DEPARTMENT OF AGRICULTURE AND RURAL DEVELOPMENT

GAUTENG PROVINCE AGRIPARKS PROGRAMME

PRESENTATION TO THE CPSI CONFERENCE

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31 AUGUST 2017
KEMPTON PARK
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GAUTENG AGRIPARKS MASTERPLAN AND OPERATING MODEL

INNOVATIVE AGRIPARKS TECHNOLOGIES

CONCLUSION
Gauteng: Geographical Overview

- Gauteng is the smallest province in South Africa with 1.7m ha of land surface area
- It occupies only 1.4% of RSA land surface area
- Population: 13.2m (24% - Largest % share of RSA population – Census 2011)
- Gauteng has 3 of the 8 Metro Municipalities in the Country
Gauteng - Economic Overview

Economic Powerhouse - Good Infrastructure

35% National GDP
10% Africa GDP

0.8% Economic growth 16
26.7% Unemployment rate - GP
Gauteng – Agriculture Economic Overview

- Contribution of primary agriculture to Gauteng GDP is 0.5%
- Contribution of total agricultural value chain including secondary and tertiary agric tiers to GDP is 2.3%
- The province is 18% built-up with 17.3% of High Potential Agricultural Land
- Vacant land in the province is 946,710ha (52% of the total surface area)
- Vegetation: 2 biomes which are Grassland and Savanna
- Agriculture households in Gauteng
Agriculture Commodities % Contribution to Gross Income

- **Horticulture**: 21%
- **Animals/Livestock**: 59%
- **Field crops**: 8%
- **Other products**: 2%
- **Animal/Livestock products**: 10%
Cattle Feedlots – Karan Beef, Chalmer Beef
Horticulture Value Chain
(21% of Gauteng GVA)
• Vegetables
• Cut Flowers
• Herbs & Essential oils

Opportunity: Proximity to large population and growing middle class – Bulking up, quality assurance and branding

Grains – Poultry Integrated Value Chain
(4th largest producer of Grains)

Red Meat Value Chain

59% of Gauteng Gross farm income comes from Livestock predominantly in Feedlots
- Linkage to mobile abattoirs program
WHAT IS AN AGRIPARK

• An Agri-park is a networked innovation system of agro-production, processing, logistics, marketing, training and extension services, located in a District Municipality.

• As a network it enables a market-driven combination and integration of various agricultural activities and rural transformation services.
AGRIPARKS LINKED TO FOOD VALUE CHAIN

PRIMARY INPUTS
- Greenhouse
- Seed / Fertilizer
- Equipment
- Crop Protection

PRODUCTION & PROCESSING
- Food Processing
- Food Packaging
- Vegetable Protein
- Poultry
- Dairy
- Seafood
- Corn Processing
- Oilseed Processing
- Beverage Processing
- Value-Added Processing

TRANSPORTATION & INFRASTRUCTURE
- Storage
- Rail
- Shipping
- Cold Storage
- Distribution
The Farmer Production Support Unit (FPSU).

The FPSU is a rural outreach unit connected with the Agri-hub. The FPSU does primary collection, some storage, some processing for the local market, and extension services including mechanisation.

Agri-Hub Unit (AH).

The AH is a production, equipment hire, processing, packaging, logistics and training (demonstration) unit.

- The Rural Urban Market Centre Unit (RUMC).

The RUMC has three main purposes;
1) Linking and contracting rural, urban and international markets through contracts.
2) Acts as a holding-facility, releasing produce to urban markets based on seasonal trends.
3) Provides market intelligence and information feedback, to the AH and FPSU, using latest information and communication technologies.
1. One Agri-Park per District
2. Agri-parks must be farmer controlled.
3. Will become the catalyst around which rural industrialization takes place.
4. Supported by government (10 years) to ensure economic sustainability.
5. Strengthen partnership between government and private sector stakeholders.
6. Maximise benefit to existing state land with agricultural potential.
7. Maximise access to markets to all farmers, with a bias to emerging farmers and rural communities.
8. Maximise the use of high value agricultural land.
9. Maximise use of existing agro-processing, bulk and logistics infrastructure.
10. Support growing-towns and revitalisation of rural towns.
<table>
<thead>
<tr>
<th>Category</th>
<th>Interventions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>POVERTY &amp; FOOD INSECURITY</strong></td>
<td>• Inclusivity and opportunity to be productive</td>
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<tr>
<td>(STATSSA Report)</td>
<td>• Agriparks as an enabling Infrastructure and environment</td>
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<tr>
<td><strong>MARKET ACCESS - LOCAL (VOLUMES, STANDARDS) AND GLOBAL IMPACT</strong></td>
<td>• Protecting and capacitating smallholders from market dynamics</td>
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<td>• Linkage into formal economy, state procurement &amp; logistics</td>
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<td><strong>INCREASED POPULATION ON LIMITED LAND</strong></td>
<td>• Clustering of Agriculture infrastructure and intensification</td>
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<td>• Rural and Urban Inter-linkages (Agro-processing Strategy)</td>
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<tr>
<td><strong>CLIMATE CHANGE AND HIGH VARIABILITY</strong></td>
<td>• Increased Protected agriculture mitigating adverse weather</td>
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<td>• Climate –Smart Agriculture</td>
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<tr>
<td><strong>WATER SCARCITY AND SOIL LOSS</strong></td>
<td>• Water saving technologies / automation technologies</td>
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<td>• Water harvesting technologies</td>
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<td><strong>FINANCE: COST OF FARMING VS REVENUE</strong></td>
<td>• Development Finance Solutions</td>
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<td>• Shared infrastructure and equipment</td>
</tr>
</tbody>
</table>
PROVINCIAL AGRI-PARKS GOALS

• Agri-parks emphasise competitiveness
• Production of High-value commodity (Focus)
• Branding (Logo) & Visibility
• Localization
• Volumes & Quality of produce
• Retail presence
• Export capability
## Agri-parks on-site Primary Producers

<table>
<thead>
<tr>
<th>District and Local Municipality</th>
<th>AGRIPARK</th>
<th>Names of Agricultural Enterprises (Primary Producers)</th>
<th>Total Beneficiaries</th>
<th>Women Beneficiaries</th>
<th>Youth Beneficiaries</th>
<th>Other Beneficiaries</th>
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<tbody>
<tr>
<td>WRDM, Westonaria</td>
<td>Westonaria</td>
<td>1. Eketsetse Trading Enterprise</td>
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<td>Westonaria</td>
<td>2. Mabombo Resources pty Ltd</td>
<td>6</td>
<td>1</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>WRDM, Mogale City</td>
<td>Tarlton</td>
<td>1. Sinenceba Cooperative</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>WRDM, Merafong</td>
<td>Merafong Flora</td>
<td>1. Merafong Flora</td>
<td>22</td>
<td>15</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>Sedibeng, Emfuleni</td>
<td>Sebokeng</td>
<td>1. Lemohang Tlala Cooperative</td>
<td>12</td>
<td>6</td>
<td>4</td>
<td>2</td>
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<tr>
<td></td>
<td></td>
<td>2. Harethusaneng Cooperative</td>
<td>7</td>
<td>1</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>City of JHB, Eikenhof</td>
<td>Eikenhof</td>
<td>1. Eikenhof Farmers Secondary Co-Operative Ltd</td>
<td>5</td>
<td>2</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Ekurhuleni</td>
<td>Watville</td>
<td>1. Amahle amakhosikazi</td>
<td>5</td>
<td>5</td>
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<td></td>
<td>Wattville</td>
<td>2. Inqazivele</td>
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<td>10</td>
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<td>1. Tau Fresh</td>
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<td>2. Harelemeng</td>
<td>5</td>
<td>5</td>
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<td>4</td>
</tr>
<tr>
<td>City of Tshwane</td>
<td>Soshanguve</td>
<td>1. Faranani Sechaba</td>
<td>6</td>
<td>3</td>
<td>3</td>
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<td>1. Tau Fresh</td>
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<tr>
<td></td>
<td></td>
<td>2. Eden Farming</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. Amakha Farms</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>City of Tshwane</td>
<td>Innovation hub</td>
<td>Food Processing - Centre of Excellence</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

| **14 Agric Enterprises**       | **91**            | **55**                                                              | **28**             | **15**             |
|                                |                   | **60%**                                                            | **31%**            | **16%**            |
Each Agripark will be a critical link between the formal markets and the smallholder farmers. The Agripark will serve as an intermediary and a distribution facility whereby the smallholder farmers’ produce will be aggregated and graded in accordance with formal markets requirements. Management of each Agripark is to be undertaken on a private-public partnership to ensure a balance between economic and development goals.
**RANDWEST AGRI-PARK FACILITIES**

**Westonaria Agripark**: Hydroponics, Packhouse and Administration Block and Training room

**Westonaria Agripark**: Lettuce production

**Training room**
AGRIPARKS TER LINKED - SEBOKENG ZONE 10

Size 4ha
Perimeter 1200M
Sebokeng Zone 10 Agri park

Packaging facility

Administration Building

Ablution Facility & Showers

Secure Agripark
Sebokeng Zone 10 Agripark – Coop
Quality of Sebokeng Agripark Produce

830 Crates produced sold @ R150/crate
EIKENHOF: 20 Tunnels and 4 10000l water tanks
COJ Eikenhof Agripark - Training and office building

Security at Access gate

Combined Office Block, Ablution Block and Training Room
Cucumber Production at Eikenhof
Merafong Agripark - Vegetable production
FLOWERS, NOT PREVIOUSLY GROWN BY SMALLHOLDER BLACK FARMERS
PARTNERSHIP FOR FOOD INNOVATION

- GAUTENG DEPARTMENT OF AGRICULTURE AND RURAL DEVELOPMENT (GDARD)
- THE INNOVATION HUB (TIH)
- UNIVERSITY OF PRETORIA (UP)
- CENTRE FOR SCIENTIFIC AND INDUSTRIAL RESEARCH (CSIR)
As part of Re-industrialization the department has introduced the latest farming technology in the form of Vertical Growth Chamber farming system.

The facility is also established at Rand West Agri-park facility. This is also in line with adaptation mitigation of climate change.

The chamber is an intensive growth chamber for vegetable production; high yield is attained within short period of time.

This technology has the potential to solve many problems associated with access to land and attain economic viability within a small space.
VERTICAL HYDROPONICS

- The chamber can carry 16,320 plants which on land surface is equivalent to 16 standard tunnels.
- High yield is attained within short period of time and space.
- This is in line with addressing land shortage and ensuring adaptation and mitigation of climate change and attracting youth.
RandWest Agripark Hydroponics Vertical chamber

11 April 2017 – Donaldson Dam near Bekkersdal
E-AGRICULTURE (IoT)

Crops & Soil Monitoring
Weather Monitoring
Air Monitoring

Main Sensor Post
Database Server
Monitoring System

Real-time Data Monitoring
## Risks and challenges

<table>
<thead>
<tr>
<th>RISKS AND CHALLENGES</th>
<th>MITIGATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acts of vandalism and theft</td>
<td>Full-time on site security</td>
</tr>
<tr>
<td>Disruption by non-project participants</td>
<td>Legal binding agreements for all the project participants</td>
</tr>
<tr>
<td>Group dynamics affecting operational capabilities</td>
<td>Continuous Cooperative capacitation</td>
</tr>
<tr>
<td>Water and electricity costs and interruptions</td>
<td>On-site back-up-up generators</td>
</tr>
<tr>
<td>Poor market uptake or inability to service off-take agreements (Need at least guarantee off-take from state institutions)</td>
<td>Support of agri-entrepreneurs with inputs and logistics support</td>
</tr>
<tr>
<td>Poor commitment from agro-entrepreneurs operating in the Agripark</td>
<td>Legal binding agreements for all the project participants</td>
</tr>
</tbody>
</table>
Success factors

- Crowding of agricultural and rural development investment in the Agri-Park model including land reform programmes
- Management Institution of the Agri-parks
- Availability of land to develop the identified agri-parks
- Funding availability and project management support
- Committed Agri-entrepreneurs
- Dedicated technical and management support
- Formidable partnerships with industry and all government tiers
Spin offs

• Each Agri-park is expected to contribute a minimum of **30 jobs onsite** with emphasis on youth, it is anticipated that **150 jobs per agri-park** when each Agri-park is operating at full capacity.

• Agri-parks will contribute to increased productivity, competitiveness and agro-industrialisation.

• Consolidation and aggregation of interventions is critical.

• Critical skills - Farmer Entrepreneurial capacity to be enhanced. Local and international partnerships to be undertaken.
CONCLUSION

• Gauteng Agripark Launch Video
  
  https://www.youtube.com/watch?v=G0mZc8oKIGU
Thank you