Generic Agrochemicals
African Sectors

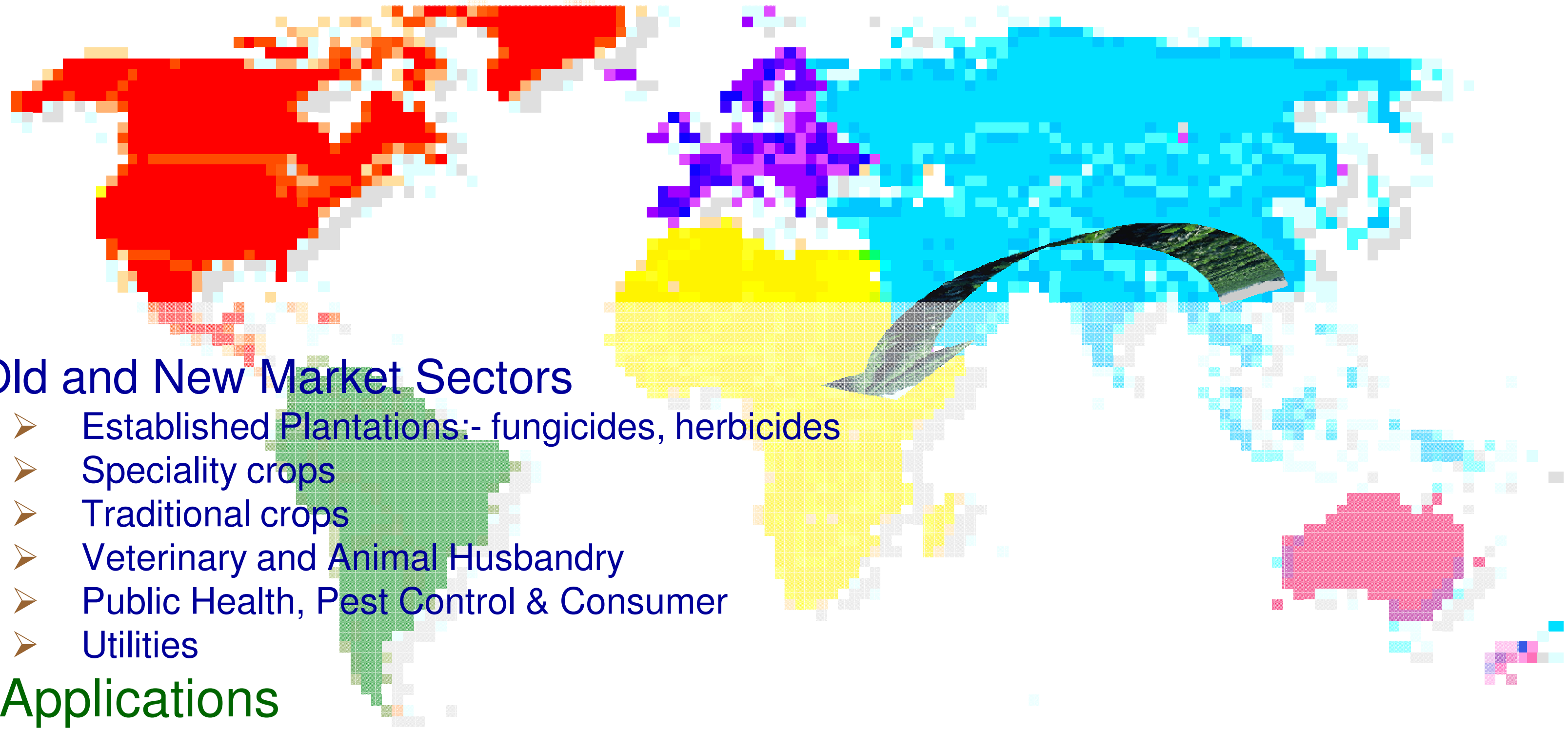
New Uses & Opportunities

Gautam Sirur

January 06-08, 2013

PMFAI International Crop Science Conference, Nairobi, Kenya 2013

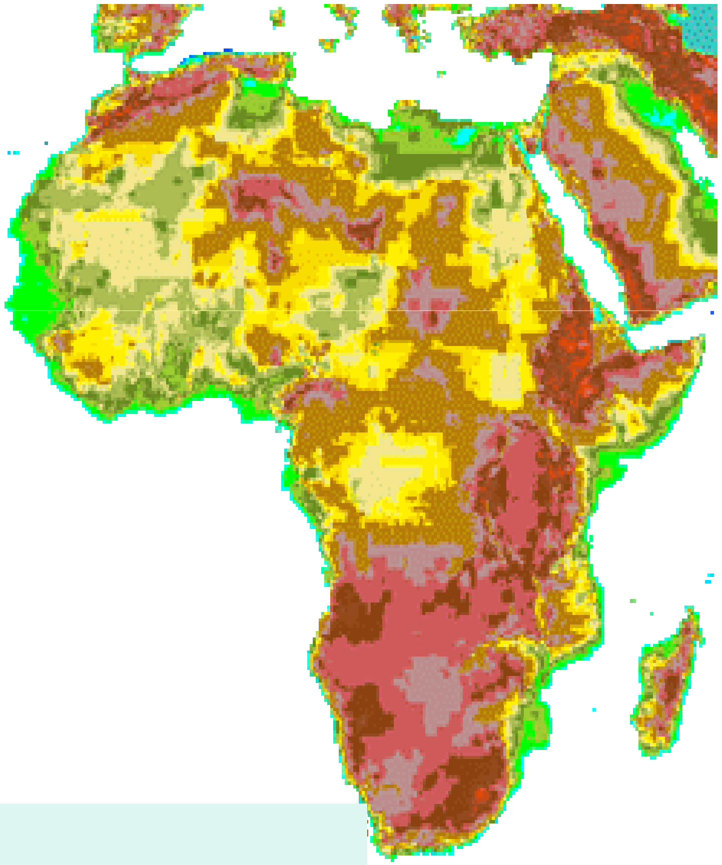
New Opportunities for Generics in Africa



- Old and New Market Sectors
  - Established Plantations:- fungicides, herbicides
  - Speciality crops
  - Traditional crops
  - Veterinary and Animal Husbandry
  - Public Health, Pest Control & Consumer
  - Utilities
- Applications
  - Herbicides- high value crops, industrial and aquatic, power utilities. Forestry
  - Fungicides- floriculture, plantations, gardens, seed treatments
  - Insecticides /nematicides- all crops, floriculture, veterinary ectoparasites
  - “Soft” options- terpenes, neem, nicotine,
  - Biologicals- most crops

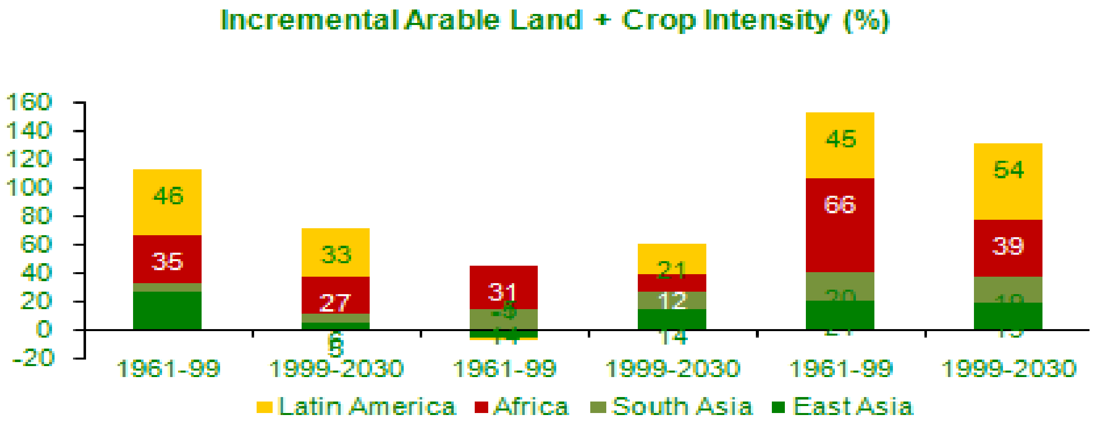
New Opportunities:

Potential in Africa - Clustered diverse markets



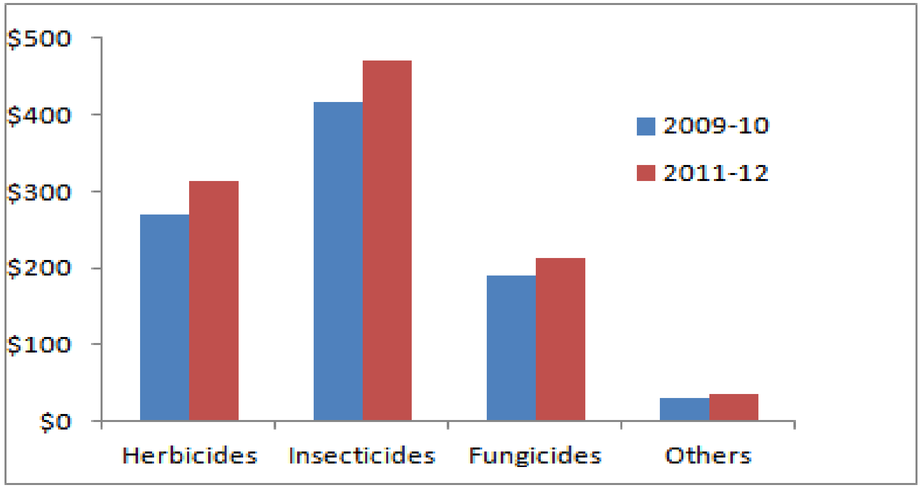
- ✓ North Africa – Maghreb cluster
  - ❑ Egypt, Sudan
  - ❑ Tunisia, Algeria, Morocco
- ✓ East Africa cluster
  - ❑ Kenya, Uganda, Tanzania, Ethiopia
- ✓ Southern Africa cluster
  - ❑ Republic of South Africa, Namibia
  - ❑ Great Lakes countries
  - ❑ Madagascar, Mauritius etc
- ✓ West & Central Africa cluster
  - ❑ Cote d'Ivoire, Senegal, Mali, Burkina-Faso, Guinea etc
  - ❑ Ghana, Nigeria
  - ❑ Cameroun, Niger, Chad etc

Arable Land Potential 1999-2030



- Potential land expansion 2nd highest after Latin America
- Proximity to European markets for exports
  - ✓ Floriculture
  - ✓ Citrus, grapes, stone fruit, pistachios, Vegetables
  - ✓ Coffee, cacao, tea, cotton
- Good potential for high quality crop protection chemicals and seeds
- Languages: Afrikaans, French, English, Arabic, Portuguese

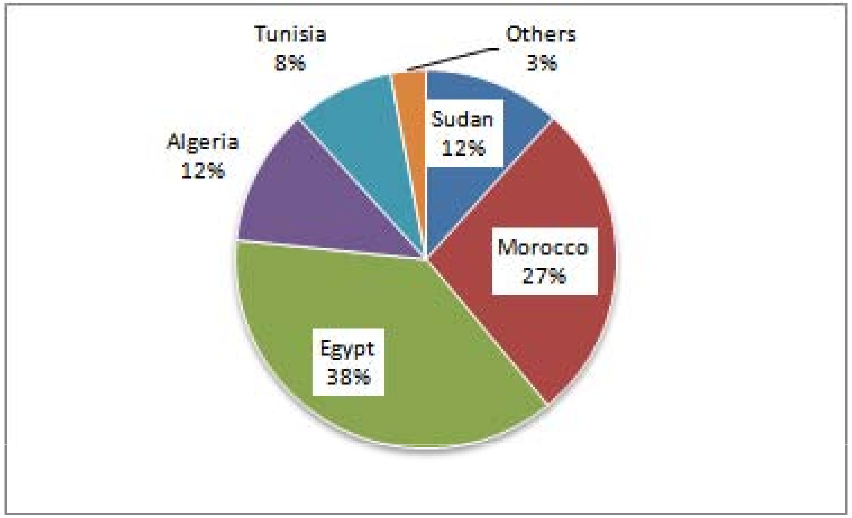
Regional Market Value $ 1.02b -$ 1.3b (CIF basis)

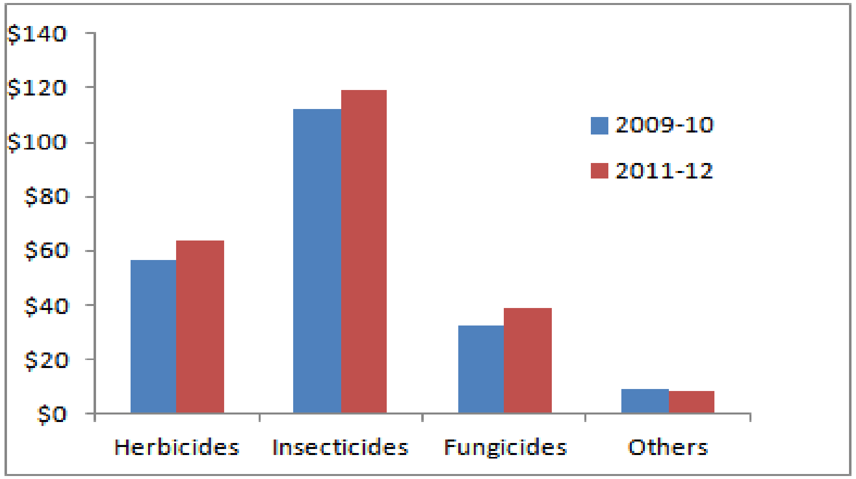


3% of Global Market

- High import level
- Formulation repack / exports
  - ✓ Larger country markets
  - ✓ Restricted by technology
  - ✓ Small packs predominant
- Competition issue
  - ❑ High brand & quality awareness
  - ❑ Generics need to meet /match
- Regulatory issues
  - ❑ Harmonise with EU / CropLife
  - ❑ Increasing costs – data provision

North Africa Agchems Sales $231m



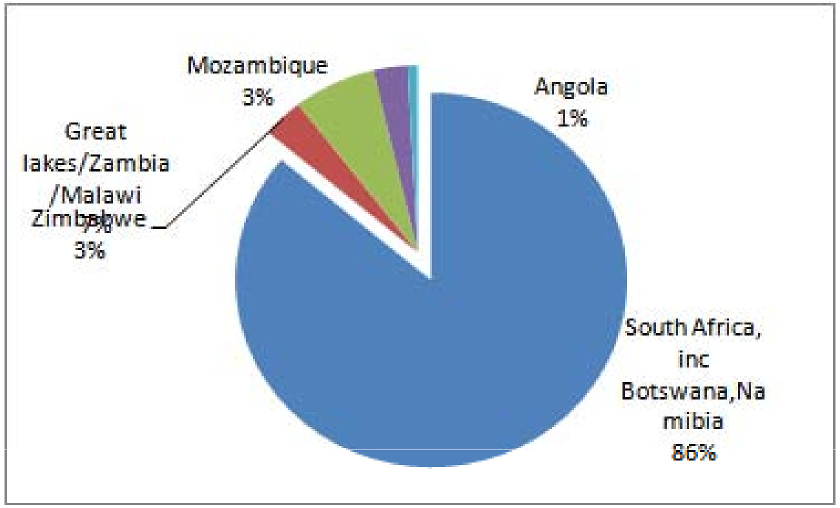


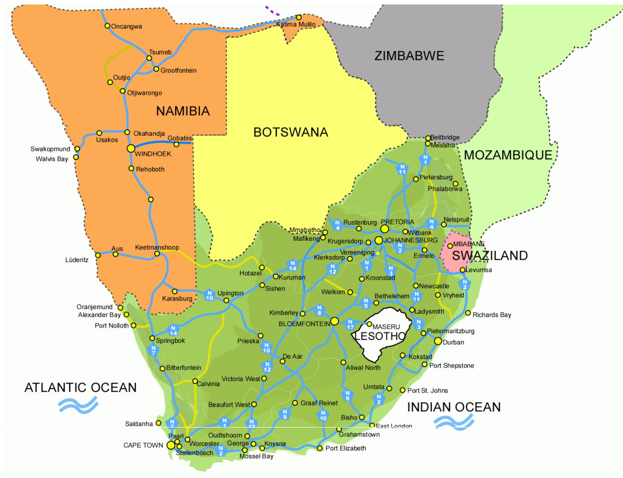
- Strong farming traditions, high yields
- Well-established distribution
- Mainly dates, cotton exports
- Insecticides fungicides
- Veterinary ectoparasites
- Political issues impact on trade

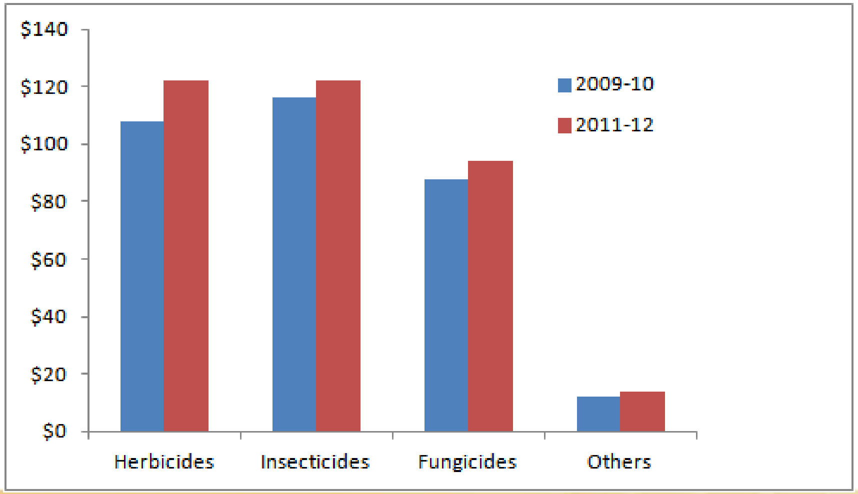
PMFAI

cropnosis
leading the field

Southern Africa Agchems Sales >$352m

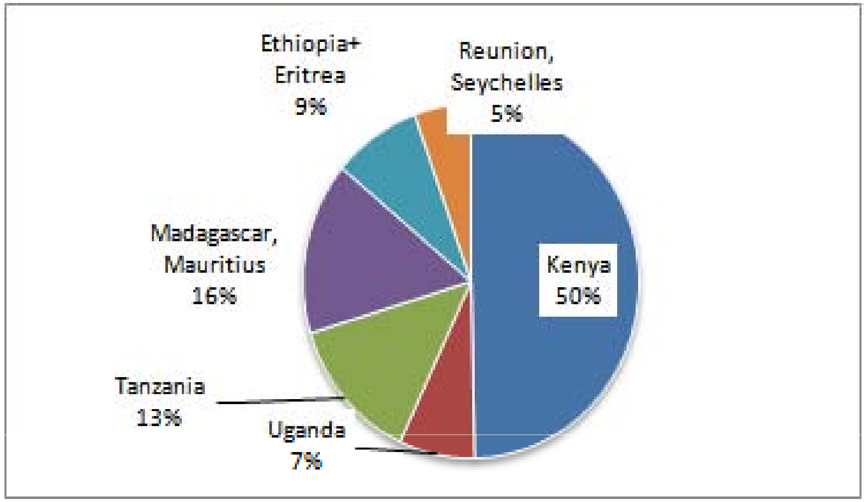


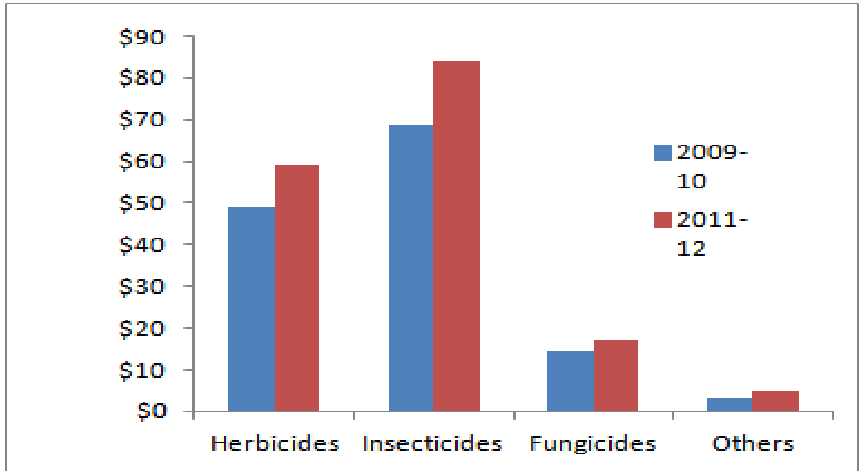




- Advanced farming conditions
- Largest country market
- Formulation & access to other African markets
- GM crops established
- Utilities, forestry, turf
- Veterinary, animal health

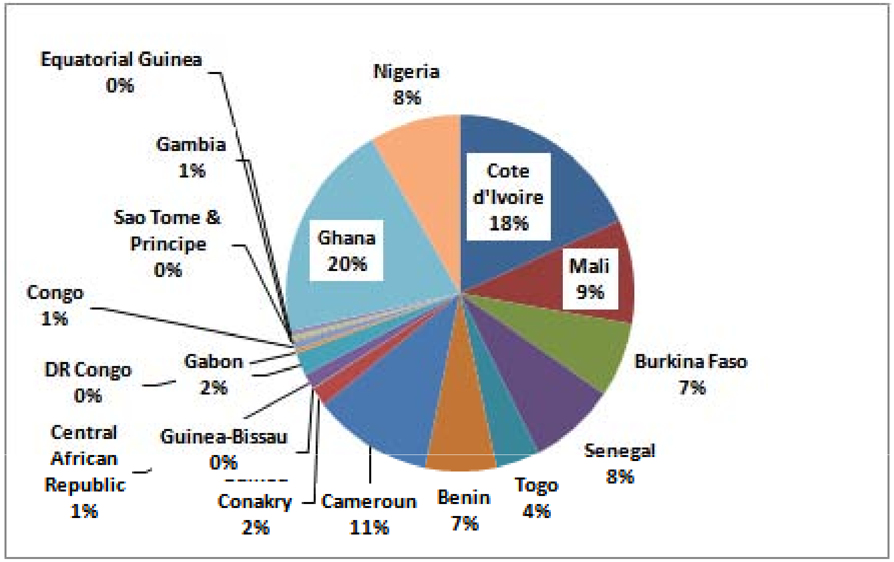
East Africa Agchems Sales >$165m

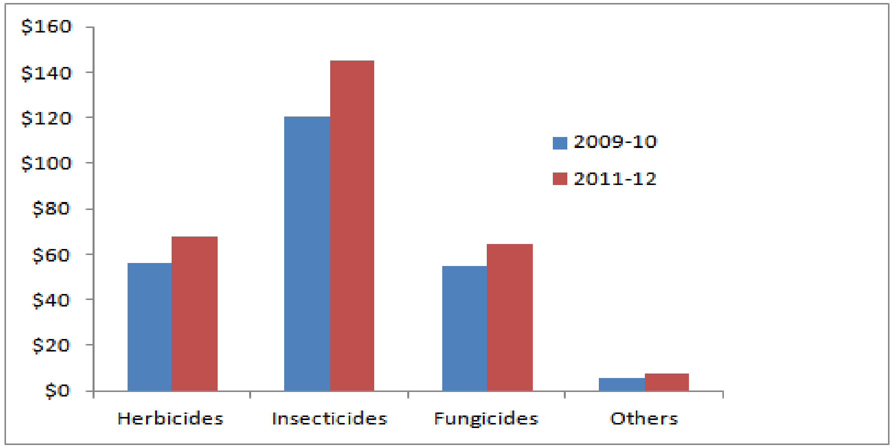


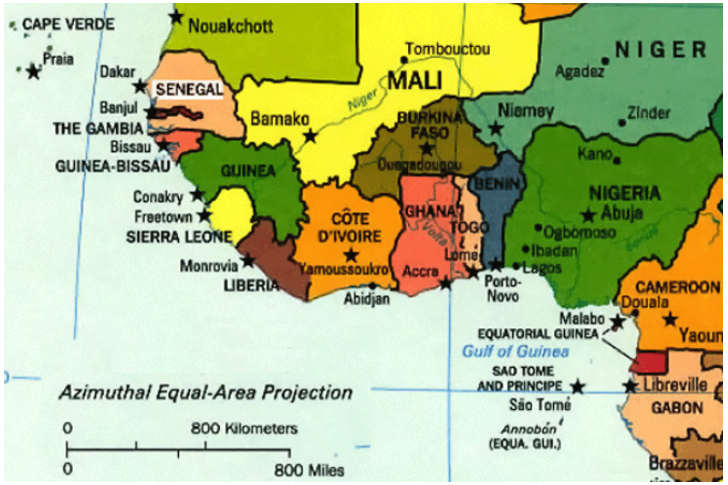


- High value agriculture, floriculture exports
- Plantations- Tea, coffee
- GM crops established
- MRL defined by exports

West & Central Africa Agchems Sales >$285m

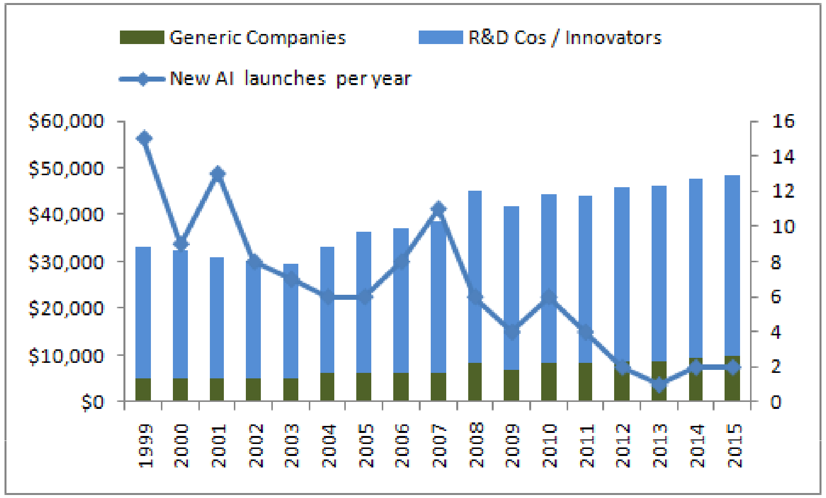


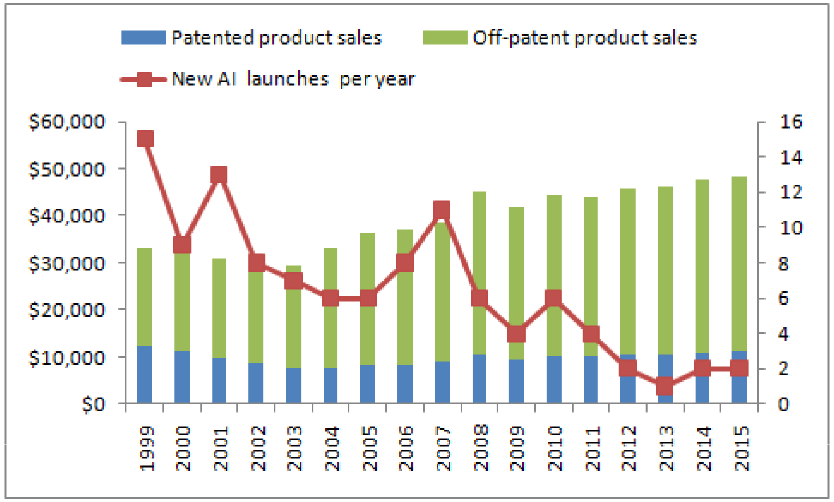




- Shift tenders > trade
- Plantation: cacao, cotton, oil palm, s'cane, rubber
- Small pack size
- Local formulation
- Ectoparasite market

Competitive advantage Patented vs. Off-patent Products Sales





- Fewer AIs introduced over time
- But sales of R&D companies keep increasing:
  - New uses
  - New formulations
  - New markets
- Success lies in innovation and distribution networks

Competitive advantage: Innovation

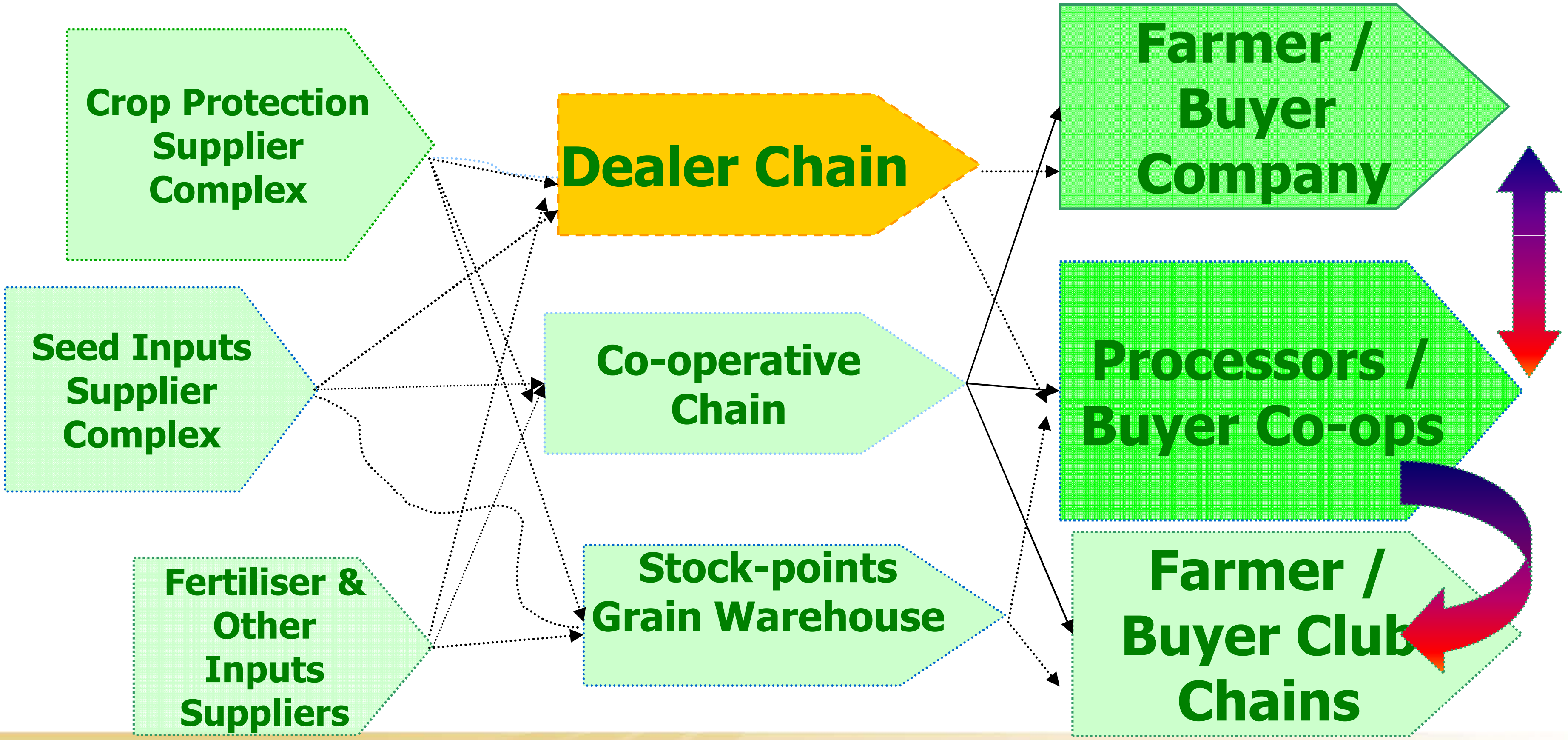
Performance and success: benchmarks of the industry leaders ?

- Returns on R&D investment i.e. on innovation
  - Historically on AI's success: new molecules / chemistry resistance issues
  - Currently on formulation efficacy:
    - ✓ tech. superiority,
    - ✓ delivery systems
- **Time to market: the shorter the better**
- Ability to diversify active ingredients into:
  - More products
  - More crops
  - More target pests
  - **More applications => more label claims=> more registrations**

New Opportunities- Formulation/Packaging

- Formulations
  - Tailor-made for local conditions – crop-pest complex adaptation
  - Technical source certification similar to EU codes
- Volume adaptation
  - Sachets / dosettes
  - Tablets
  - Pre-measured
  - Pre-mixes
  - RTU (ready-to-use)
- Low-risk, safety primary

Competitive Advantage: Distribution
Value Chain Linkages in the Supply Chain



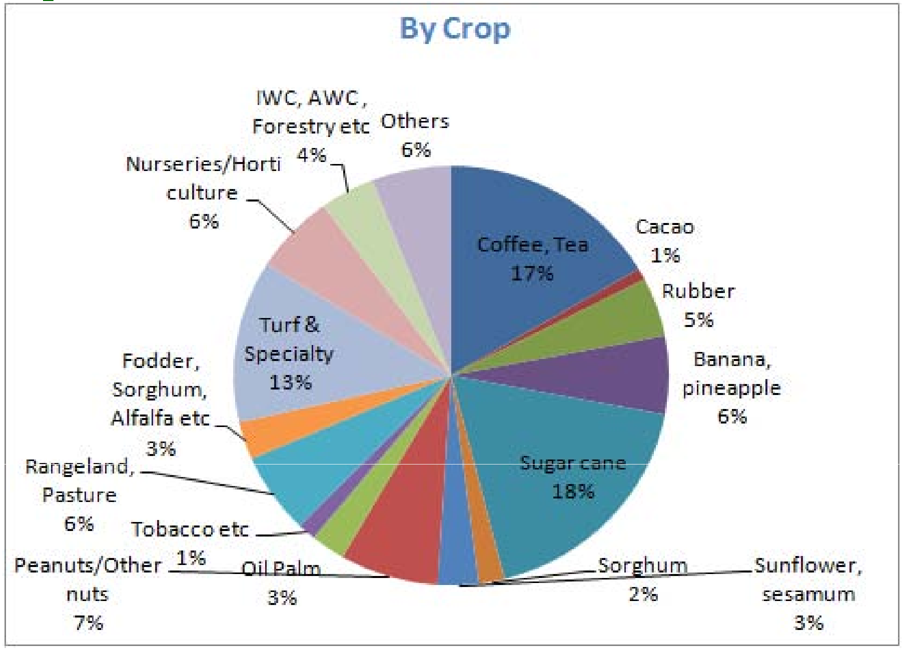
Distribution in Africa

- Security – Importers and Exporters - International
  - Standard Irrevocable Letter of Credit
  - Inspection, Certification, Risk Management – SGS / Cotecna
- Partnerships for local sales
  - Established distributors – crop and non-crop
  - Cooperatives
    - ✓ Collateral on harvest bewteen producers and buyers
    - ✓ Wholesale buyers - commodities
    - ✓ Processors – coffee, cocoa, sugar, cotton
    - ✓ Similar to practices in India, China.
  - Local formulators
    - ✓ Reconditioning from bulk (packaging)
    - ✓ Formulate and pack locally.
    - ✓ Parallel imports
  - Fertiliser companies and distributors

Competitive Advantage: Key Drivers

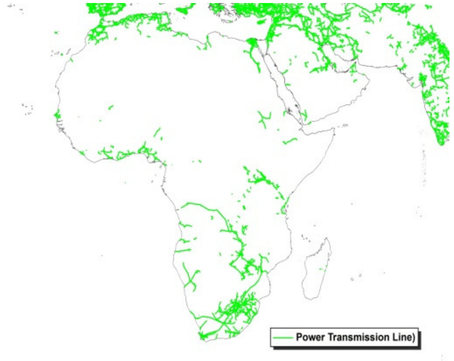
- Range and share of products current and in pipeline
- **Product innovation dependent on R&D and the capacity / capability to bring the fruits of these to the market**
- Manufacturing strengths (efficiency) in reducing costs
- Creating entry barriers through:
  - Patents
  - Data Protection
  - Tightening regulatory rules
- Managing brands/brand equity in both patented and post-patent situations
- Marketing and communications skills
- Logistics and distribution strengths

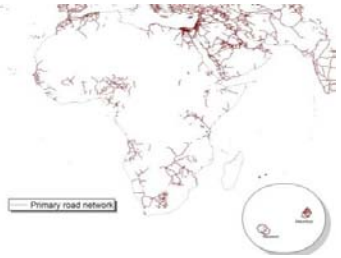
Other Crops 2011-12 CP Sales $7bn

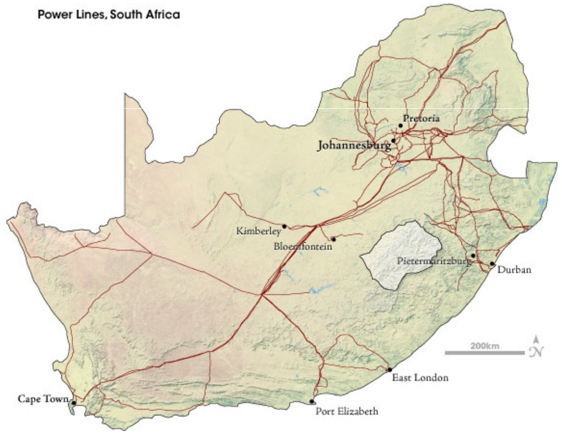


- Spread in each African cluster
- Each cluster different in profile
  - Southern Africa developed market with high veterinary, non-crop sales
  - West and Central Africa plantation and cattle spread, others developing
  - East Africa plantation and floriculture with others developing
  - North Africa good prospects with developing political stability

Industrial, Power and Aquatic Herbicides





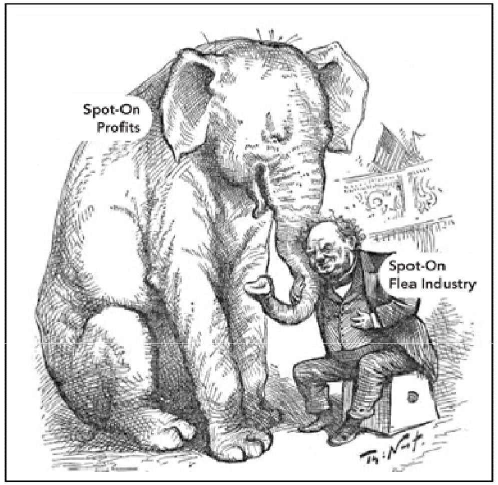


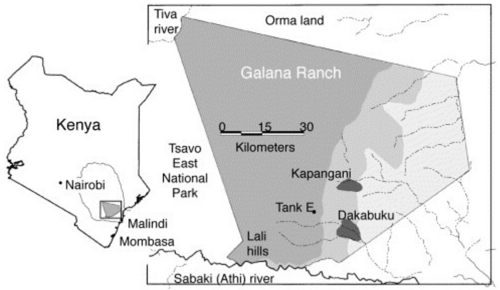
- Total vegetation control
- Stump and brush killers
- Line maintenance
- Large corporations with expertise

Post Harvest Investment Issues

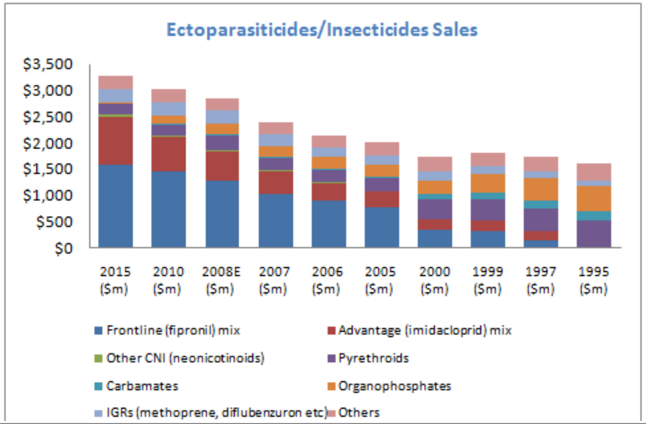
- Losses in transport and storage 5% to 25% of harvest
- Post-harvest chemicals: fungicides, fumigants, insecticides, rodenticides
- Industry invests in seeds and chemicals but less in storage and warehousing facilities:
  - Losses in developing countries est. $18b-$20b
  - India alone >$10b (= 17m-18m metric tons / year)
- Modernisation of infrastructure, grain handling needed

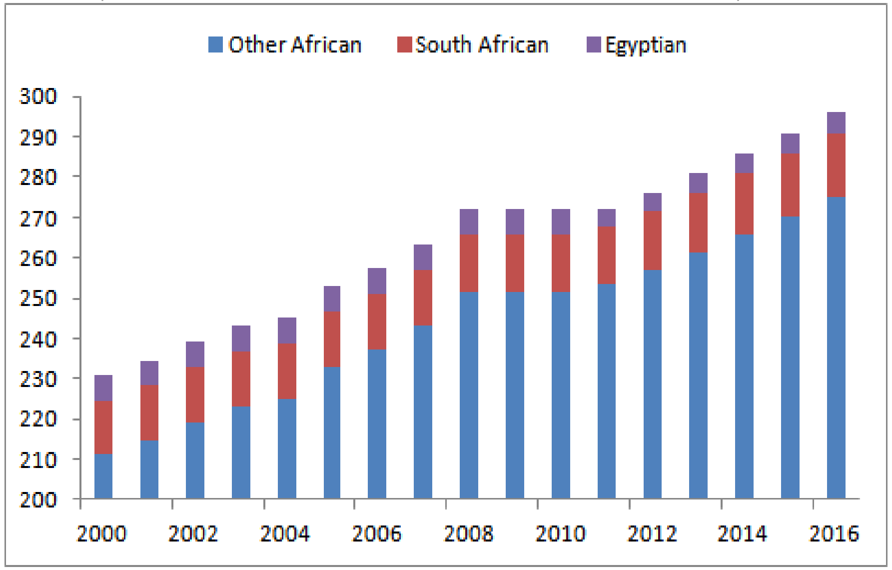
Veterinary Opportunities- Africa





Non-Crop: Veterinary Opportunities





- Low volume, high value – linked to pharmaceutical-veterinary network
- Types of application:
  - Pour-on leading market
  - Spot-on
  - Ear tags
  - Dips
  - Sprays
  - Wicks
- Growing annually @ 8.6% CAGR since 2005
- Short-term and long-term opportunities
- Cattle population growing
  - Midges, ticks, lice, fleas
  - Flies- biting, piercing

“It’s not the size of the dog in the fight……

It’s the size of the fight in the dog……”
Mark Twain

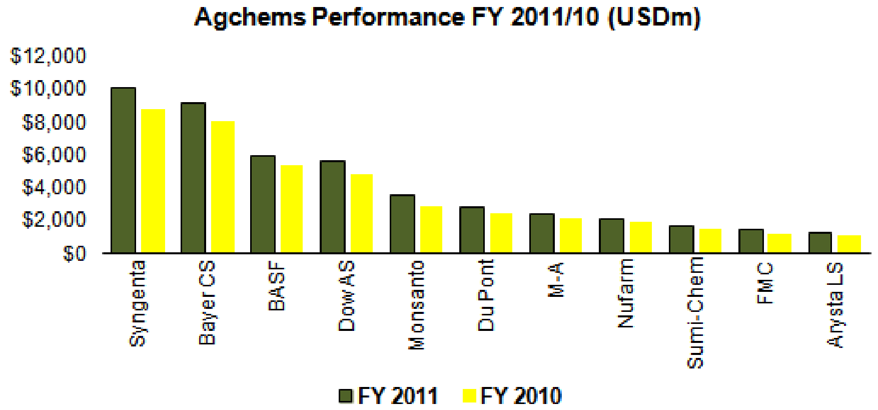
PMFAI

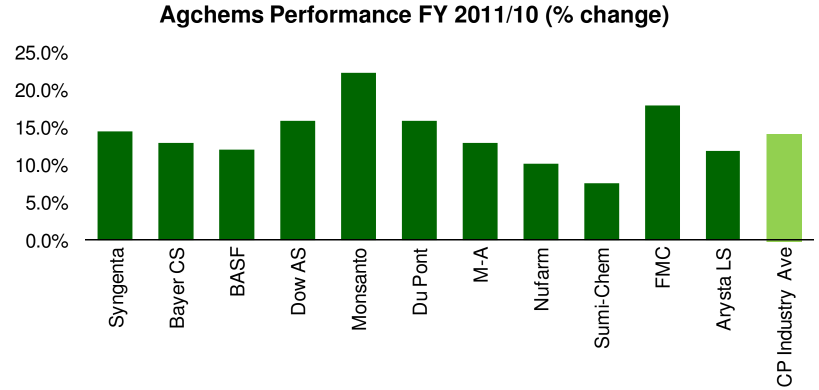
cropnosis
leading the field

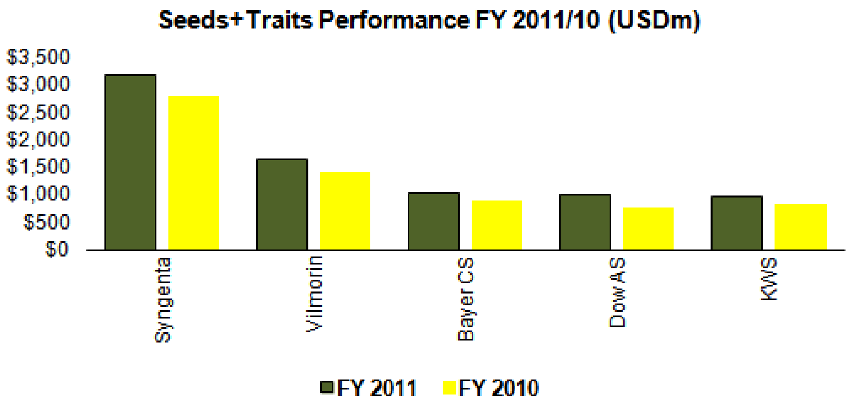
Crop Progress Calendar

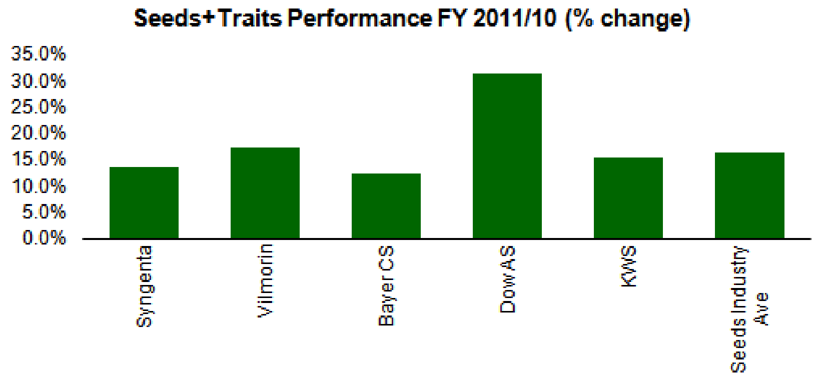
- Quarter 1
  - USDA planting intentions
  - COCERAL first European crop estimates.
  - Mercosur, ANZ, S. Africa maturing crop, beginning harvest
  - 35% of herbicide & 25% fungicide volume in Europe, NAFTA.
  - Late winter crop Asia insecticide use
- Quarter 2
  - Wheat harvest starts late in USA.
  - Main herbicide markets in Europe, USA, Canada.
  - Half of fungicide volume in Europe,
  - Cotton, Rice planting in Asia.40% of herbicide used
  - Harvesting in S. Africa
  - Planting in N. Africa
- Quarter 3
  - Half of fungicide volume in Europe,
  - Insecticides in rice, cotton Asia.
  - Harvest in Northern Hemisphere.
  - Planting starts in Australia.
  - Growth in N. Africa, West Africa
- Quarter 4
  - Planting starts in Latin America. S. Africa
  - 80 % European wheat planted, 60% European oilseeds planted.
  - USDA forecasts for southern hemisphere harvests released.
  - Asia-Pacific winter crop 50% herbicide 40% insecticide, fungicide begins
  - Growth in S. Africa
  - Harvests in N and West Africa

2011 Snapshot Leading Companies









One, Saint. Colme Street, Edinburgh, EH3 6AA, UK
Tel: +44 (0)131 220 8418 Fax: +44 (0)131 464 0317
E-mail: info@cropnosis.com URL:http://www.cropnosis.com