Overcoming farm level constraints

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Overcoming farm level constraints requires..

- Partnerships
- A Business Unusual approach
- Technology

Smallholder agriculture is challenging and complex - low technology, limited information, little access to finance, limited access to markets, vulnerability to climate....

Complexity makes it imperative that a variety of institutions contribute their core competencies to Empower and Incentivize farmers to make farming productive and able to offer a decent standard of living.
1. Progressive Partnerships are needed

- **Government** – enabling policy, infrastructure investment, effective institutions, incentives, leadership, facilitation, coordination…
- **Farmers** – organisation, business mindset, openness to technology and training, advocacy, ……hard work !!
- **Development partners** – support for capacity building, infrastructure, knowledge sharing, coordination,…
- **Agricultural Input companies** – technology & training, market development, investment in products and people,
- **Financial institutions** – cash, credit, financial training, credit guarantees, crop & weather insurance
- **Output Marketing, Storage, Processing organisations** – closed loop systems assure market access and boost productivity
- **Other Service Providers** – MIS, Commodity exchanges, Storage silo’s,

- **Working together** in a region/district/province in a value chain/holistic approach that builds productivity, profitability and the rural economy.
Partnerships – some examples

- **Strengthening Ag dealer networks** - KENYA
  - CNFA, Rockefeller Foundation, Kenya MOA, Ag dealers, Monsanto

- **Training farmers in Maize agronomy** - KENYA
  - KMDP, FIPS, USAID, Farmer organisations, Monsanto (and other seed co.’s)

- **Conservation Tillage programs** – NIGERIA & UGANDA
  - Candel Nigeria, Federal MOA, SG2000, Monsanto
  - Uganda MOA, APEP, USAID, Farmers organisation, Monsanto

- **Biotech projects**
  - Traite and technology donation to NGICA cowpea project
  - Traite donation to Danforth Cassava project
  - Drought tolerance maize project for Africa – (design phase) – CIMMYT....

- **Government ministries of Agriculture (NARS & Extn), Trade, Science and Tech are key partners**
  - Seed laws, biotech laws, variety registration, seed importation and export,

- **We welcome diverse partnership as long as they are impactful**
  - (WASA, EASA, WACIP, AGRA.....
2. A Business Unusual Approach

- Commercial
- Cooperative
- Humanitarian

**Monsanto business in Africa**

Hybrid maize & veg markets
- South Africa, Lesotho, Malawi, Zambia,
  Tanzania, Uganda, Kenya

Maize breeding and testing
- South Africa, Kenya, Tanzania, Malawi

Maize seed Production
- South Africa, Kenya, Malawi, Uganda, Zambia
2. A Business Unusual Approach

Commercial Business

• Monsanto provides farmers in Africa (and the rest of the world), with seed technology to make them productive.

• We invest in, add value to and make a return from our African operations. Longer ROI’s but important business nevertheless.

• Profitable farmers make good customers

• Productive and profitable farmers can provide food security and sustainable rural economic growth.

• Farmers must be Empowered and Incentivised to invest in their farming business.
A Business Unusual Approach

Cooperative partnerships

• Partnering with other service providers to meet the farmers needs.
  • training, distributing, supplying…
• Developing appropriate products - small packs of seed, herbicides (affordable),
  • 25kg, 5kg, 2kg, 1kg of hybrid maize
  • 20g, 50g, hybrid tomatoes
  • Combi-pack (seed, herbicide, fertiliser packaged together)
• Supporting growth in distribution channels by training and supplying small ag-input stockists
Humanitarian donations

Contributing products and know-how to assist those currently beyond the market.

- **1m$ donation** to WFP, Nov 05, grain from RSA to Malawi.

- Hybrid seed donations for the Millennium Villages in Malawi & Kenya. (working with vouchers)

- **Monsanto Fund** donations for various ‘improved nutrition thru ag. productivity” projects.

- NB Seed subsidies can work via vouchers if
  - Support not surplant the distribution chain
  - Impactful, targeted, limited duration
Making the Difference in the Field

0.8 to 5.5 tons/ha!

Over 500%!
3. It Takes Technology

...in an enabling environment that allows agriculture to work..
Genetic potential of maize - examples

- All countries have significant maize hybrid markets
- Egypt shows yield increase through genetic improvement & irrigation

Source: Index Mundi 2004
Our Technology Platforms

Monsanto uses its scientific capabilities in a number of arenas to develop new products. These capabilities form a toolkit used throughout our product pipeline, as each tool can be used on its own or in combination to help study, test and refine new traits, germplasm and other characteristics in plants.

**GENOMICS**
- Genomics involves the mapping of the genes of plants to understand their structure and the role they play in how the plant functions.

**CONVENTIONAL BREEDING**
- Conventional breeding is the process of cross-pollinating plants with desirable qualities to develop improved plants in successive generations.

**MOLECULAR BREEDING**
- Molecular breeding involves the use of DNA markers for genes in combination with physical measurement of traits to manage plant breeding programs. Molecular breeding significantly accelerates the efficiency in bringing new varieties to market.

**CROP ANALYTICS**
- Crop analytics involves the application of advanced analytical methods and technologies to identify the composition of food and feed traits.

**BIOTECHNOLOGY**
- Biotechnology is the application of scientific knowledge to transfer beneficial genetic traits to enhance plants’ growth or to provide nutritional or other benefits to farmers, food and feed processors, or consumers.
It Takes Technology — quality seed, fertiliser, pest control products, biotech, training

- **Quality seeds** have high yield potential when combined with fertiliser, good agronomy and favorable weather

- **YieldGard (Bt Maize)** provides protect against stalk borer, and **Bollgard (Bt Cotton)** against bollworms

- **Biotech** has scale neutral benefits — reduced operating costs, increased yield, less pesticides, simplicity, reduced soil erosion

- **South Africa** commercial. **Trials** in Burkina Faso, Kenya

- **Biotechnology** needs an enabling regulatory environment. Policy, law, regulations. Requires investment and regular communication.
Biotech Benefits

Spain

Study of 2001-02 Season. Huesca

10-15% yield increase

Increased gross margin of 12.9% for

Increased average income of €150 per hectare

Decreased pesticide application of 35,000-56,000 kgs

India: Cotton = 30% Agriculture GDP

+54% in yields

+62% in profits

-70% in insect sprays

$50 Gross Margin

20 -60% yield

6 less sprays

Drought Tolerance project for Africa

- Monsanto has 3 years of promising trials Drought Tolerance (DT) in USA
- Committed to sharing DT royalty free for white maize in Africa
- Aim to launch 3-4 years after commercial launch in US (2014)
- Developing a consortium of partners to fund, develop and test the product
- Need support of African government in regulatory development.
Benefits of Biotech Drive Global Expansion

- 250m acres worldwide
- 1.43 billion acres cumulatively since 1996
- 10m farmers, 8m smallholders
- 22 countries planting, 29 countries importing

*14 countries growing 50,000 hectares / 123,553 acres or more of GM crops

Source: Chris James, 2006
High Productivity Smallholder Farming

**Victorious Cycle**

- **Increased crop yields**
  - Growth of the Economy
  - Growth of non farm production
  - Increased employment
  - Demand for farm inputs, consumer goods & services
  - Increased farm cash income
  - Investment in quality farm inputs

**Food security**
- Market surplus
  - Domestic market
  - Export market
  - Food reserves
  - Export earnings
  - Stimulates economic growth
  - Strategic food reserves
  - Stimulates rural enterprise (agroprocessing)
  - Food security
  - Food self sufficiency
  - Poverty alleviation
  - Job creation
  - Reduced cost of food in real terms
Monsanto Pledge

• The Pledge represents what we stand for as a company. It confirms our commitment as a capable steward of the technologies we develop, addressing tough issues honestly and openly, delivering on values-based as well as science-based commitments.

• The Pledge provides the foundation for Monsanto’s Partnerships, Business and Technology

**Dialogue**
- Listening carefully, thoughtful dialogue, addressing the needs and concerns of society.

**Transparency**
- We will ensure that information is available, accessible, and understandable.

**Respect**
- Respect the concerns our customers, consumers and the environment. Act with integrity, respect, and consistency.

**Sharing**
- Sharing knowledge and technology to advance science, improve agriculture and the environment, and help small-holder farmers in developing countries.

**Benefits**
- Deliver high-quality products that are beneficial to our customers and the environment.
Call to Action to spur ag. productivity (all stakeholders)

- **Partnership approach**
  - Consultation and collaboration in action and attitude. Effective dialogue advocacy, engagement.
  - Value chain approach, clusters of competence

- **Investments to improve the investment climate.**
  - enabling policy, infrastructure, institutions, incentives
  - Open markets and borders, harmonize seed laws, PVP, biosafety (science based), smart support to farmers....
  - Growing Agriculture within a Growing Economy
    (Free business to do what it does best, create value)

- **Regional approach**
  - Participate and influence international agenda re: ag. issues via strong regional organisation
  - BSP, Codex, WTO, EAC, COMESA, SADC, UEMOA, ECOWAS

- **Action**
  Walking the talk
Thank you