PlantBio Trust

National Innovation Centre for Plant Biotechnology

Established in 2004 by DST as a part of the National Biotech Strategy

Vision

"To serve and lead South Africa towards developing a sustainable Plant Biotechnology sector that is competitive and world class in specific areas and address poverty alleviation"

PlantBio
National Innovation Centre for Plant Biotechnology

Strategy

Commercial and Social Mission

- **To improve South Africa's competitive advantage**
  - Developing human skills and technology platforms
  - Increasing the amount of Intellectual Property (IP) in Plant Biotechnology.
- **To increase the contribution towards South Africa's GDP**
  - Facilitating the creation of start-up companies
  - Striving for sustainable and profitable commercialization of IP
- **To impact on South African society**
  - Assisting in the development of better products
  - Creating employment opportunities
  - Addressing poverty alleviation
- **To become sustainable**
  - Source additional funds
  - Co-invest with other role players
  - Recover investment and re-invest proceeds

PlantBio
National Innovation Centre for Plant Biotechnology

Strategy

- Developing biotech initiatives with commercial impact and building capacity in South Africa to create human skills required to develop competitive biotech projects
- **Provide focus** on key areas
- **Diversify risk** with a balanced pipeline
- **Invest** in viable business ventures
- **Building capacity**
- **Collaborate with other DST Biotech Instruments**

PlantBio
National Innovation Centre for Plant Biotechnology

Focus areas

- **BioControl and Biofertilisation (2)**
  - The use of microbes predatory insects or microbe derived toxins/pheromones to combat plant diseases
  - Improvement of soil fertility using microorganisms
  - In SA several products are in development and some players have products near or in the market

- ***In Vitro* propagation (2)**

  Activity: clonal propagation of disease free plants
  - Medicinal plants
  - Ornamental Plants
  - Cassava

PlantBio
National Innovation Centre for Plant Biotechnology

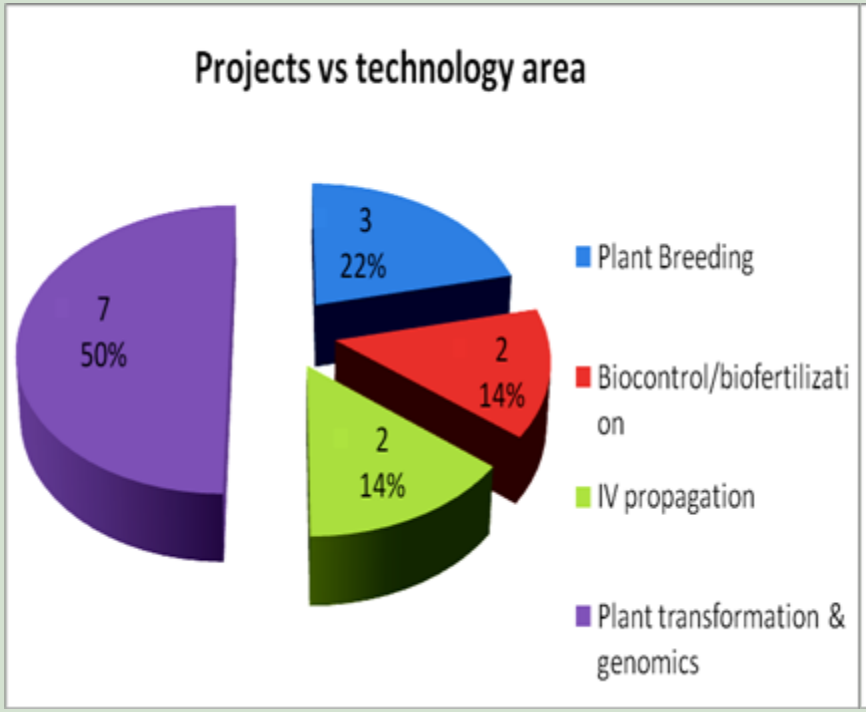
Focus areas

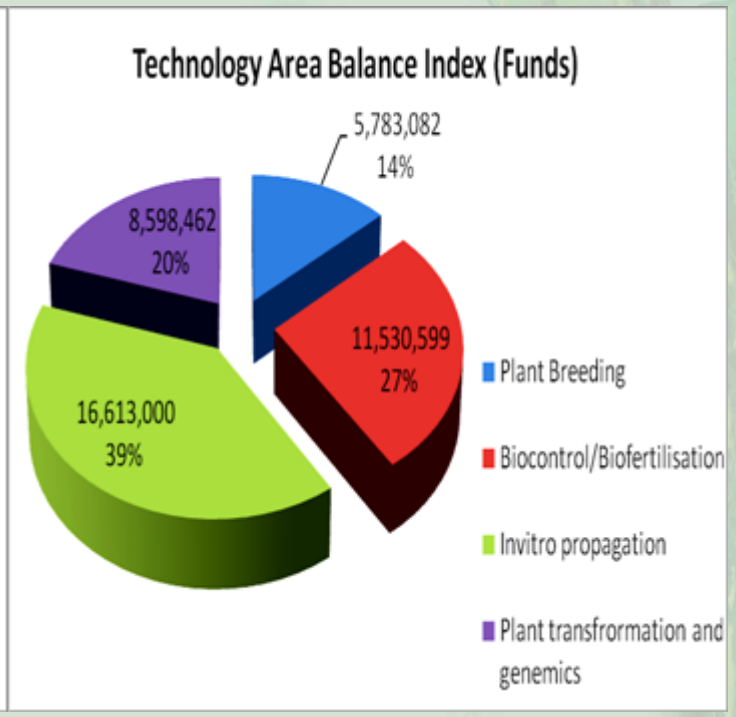
- **Plant breeding (3)**
  - Food and cash crops
  - Industrial crops (i.e. biofuels)
  - Use of molecular markers to assist breeding

- **Plant transformation and genomics (7)**
  - GM crops:
    - Gene Insertion or manipulation with specific outcome/s
    - Commercially available in SA (bt &/or herbicide resistance in maize, soybean, cotton)
    - Research projects on drought and disease tolerance
  - Bio-farming:
    - Production of biomolecules with commercial value using plant expression systems (medical, industrial, agricultural and food sectors)

PlantBio
National Innovation Centre for Plant Biotechnology

Focus areas


Projects vs technology area
7
50%
3
22%
2
14%
2
14%
Plant Breeding
Biocontrol/biofertilizati
on
IV propagation
Plant transformation &
genomics

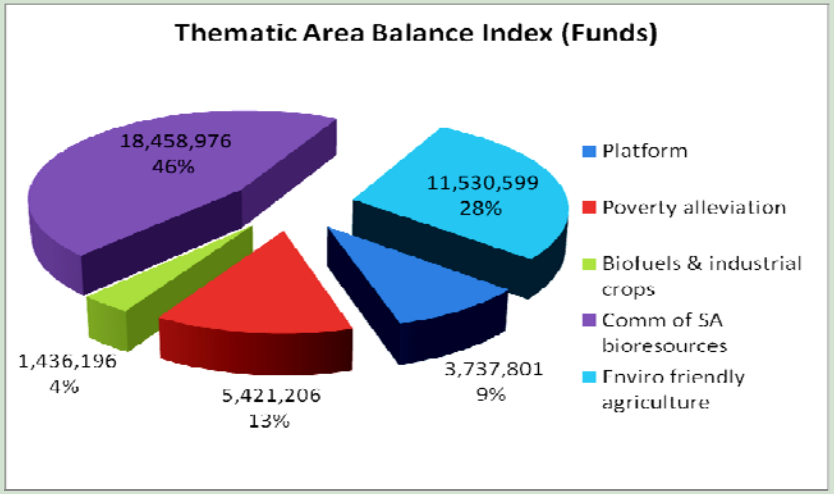

Technology Area Balance Index (Funds)
5,783,082
14%
8,598,462
20%
11,530,599
27%
16,613,000
39%
Plant Breeding
Biocontrol/Biofertilisation
Invitro propagation
Plant transfrormation and
genemics

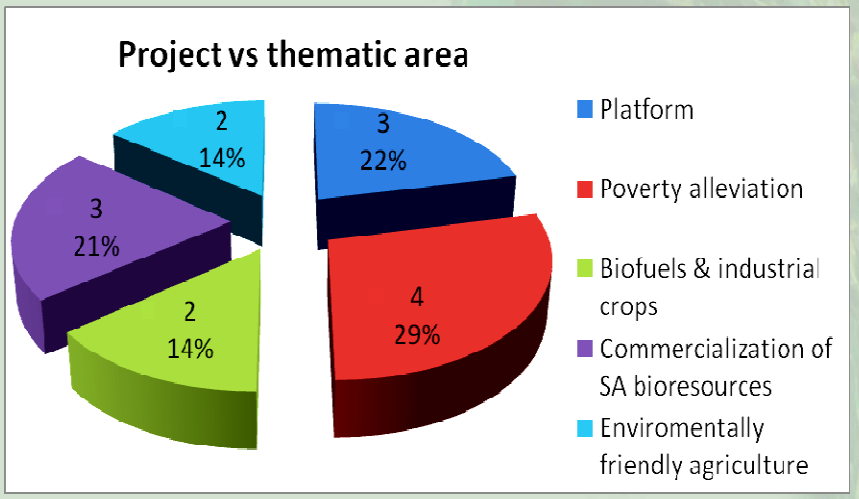
Thematic areas

- **Poverty alleviation/food security (4)**
  - Small scale farmers
  - Indigenous crops
- **Biofuels & industrial crops (2)**
  - Ethanol crops (sugar cane, sweet sorghum, cassava)
  - Biodiesel crops (soybean, sunflower, others)
- **Technology platforms (3):** creating national capacities for innovation
  - Plant transformation
  - Genomics
  - *In vitro* propagation
  - Biosafety
    - To create a self-supporting capability in SA to perform risk assessment studies and address the environmental and consumer safety requirements
- **Exploitation of South African Bio-resources (3)**
  - Bioprospecting to identify valuable products/technologies in medical, food and industrial sectors
- **Environmental friendly agriculture (2)**
  - New low risk agricultural practices/technologies

PlantBio
National Innovation Centre for Plant Biotechnology

Thematic areas





PlantBio
National Innovation Centre for Plant Biotechnology

Project stage

- Early stage (pre proof of concept):(4)
  - Functional genomics/molecular markers
  - Plant Breeding (African crops, biofuel crops)
- Middle stage (proof of concept)(5)
  - Biocontrol
  - Evaluation of industrial crop varieties (biofuels)
  - Late stage (start up companies)

PlantBio
National Innovation Centre for Plant Biotechnology

Project Stages

Late stage (start-up companies)(4)

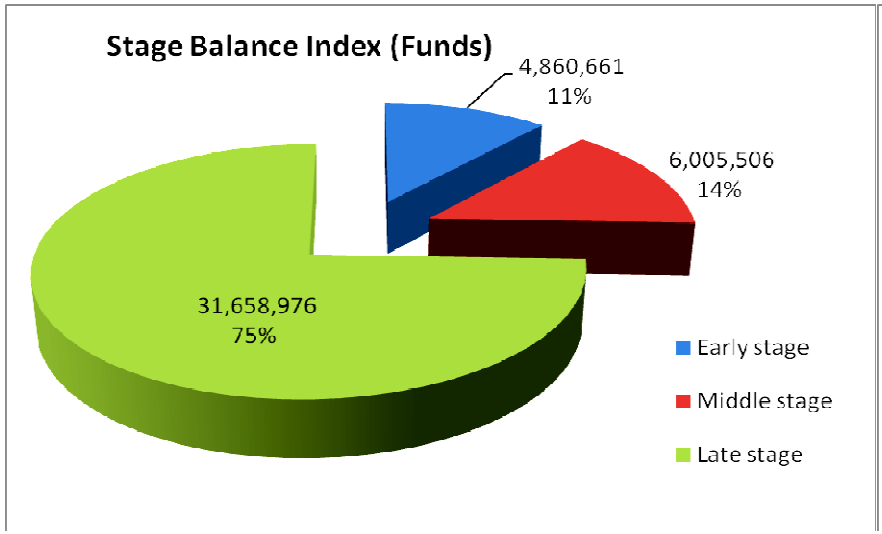
-In vitro propagation of ornamental plants

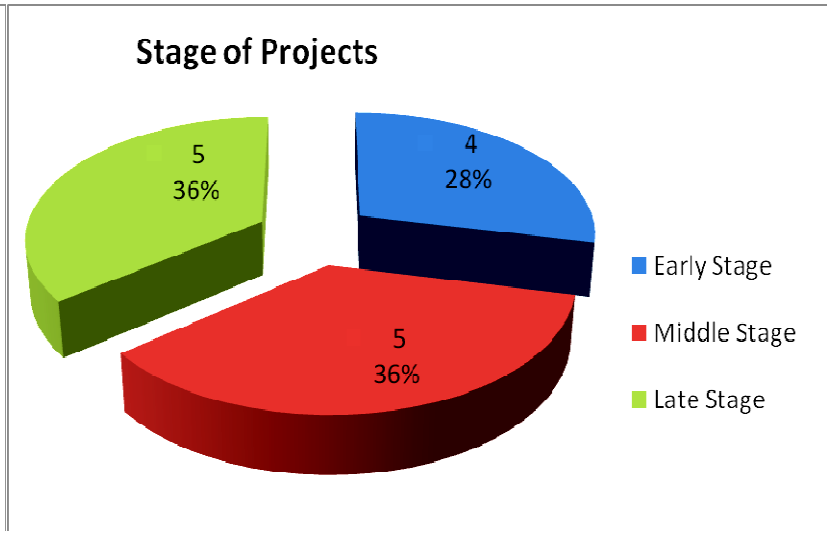
-Management and commercialisation of PBRs

-Production of high value mushrooms

-Biocontrol of insects in citrus fruits

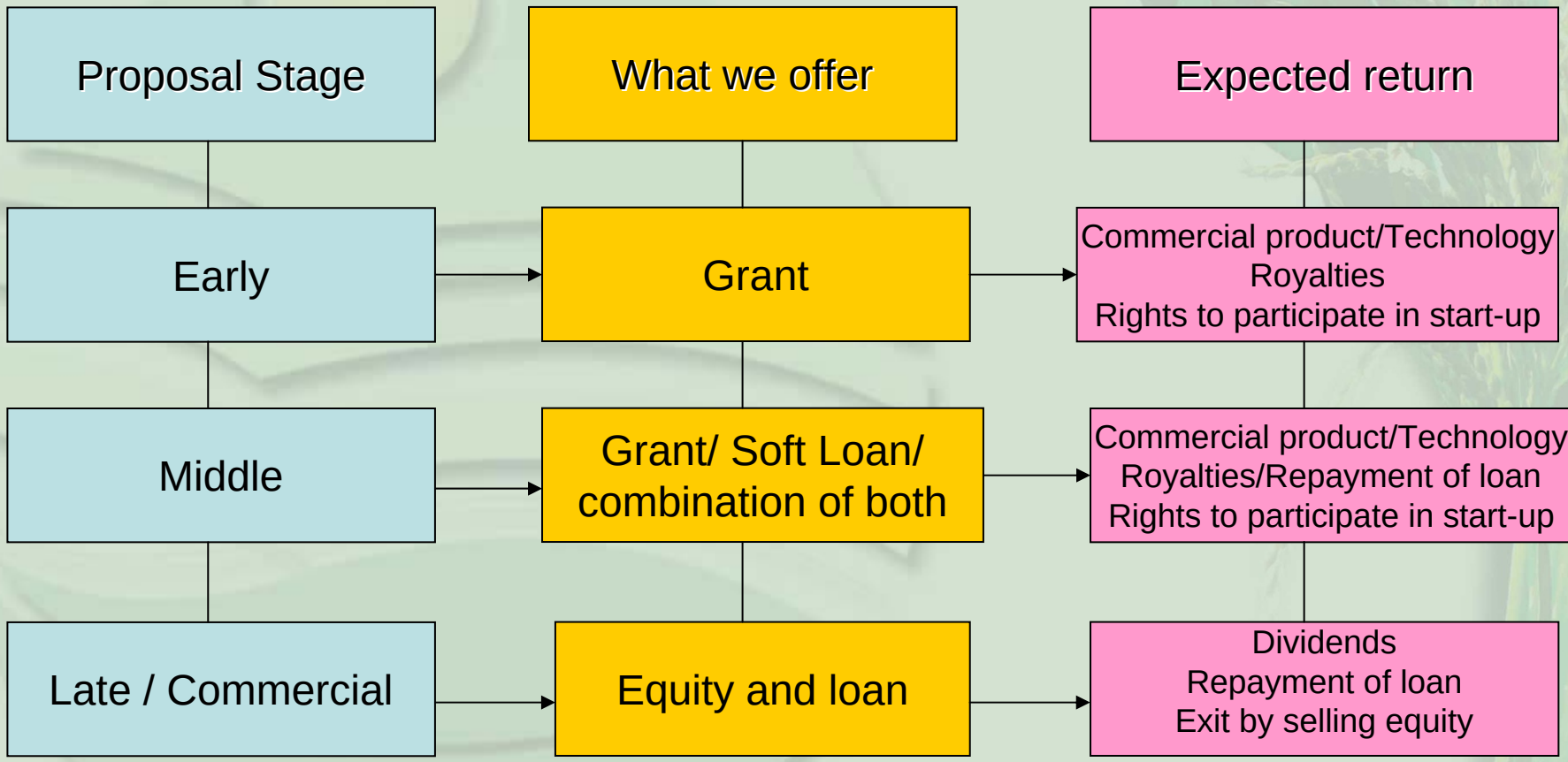
Funded Projects





PlantBio
National Innovation Centre for Plant Biotechnology

Funding Structure (revolving fund concept)



PlantBio
National Innovation Centre for Plant Biotechnology

How to apply

Download pre-proposal template from our website,

www.plantbio.org.za

Fill it in, submit

Await (approx 3-6 weeks) feedback from PlantBio

Approx time to funding: 4-6 months

PlantBio
National Innovation Centre for Plant Biotechnology