

**Minutes of Research and Development Focus Group Discussion  
Funders and Industry Representatives  
June 12, 2002**

Funders of the research and development/technology transfer/commercialization system and industry representatives met on June 12<sup>th</sup>, 2002 in Nisku to give valuable input into the development of a Strategic Research Business plan for Alberta's Agriculture and Food research, technology and commercialization system. As well as completing an analysis of the present system and their vision of a successful system in the future, participants outlined strategies to deal with the present issues that need to be addressed before reaching the desired outcomes. Here are the results of this focus group.

**I. What part of the system do we need to: Keep, Discard or drop or Create**

**A. KEEP**

**People**

- Critical mass, excellent researchers, inquisitive highly skilled practitioners

**Balance**

- Basic research, innovative research, commercialization, enthusiasm; balance of market and technology/science drivers; R&D focused on reducing export dependence; process to balance between focus on primary, value added and environment

**Creative (basic)**

- Basic discovery initiative maintained; capacity for basic & applied production research; focus on adoptive research (Japanese model); creative aspects of research not just the focused strategy network areas; ability to support research creativity and imagination (idea generation)

**Primary**

- Agronomic research; primary production and sustainability research; variety development

**Funding**

- Diverse funding; varied mandates within a unified strategy (to be developed); cooperative work done by the funding agencies; brains, dollars, breadth and depth of research capacity; funding maintained or enhanced; funding; new Human Resources

**Capacity**

- AAFRD & federal government capacity for research

## **B. DISCARD OR DROP**

### **Specific Items/Decrease Emphasis**

- Demonstration type tech transfer; production research (there's been a heavy emphasis for years); better payback from alternative markets

### **Institutional Barriers**

- Institutional barriers to research collaboration - unnecessary competition for research and the empire mentality in institutions (4); need to discard fragmentation and silo's (2); need to discard duplication of research and fuzzy mandates which create duplication (2)

## **C. CREATE**

### **New Human Resources**

- Training capacity – student training; education & training; ways to attract young people to the science of agriculture; better alignment of research and technology delivery; reverse “brain drain”; cooperative programs between companies and university grads

### **New Structures**

- Structure for collaboration through the R&D continuum – balanced system; system transparency; create forms for interactivity between sectoral R&D; a single R&D and tech transfer department, all funding through a single desk; a high level policy discussion platform to publicly examine issues pertinent to R&D

### **Tech Transfer**

- Create a vehicle to help commercialize the non-shiny technology ideas; tech transfer; more competitive intelligence; communication system between funding agencies to achieve collaboration & prevent duplication and inefficient funding system; system to access technology worldwide

### **New Investment & Funding Processes**

- Establish an outcome relevance index for basic to applied research; new vehicles to attract research investment capacity; improved administrative coordination by research groups; mechanism to renew funding organizations allowing long term funding decisions; research capacity independent of and crossing institutional boundaries; investor confidence; low cost research routes; guidelines for funding costs (e.g. overhead)

II. Participants were asked to write down three words to describe the **characteristics that they believed described a successful R and D system for the province**. The following characteristics were suggested:

- Collaborative – integrated; coordinated; active communication among all players; collaborate with others and have a shared vision and buy in; priority setting; one stop shoppers for researchers
- Well funded – research capacity
- Innovative – encourage basic discovery; creative – use non ag food approaches; progressive
- Focused – sharply focused on most important investment opportunities
- Accountable
- Transparent
- Effective – obtainable outcomes, productive
- Diverse
- Flexible
- Progressive
- Commercial success
- Competitive
- Profitability - economic returns; attracts investment; major contributor to economic development
- Intellectual critical mass
- Benefits farmer – production key component

III. **Vision** – Participants spent time thinking about a successful R and D system for 2010. What does success mean to you? What specific outcomes are we working towards? In groups, describe the most desirable future for the R and D system in 2010.

**Common themes that came out of the discussion to describe a successful Alberta R and D system include:**

- Accountability throughout the system
- Funding through a one-stop system
- Profitability for sector
- Always changing to meet needs
- Public involved in research direction
- More strategic approach to developmental process
- Sustainable process

**Individual group reports included:**

**Group A – Facilitator, Maureen Bolen – AAFRD**

- Achieving something – working towards outcomes
- A functional due diligence system – when a project is brought forth, person needs to be assured that it is being looked at in a fair way – it builds on the strengths and weaknesses of the project – the due diligence process would support or enhance

the project rather than it being an impediment. Coaching could be given to those putting in a project. This process would ensure we are investing in the right things – it would be transparent, accountable to stakeholders and an effective process.

- Needs to be a balance – applied research has to be part of receptor industry where companies are prepared to pay for Research and Development. Pure research needs to be government funded – comes out of the public purse. There would be enough of private industry driving R and D – 50% paid for by the private side.
- Agri-research is part of the economic system and integrated into the entire system and not singled out e.g. integrated into the health concerns.
- System working for those growing food – don't lose track of producers
- Information and Tech transfer is being transferred and utilized by producers. Producers are able to get decent return on their investment – profitability is critical
- Information management system – a very effective competitive intelligence system. It is reconnaissance, assessment and response. It helps us look outwards and gives us excellence in our reputation. CI system would be available to those writing up projects.
- Presently we are renowned for good wheat, oil, pulse, beef quality – in the future we will have a good share of the global market – we will have established ourselves as market leader.
- No longer see the phrase “educated consumer” or the need to educate them – it has occurred in 2010
- We are doing R and D planning more strategically
- Production systems are aligned with processing systems.
- Good business planning occurring throughout chain
- Think Tank – group of respected, individuals identify the opportunities – and then another group takes these ideas, debates and discusses them and moves process along e.g. Livestock parts for human transplant. Ag decision-making – how is it made today. In future, leadership like a board of directors provides guidance to that decision-making. Creative think tanks could occur throughout province to create these ideas.
- Intellectual property issues have been settled
- Entrepreneurs input into the process
- Branding opportunities for quality assurance
- Auditable system – so we can repeat things
- Funding – gap filled from pre-commercial (AVAC) to active commercialization – presently there is a gap and in the future it should be filled
- Move to funding standards that allow us to compete with well organized R and D systems in other countries

**Group B – Facilitator – Susan Meyer, AAFRD**

- A number of (different type) companies and (new) products in Alberta are meeting market demand
- Politicians & leaders are actively supporting by attracting investment – they have a vision and stick to it with long term, long time thinking and commitment
- Funders use their “big stick” to ensure the system approach connects, enhances and do not reward applications which don’t add to information, share ideas or use existing resources and infrastructure
- The community decides priority areas which produces the “program” – includes focused and broad based research, and has identified the areas where Alberta has a natural competitive advantage for research in how to value add them
- There are two streams funded:
  - Infrastructure – to attract and keep a intellectual critical mass, with hard money for “bricks & mortar”
  - Projects
- The platform technology or centers of excellence attract world class researchers, which will focus but not lose ideas
- “One stop funding” happens around a table to which a researcher need make only one application
  - the table finds the funds for approved projects from appropriate (internal and external to Alberta) sources, helps the applicator get from where they are to “commercialization”
  - a “gate system” includes criteria which are different for each level – easier, perhaps, for lower cost, innovative ideas which travel up the system to more complex criteria for longer, more expensive projects (refer to ARC forestry model)
- The system includes “clearing house” tasks including
  - Investment capital
  - Ideas
  - Who’s who
  - Connecting

**Group C – Facilitator – Scott Wright, AARI**

- Focused on removing barriers to development – Primary/profitability
- Balanced portfolio – short/medium/long term
- Pool world knowledge for adaptive research – medium term
- Credible – R and D system marketing/commercialization; priorities set by “consumer” benefits – focus
- Measurable benefit – credibility built on demonstrated results
- Distributed as part of the rural fabric
- Communication capacity to harvest world technologies
- Outcomes – harvest world research; add to research pool
- System linked (enhanced focus to the research side)/dialogue – research, development users

- Circular model - Idea→Consumer→Opportunity (Idea is inputted) →Research (Idea is inputted) →Development→Transfer/Commercialize
- Duplication? – Private/investment research; public investment (targeted problem solving); Do we need public researchers – what focus?
- R and D – Food, Ag products, Resource Quality - Private=Short Term + Commercial; Public = Long/Medium Term + Broad benefit
- Focus on import replacements, secondary non-food products
- Future is more engineering technology, processing, incubator capacity, output trait – commercial, environmental, consumer specific
- Research transparency – consumer based issues; public image conscious
- World class – at universities (training, knowledge)
- Prairie/Ecoclimate based – R and D systems for production
- Value of system – supportive of rural tapestry; instill rural economy;

**Summary:**

- For researchers
  - Clear direction
  - One stop funding
  - Adequate infrastructure
  - Adequate funding
  - Reduced administration: 20:1 researcher to management
- For Consumer/Public
  - Safe
  - Meets wants/needs
  - Contributes to quality of life
  - Rural esthetics/quality
  - Confidence/trust
  - Stronger economy
  - Don't have to pay for safety nets
  - Sustainable environment
- Funders Get
  - Measurable results
  - Accountability
  - Impact
  - ROI – product, \$, benefits
  - Resources, reviewed
  - Knowledge of strategic industry needs
- For the Ag & Food Industry
  - Knowledge
  - Results – ROI
  - Profitability
  - Sustainability
  - Marketability
  - Commercial product

#### IV. Issues/Strategies

In the past stakeholders have identified several key issues that are getting in the way of the desired future for the Research and Development system. A list was presented to the participants and they were also asked whether there were other issues standing in their way of success. Participants were given 4 votes and with these four votes asked to place them on the top four issues that they believed were critical to the future success of the R and D system. Top five issues that group thought are standing in the way of a successful R and D system are noted by an \*

- Lack of a good process to align market responsive and outcomes focused research priorities to resources – **7 checks** \*
- System lacks leadership and direction to achieve performance – 3 checks
- System fragmentation – each player has separate and an independent strategy with most R and D/TT activity conducted in independently and without adequate collaboration – **9 checks**\*
- Inadequate, misaligned and fragmented funding system – 2 checks
- Lack of capital investment in R and D from inside and outside Canada – **6 checks**\*
- Lack of commercialization funding – **6 checks**\*
- Lack of skilled researchers/labor shortages when scientists retire – 1 check
- Lack of accountability – 2 checks

#### Other Issues identified at meeting:

- Effective tech transfer research - balance between adequate and inadequate tech transfer research - 2 checks
- Tech transfer/commercialization research – 2 checks
- Image of Agriculture research/political process – 3 checks
- Lack of long term funding – 5 years or more – **6 checks**\*

Participants were divided into groups and asked to develop strategies around one or two issues of their choice.

**1. Political Image of Agriculture** – Agriculture lacks a political image. The challenge is to communicate the image of land and agri-food managers – environmental quality, nutrition, public health.

**Ideal situation** – Better communication about the importance and opportunities to politicians who need to be reminded of the true productivity and opportunity in agriculture. Challenge is to inform non-ag sector of the responsibility, ability and potential of agriculture to contribute to the economy.

**Strategies** – Bring ag groups together as one voice to deliver communication plan to MLA's and MP's:

- Knowledge based
- Tech based

- Exciting opportunities and profitability
- A lot of specific examples: diversity, sustainability

**Who** – All producer groups together

## **2. Lack of a good process to align market responsive and outcomes focused research priorities to resources**

**Issue**– lack of sound direction in public and market-driven policy development in issues surrounding agri-food

### **Ideal Situation and Strategies –**

- World renowned thinkers in one room
- Dedicated thinkers
- Seeking information & different

**Who** – Health scientists, environmentalist, public funds to fund idea and policy development

## **3. Lack of Commercialization Funding**

**Issue** – problem of start ups accessing funding, money is present from basic research to pre-commercialization, there is also funding when a product is commercial (e.g. banks, lending bodies)

**Ideal Situation** – readily available funding for people/companies with “commercializable products

### **Strategies –**

- Industrial Development Bonds
- Phase 3 at Leduc Processing Center – scale up from pilot to small run of a product for an extended period of time
- Preferred tax treatment – Venture funds – this area needs target from favorable tax treatment
- AFSC commercial fund back up the chain and take more risk on these kinds of products

**Who** – Provincial Treasurer, AFSC, Minister of Ag, WED and AVAC and NRC

## **4. Lack of Accountability**

**Issue** – lack of measurable outcomes and non- strategic research on the part of researchers (responsive to market needs). Funders need to do their due diligence to ensure this occurs. All have a responsibility to accountability.



**Ideal situation** – The process of accountability is not always being seen but there are many checks and balances in place at different levels. (ie. ARC – gating process to look at research). Also funders looking at renewals and priorities of the day.

**Strategies** – The criteria are important in the system (economic, scientific, etc.) What are you going to gauge the project on? A gating system – a number of gates based on dollar amounts required.

**Who** – Maybe through a round table funding group, research (researchers and administrators) institutions, or through industry matching. We all have a role throughout the system.

## **5. Lack of tech commercialization**

**Issue** - Barrier of good ideas to commercialization, have a good idea but can't get anyone to pick up on it.

**Ideal situation & Strategies** –

- Has to be something in it for everyone.
- The process is splintered amongst the various partners and therefore need to work together to attract dollars, - economics, marketing, profitability, packaging, etc. this might work through an incubator forum for people to hear ideas – annually or semi-annually – a meeting to look at ideas
- Lack of infrastructure for delivery (targeted delivery.)

**Who** - Researcher, distributor, industry, funder, consumer, coming together to obtain benefits to all, and a group to help innovators

## **6. Lack of long term funding**

**Issue** – long term funding implies long term vision, opportunities to tackle long term issues and larger issues. Currently funding agencies (especially public funders) can fund only three year terms. Others are funded on a one-time basis.

**Ideal situation & Strategies** –

- Greater partnerships with long term vision
- System for renewal from public funders
- Value based accountability system
- Need to specify what research needs to be done

**Who**

- Provincial and federal funding agencies within government
- Industry development and commodity interest groups
- Industry stakeholders
- AARI
- IDF's

## 7. System Fragmentation

**Issue**– poor communication between research institutions (self protection & empires), short term funding pushed projects to “bits and pieces” not cooperation. Reward system in research rewards isolation and lack of cooperation the system is developed around production by single researchers.

### **Ideal situation & Strategies –**

- Encourage optimum teams for projects through funding organization cooperation’s
- Identification of strategic areas for research – requires a mix of market driven and science driven
- Must have discussion on funding along the value chain (used to incorporate various funders to cover all mandate segments)
- Need to clearly indicate what research needs to be done
- Need to bring private funders to round table process

### **Who**

- Researchers
- Funding agencies
- Industry and commodity stakeholders

**V. Communication Plan** – Maureen Bolen, Organization Development Specialist for the project highlighted the communication strategies for the process. They include:

- Communiqués – sent out to all stakeholders on a regular basis to keep everyone up to date regarding the progress of the R and D strategy
- Web site dedicated to this strategy

## **VI. Representatives for Stakeholder Task Team**

Clif Foster (Alberta Barley Commission) and Darcy Fitzgerald (Alberta Livestock Industry Development Fund) volunteered to be part of the Stakeholder Team that will put together the first draft of the Strategic Business Plan.

Participants: Brian Tischler, Les Brost, Cam Klapstein, Doug Walkey, Clif Foster, Lindsye Dunbar, Janette McDonald, John Christensen, Bill Buchta, Aaron Falkenberg, Larry Kitz, Keith Digenhardt, Darcy Fitzgerald, Ross Bricker, Neal Oberg, Scott Wright, Alan Hall, Don Macyk, Brent McEwan.

Meeting process developed by: Maureen Bolen, Barb Vanden Bosch, Susan Meyer and Cindy Bishop - Organization Development Specialists, Ag-Entrepreneurship Division, Industry Development Sector, AAFRD.

Meeting facilitated by: Maureen Bolen and Susan Meyer, Organization Development Specialists and Scott Wright, Leader - Network Development, AARI – July 2, 2002.