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Agri-Technology : The New Wave

Dave Smardon

Growing the Margins

April 3, 2008

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BioEnterprise

- *Building and growing Ag-Bio businesses !*
- *Focused on Innovation and Commercialization*
- *Funded under the APF*

Canada 

 Ontario



BioEnterprise Corporation

What is BioEnterprise ?

BioEnterprise is a Commercialization Agent!

Commercialization: from the word “commerce”; to apply business methods chiefly for financial gain or profit.

Agent: an instrument or means by which a guiding intelligence achieves a result

Commercialization Agent

Management / Advisors

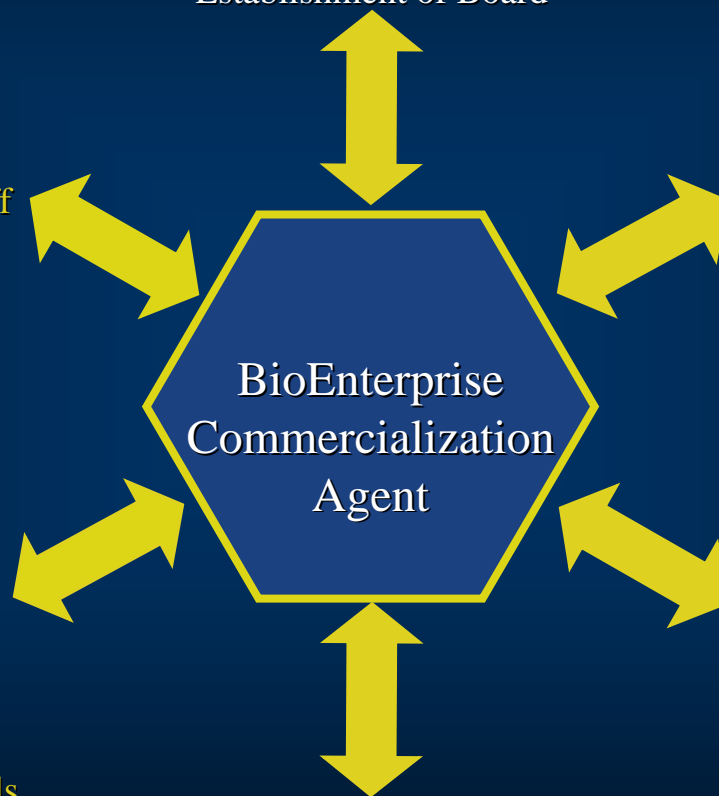
- Scientific Advisors
- Augmenting / support of management
- Establishment of Board

Financial Expertise

- Cost Management
 - Product Margins
 - Path to Profit / ROI
 - Revenue streams
 - Delivered via BioEnterprise staff
- Consultants, the BioEnterprise Global Networks

Business Plans and Strategy

- BP Development
- Critique / Modification
- Reality Check Program
- Delivered via BioEnterprise staff or via Consultants, Mentors, Angels and Professionals



Technology Assessment

- Uniqueness / “Disruptivity”
 - Manufacturability
 - Competitive Barriers
 - IP Protection
 - Delivered via BioEnterprise staff or via Consultants, Mentors, Angels
- And Technology Professionals

Mentorship Coaching

- Via BioEnterprise staff or by Business Leaders, Semi retirees, Successful Entrepreneurs, Angels

Investment \$

- Angels / Angel Groups
- Strategic Partners
- Venture Capital
- Government Programs

Where Does Ag-Innovation Occur ?

- In corporations - sometimes but less and less
 - Too expensive to do internally
- Research institutions / universities
 - But science does **NOT** equal innovation
 - Science can lead to innovation
- The vast majority = **On The Farm !**

Who Drives Ag-Innovation ?

- Corporation management - Acquisitions
- Researchers & scientists - Sometimes
- Driven by those in the trenches !
- **Farmers / Producers = Entrepreneurs**
- **Consumers**

- Three producers in S. Ontario get together to establish a BioMass Pellet Fuel operation
- Target market is initially - Greenhouse growers
 - Feedstock sources flexible – waste wood, biomass fuel crops
 - Grasses – Switchgrass, Miscanthus, Canary Grass
 - Woody crops – Willow, Hybrid Poplar, Black Locust

Benefits:

- Alternative low production cost crops
- Significantly lower energy costs for Greenhouses
- Global applicability

- Bio-diesel processing equipment - unique offering
 - Scaled for on-farm production
 - Designed for ASTM standards production
 - Small crusher available for producing oil
- Delivers batch process for farmers to produce 200L to 1500L of Bio-diesel annually

Benefits:

- Low cost entry into self-sufficiency for producers
- On-farm processing
- Lowers operational costs for producers
- Global applicability

Innovations Abound

Organization	Location
Biomass Energy Systems (Vidir Biomass)	Morris, MB
BoldtWood Enterprise	North Bay
Bio Balance	Smith Falls
BioForest Technologies	Sault St. Marie
Canadian Biofuel	Chatham
CARES	Ridgetown
Certo-Labs	Toronto
CSR Plus	Toronto
CWR	Grand Valley
Diabetic Delight	Toronto
Earthfoam Canada	Belleville
Eco- Habitat Agri Services	Grimsby
Creekline Edamame	Guelph
EEC Energy	Thunder Bay
Eggshell Resources	Thornhill
Forest Bioproducts Inc	Sault St Marie
Fractec	Guelph
Freeman Farms	Meaford
Genopod Inc.	Peterborough
GangaGen Life Sciences	Ottawa
GAP-C	Guelph
Glass Allium	Guelph
Global Tox	Guelph
Green Energy Fuels	Richards Landing
Green Circle	Sault Ste. Marie
Golden EBM	Toronto / Port Dover
Hearst Biocom	Hearst
Harsters	Dundas

Innovations Abound

Hydrocor Inc.	Lucan
Jiangxi Peako Biomass Energy Co. Ltd	Hong Kong
Keresturi Farms	Scotland Ontario
Little John	Timmins
La Brichetta	Italy
La Maison Verte	Hearst
Lifewell Corp.	Guelph
Lucknow Windfarms	Lucknow
MaxSoy	Markham
Mikro-Tek	Timmins
NeoVentures Biotechnology Inc	London
Nott Farms	Clinton
Ontario Bean Producers Marketing Board	London
Purification Research Technologies Inc	Guelph
Performance Plants	Kingston location
Persall Naturals	Waterford
Renewable Energy Vehicles	Sault Ste Marie
Real Tech Inc.	Whitby
Retrievall Inc	Brantford
ReWorks	Toronto
REO Energy Group	Paris
SWEETechs Corporation	Niagara Region
Terako Industries Inc	Georgetown
UofT- Centre for Bio-composites and Biomaterials Processing	Toronto
Vinifera for Life	Jordon
Vitabars	Kitchener/Waterloo
Weather Innovations Inc	Ridgetown
Wellington Polymer	Chatham



The diagram illustrates the flow of innovation from various sectors into agriculture. At the top, a blue banner reads 'The Confluence of Sectors'. Below it, a light blue hexagonal box contains the text 'New Agricultural Innovation'. Two large yellow curved arrows point from the sectors below towards this central box. Below the hexagon, a list of sectors is provided: 'Food Technology, Industrial Bio-products, Commercial bio-products, Nutraceuticals and Functional Foods, Alternative Energy, Agri-Health, Agri-waste Management'. At the bottom, five light green cylindrical containers represent the sectors: 'Food', 'Healthcare', 'Energy', 'Environment', and 'Industrial'.

New Agricultural Innovation

Food Technology, Industrial Bio-products, Commercial bio-products, Nutraceuticals and Functional Foods, Alternative Energy, Agri-Health, Agri-waste Management

Food

Healthcare

Energy

Environment

Industrial

Ag-Biotech Drivers

- ✓ “Integrated Innovation” between Agriculture and Energy, Healthcare, Environment and Food
- ✓ Meets the increasing public demand for “greener”, “cleaner”, “healthier” products
- ✓ Ag-related business opportunities have the market potential to surpass Medical Biotech Markets, which have dominated both corporate and investors’ mindsets
- ✓ Drivers of Broad Integrated Mega-Value Creation from **Farm Gate to the Consumer**

Agriculture and Ag-Bio-Technology will contribute to resolving the **Four Critical Challenges Facing the the Rest of the World !**

Ag-BioEnergy

New renewable/sustainable
non-oil based BioFuels

BioMaterials

New renewable/sustainable
materials

BioEnvironment

Reduce the impact of
global warming/GHG

BioHealth

Prescriptive “Wellness”
focus on nutrition/health

Food Technology

Industrial bio-products

Commercial bio-products

Forestry bio-products

Nutraceuticals

Alternative Energy

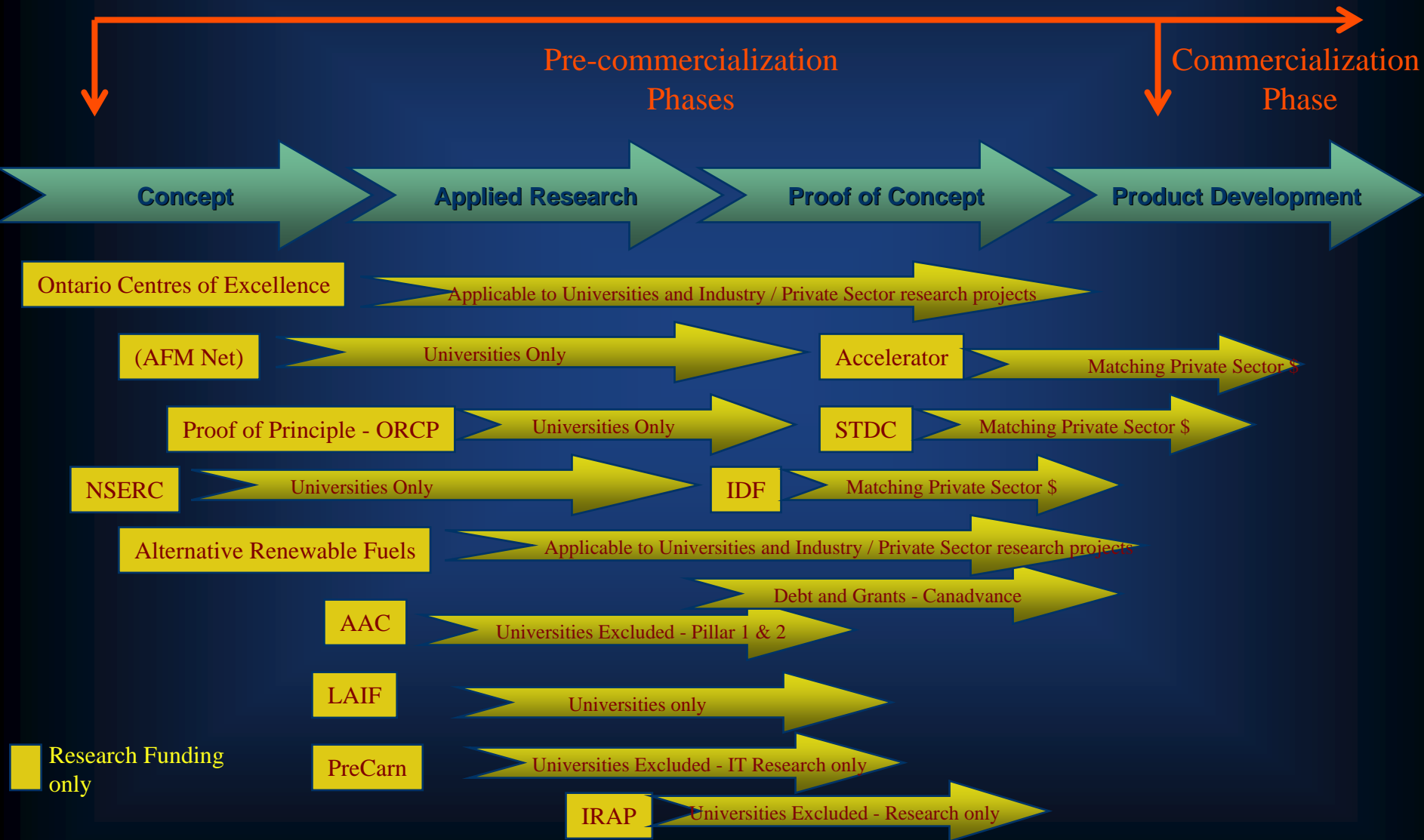
Agri-Health

Agri-waste Management

- **MOST OF THE TIMEIT DOESN'T**
- **WHY?**
 - There are no investment programs designed to commercialize agricultural innovation.
 - There is no capital available to early stage ag-bio businesses

Path To Commercialization

There is no lack of R & D monies. But what happens when R & D is completed?



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 Commercialization Capital

- Ag-Opportunities is a start but.....

Mandate

BioEnterprise Proposal:

To create an commercialization investment fund called the Agri-Innovation Fund that would focus on Ontario-based ag-innovations with national, multi-national and global applicability.

An Agri-technology (Agri-Tech) Fund!

Key Objectives

This proposed fund has three major objectives:

1. To accelerate the commercialization and growth of agri-technology and innovative new companies in Ontario
2. Increase / drive receptivity within the Canadian investment community for investments in agriculture and agri-technology
3. To attract private sector investment from both domestic and foreign sources into the agri-technology sector

These objectives are of equal importance, because successful commercialization of innovation will NOT take place without private sector investment!

Government's Role

1. Provide leadership in addressing critical gaps and objectives
2. Act as a catalyst to drive private sector participation
3. Ensure the long-term benefits to Canadians and the agricultural industry
4. Help establish and maintain our leadership position in global agriculture
5. Deploy programs that build on existing investment in infrastructure, organizations and people

The impact of “Integrated Ag-Bio Innovation” could create waves of transformational change, that will have broad impact:

- ✓ Global economy,
- ✓ Corporations/Governments worldwide,
- ✓ Citizens of the world (mega consumers),
- ✓ Wall Street, financial markets, and investors

Investment opportunities will capitalize on ag-bio tech innovation, as the enabler of new sustainable industries and companies

***AgBiotech is About to Move to Center Stage
as a Major Investment Driver***

SO WHAT IS CHANGING FOR INVESTORS?

Market potential – Large global demand-driven mega-markets

Growth potential – High growth driven by large global market needs

Innovative Technology – Agri-technology-based products for NEW integrated markets

Profit Margins – High margins will be driven by Integrated Business Models that link the farm gate to downstream industrial and consumer markets

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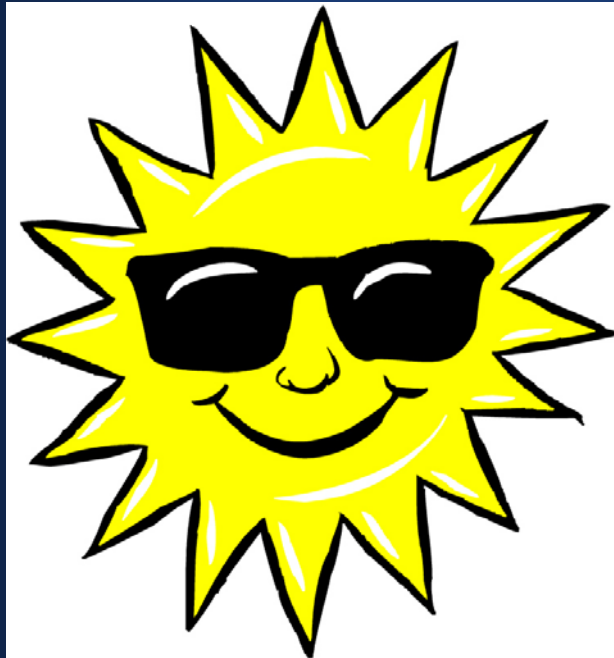
“We believe that we are on the brink of a technology-driven restructuring of agriculture, one that will lead to a reshaping of agriculture and agribusiness on a scope that is truly revolutionary. The driving force behind these changes is agricultural biotechnology...”

We expect to see a transformation in investors perceptions of agricultural biotechnology – from an industry of promises to a proprietary growth industry – as well as agriculture – from a mature industry to a new technology-based growth industry.”

Sano Shimoda

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The Future's so bright...



Thank You !

we gotta wear shades