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*Excellence in Research and Development*

**AGRICULTURAL RESEARCH COUNCIL IN  
PLANT VARIETY PROTECTION AND  
TECHNOLOGY TRANSFER IN SOUTH  
AFRICA**

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## **ARC MANDATE PER ACT**

- To CONDUCT RESEARCH,  
DEVELOPMENT & TECHNOLOGY  
TRANSFER IN ORDER TO:
- Contribute to better quality of life;
  - Facilitate/ensure natural resource conservation
  - Promote agriculture & industry;



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## RESEARCH & DEVELOPMENT MANDATE

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- GRAIN CROPS
  - Maize, sorghum, barley, sunflower, soya bean, dry beans, wheat, groundnuts, cowpea, bambara, tobacco, new crops
- HORTICULTURE
  - Vegetables, root & tuber vegetables, citriculture, subtropical crops, deciduous fruits, citrus, viticulture, temperate crops etc
- LIVESTOCK (production & diseases)
  - Cattle, sheep, goats, poultry, pigs, vaccines etc
- AGRICULTURE ENGINEERING
- NATURAL RESOURCES
  - Soils, climate, water, biocontrol etc



## SOUTH AFRICA & UPOV

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- Member country to UPOV 1978
- Plant Breeder's Rights Act 1976 (Act 15 of 1976)
- Act amended in 1996
  - conformity to Constitution
  - Alignment and compliance to UPOV 1991
  - Country has not acceded to UPOV 1991
- Minister responsible for Agriculture, now includes Forestry and Fisheries
- Plant Improvement Act, 1976 (Act 53 of 1976)



## Breeder's Rights Applicability

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- **PROCESS:**

- Resident of South Africa or any other UPOV country
- Agency mandate for non – residents – mainly administrative and legal compliance
- Specified administrative process
- Includes variety listing
- Submit quantity of propagating material for examination

- **EVALUATION:**

- National authority maintains reference collections (some at ARC)
- Fruit and some ornamentals breeder or the agent establishes trials on own site
- National authority conducts planting trials for examination over three growing cycles
- Examination focus: **Distinct, Uniform, Stable**



## GRANTED BREEDER'S RIGHTS

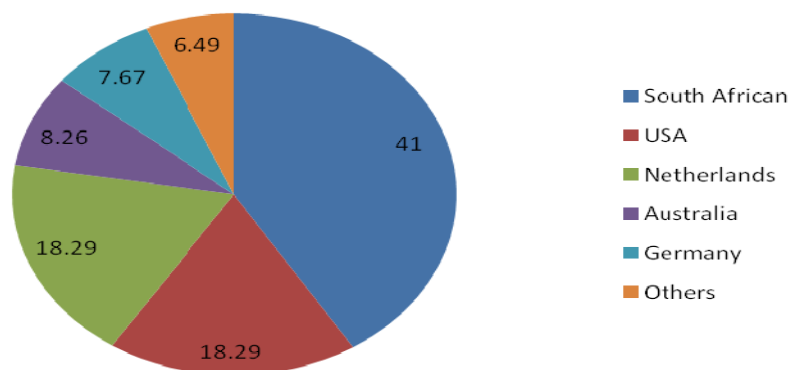
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- Enables commercialization & technology transfer
- Conducted through Plant Improvement Act – variety listing
- Period of Breeder's right:
  - 25 years for trees and vines
  - 20 years for all other crops
  - National authority may expropriate rights for national interest – food security needs
  - National authority may issue a compulsory licence
  - Automatic expiry of rights following prescribed period
  - Farm saved seed allowed



## PBR OWNERSHIP IN SOUTH AFRICA

(PERCENT FOR 2009)



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## ARC INTELLECTUAL ASSETS

- Composition
- **Plant Breeder's Rights – predominant**
- Patents
- Copyrights – publications
- Trademarks
- Trade secrets
- Know How

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## IPR FROM PUBLICLY FINANCED R & D ACT

- **Purpose:**
  - Publicly funded R & D must:
    - a) be protected;
    - b) Utilized; and
    - c) commercialized
  - To benefit people of South Africa
  - Recipients of public funding act in a manner conducive to public good
  - Acknowledge & reward innovation
  - Enable economic growth through enterprise development
  - Allows publishing of scientific results

## POSSIBLE EFFECT OF IPR ACT ON PUBLIC INSTITUTIONS

- Technology Transfer Office to manage IP
  - Disclosure
  - Identification, protection, development
  - Commercialization
  - Benefit – sharing arrangements
  - Reporting to National IP Management Office
- IP protection – benefit sharing arrangements
- Administrative impact
- Qualified IP experts to advice and manage

## **POSSIBLE EFFECT OF THE IPR ACT IN SOUTH AFRICA**

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- **INVENTOR/RESEARCHER:**

- 20 % of revenue for first R1 million
- Thereafter at least 30 % of net revenue from institution from the invention
- Good for the inventor – incentive & protection
- Prescription is perceived as onerous
- Most institutions already have benefit – sharing systems with inventors – often these provide for higher percentage for inventors
- Compliance may reduce benefit – sharing percentages for inventors

## **POSSIBLE EFFECT OF IPR ACT ON PRIVATE SECTOR**

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- Majority of R & D projects are co – funded (public & private)
  - May result in administrative burden for institutions
  - may be disincentive for private funding of R & D
  - Still to learn impact on economy and the creation of new businesses
  - May lead to reduced co-funding arrangements
  - May lead to increase in the development of trade secrets by private entity

## ARC INTERPRETATION OF THE IPR ACT

- ARC Intellectual Property Rights Policy
- Technology Transfer Office
  - Intellectual Property Manager
  - Commercialization Manager
  - Corporate Legal Advisor
- **Policy used for technology transfer**
  - **Licencing**
  - **Commercialization**
  - **Income generation**
  - **Investment into R & D**



## Technology Transfer

- In 2009 the ARC released 11 new varieties to the South African stone fruit industry. The varieties released, are either replacing older and non-performing varieties, or will fill important harvesting gaps in the season. The eleven new varieties are made up of
  - four plums
  - five peaches
  - two nectarines
- Of the four plums, two have a full red, one a black and one a yellow skin colour. Of the peaches, three were for the dessert industry, one for the canning industry to extend the harvesting season, and one for the drying industry. Of the two nectarines released, one is a very early variety for the fresh market. The second variety which is being marketed as "Colorburst™", will extend the drying season for the yellow skin nectarines suitable for drying. "Colorburst™" is the trade mark registered for the unique range of yellow-skin nectarines bred by the ARC and is currently sold exclusively by Woolworths in South Africa



## Technology Transfer

Commercialization (cultivars released  
+ all other related activities)

- A new blushed pear selection, with the trade name Cheeky™ was released to Deciduous Fruit Industry. The uniqueness in this cultivar lies in the ability to keep its delicate blush during warm periods, good storage ability of up to 12 weeks and pleasant taste after storage. Cheeky comes on the market when there are no other blush pears. Blush pears fetch premium prices. Result of a breeding programme.



The ARC has bred a new citrus cultivar called 'Sonet' and although it is still being evaluated, it has already attracted huge interest from citrus farmers. The response to a presentation at a citrus growers day organised at Addo Research Farm to inform citrus farmers about the qualities of 'Sonet' was overwhelmingly positive. The cultivar has also attracted international interest and indications that this citrus cultivar will be sought after on global markets. The cultivar will be released for commercial production once the comprehensive evaluation process has been concluded and will enhance the competitiveness of South African citrus farmers on global markets.



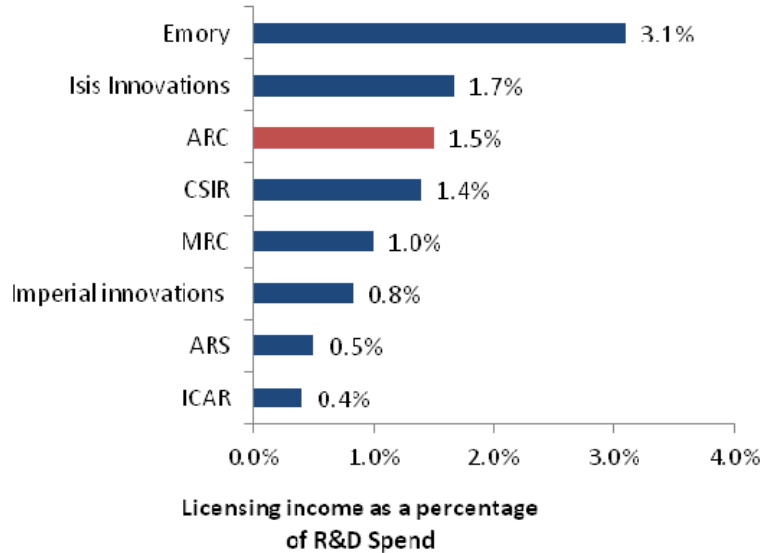
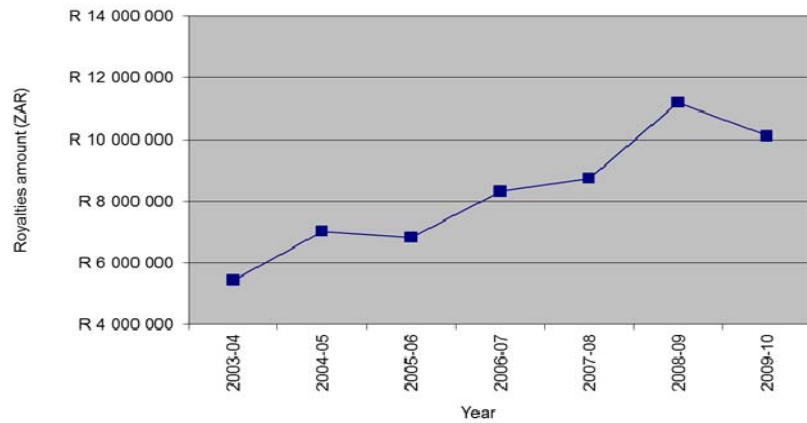
The new 'Sonet' selection





## IMPACT OF LICENSING ON ARC

ARC income from royalties (2003/04-2009/10)



## USE OF PVP FOR BENEFIT – SHARING

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- **As a public entity ARC utilizes PVP to enhance benefit sharing:**
  - **Effective technology transfer – mainly for agriculture development and growth**
  - **Enable competitiveness of the agriculture sector**
  - **Contribute cultivars that are important for food security**
  - **Incentivise innovation through:**
    - **Further investments into Research and Development**
    - **Providing a share of the revenue generated to inventor**
    - **Stimulate enterprise development**
    - **Facilitate access to poor farmers for development**



**Re a Leboha**

**Siyabulela**

**Siyabonga**

**Siyathokoza**

**Ha khensa**

**Ria livhuwa**

**Baie dankie**

**THANK YOU**

