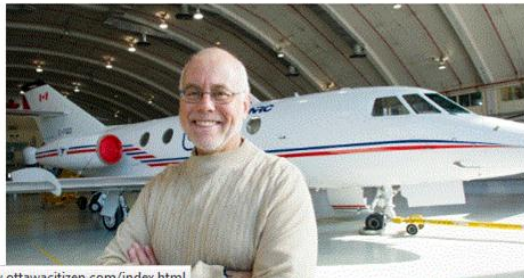
Grown in Saskatchewan, flown in Ottawa

NRC aircraft test oilseed-based fuel in search for a cleaner alternative to traditional jet fuel

BY SCOTT LARSON AND VITO PILIECI, THE OTTAWA CITIZEN MAY 21, 2012

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In Canada, the first flight in the world to ever be entirely powered by biojet fuel will depart from Ottawa in late October. In partnership with Applied Research Associates and Agrisoma Biosciences, the National Research Council of Canada will test the new jet fuel used to produce the jet fuel in western Canada.

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Chevron Lummus and ARA partner with Agrisoma, US AFRL and Canada's NRC to evaluate and to flight test ReadJet 100% renewable biojet fuel

13 September 2012



Canada launches first ever 100% biojet-fuelled flight

Meghan Sapp | September 24, 2012

In Canada, the first flight in the world to ever be entirely powered by biojet fuel will depart from Ottawa in late October. In partnership with Applied Research Associates and Agrisoma Biosciences, the National Research Council of Canada will test the new jet fuel used to produce the jet fuel in western Canada.



FARNBOROUGH: Canada advances biofuel testing with vintage T-33 trainer

06:00 9 Jul 2012



Carinata grows in marginal soil where canola won't. It can be used in rotation with other crops or during a period when a field would normally be fallow. Chuck Red, principal engineer at ARA, estimates one acre of the plant produces 100 to 200 gallons of jet fuel.

Homegrown jet fuel

The NRC is making preparations for world's first jet flight powered entirely by plant oil, TOM SPEARS writes.

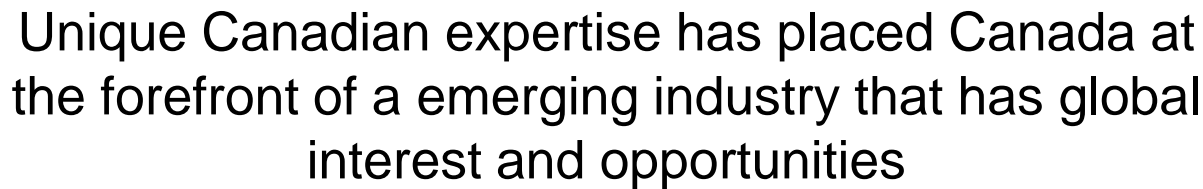
Sometime next month, a passenger jet will roar over Ottawa in the first test flight of jet fuel made entirely from plant oil. The National Research Council rolled out its plan Thursday to test the new fuel in one aircraft while a little T-33 jet will fly behind to sample and analyze pollutants in the exhaust. In one sense it's "a non-event," says NRC pilot Tim Leslie, meaning that the air-



Next month, pilot Tim Leslie will fly the National Research Council's Falcon 20 in a test of 100 per cent bio jet fuel made from plant oil.

made at NRC in the next month," he told an audience of MPs and business reps. See FUEL on page F2

First biofuel powered jet flight may be windfall for Canadian economy

[illegible]

What Biojet Means.....

2 Million Acres of Summer Fallow Conversion:

\$1.0 B in Primary Production

\$1.2 B in Processing

\$0.8 B in Fuel Sales

\$3.0 B in New Economic Activity

750 M Litres of Fuel

Why Saskatchewan?

- Oilseed **Expertise** – no where else has the depth and concentration of expertise that supports the industry
- Agriculture **Infrastructure** – on-farm storage, logistics, consolidation and contracting mechanisms second to none
- Strategic **Location** – ability to reach into USA, service Pacific Rim as well as rest of Canada
- **Energy** Focus – ability to add to a growing sector of strategic importance
- **Cooperation** Model – the community has a unique ability to work in harmony



Resonance Energy Feedstock

Growing Fuel on the Farm

SASK MUSTARD
WESTERN CANADIAN

prairiegold

Mustard 21
AT BURLINGTON

POS
Bio-Sciences

Uop
A Honeywell Company

ARA

CANTERRA
SEEDS

PATERSON
GRAIN



Agriculture and
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AGRISOMA₁₄

Sustainable Energy Founded in Agriculture