
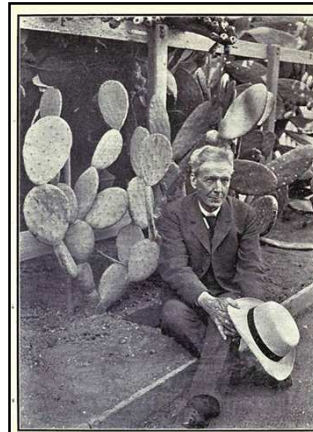


Spineless cactus pear evaluation in South Africa

Dr. Herman Fouché (ARC-API)
Dr. Gesine Coetzer (UFS)

International Cactus Pear Workshop
Development of a cactus pear agro-industry for the sub-Sahara Africa Region
27-28 January 2015


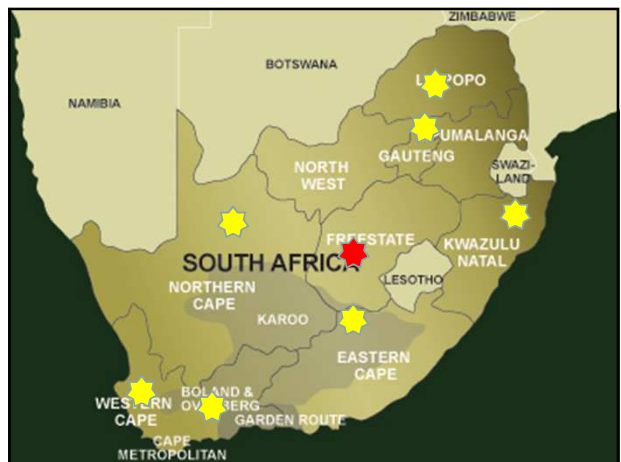
Luther Burbank
March 7, 1849 - April 11, 1926

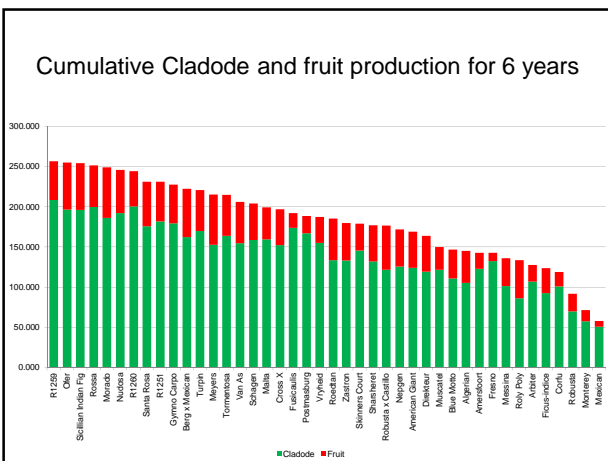
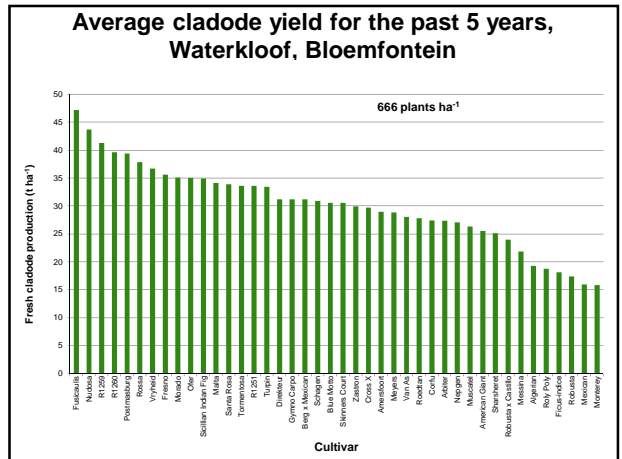
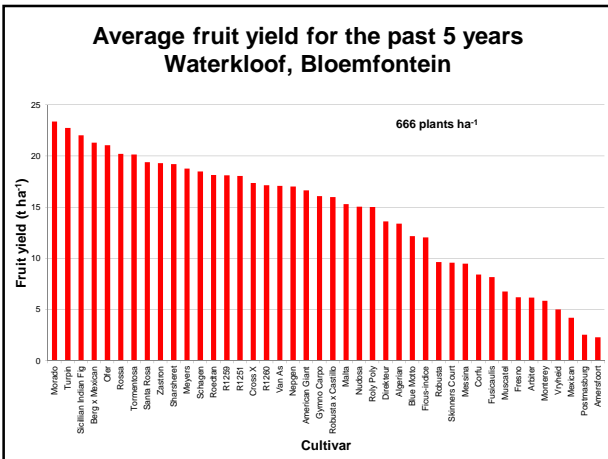
1914 – Department of Agriculture imported 21 spineless cactus pear varieties (Burbank-types)

LUTHER BURBANK, THE CALIFORNIA PLANT WIZARD, AND HIS THORNELESS CACTUS. FROM HIS LATEST PHOTOGRAPH.

Introduction

- Burbank genotypes evaluated as animal fodder at Grootfontein by de Kock and co-workers.
- Fruit production from spineless cactus pear cultivars started during the 1960s. Later, cactus pear fruit trials were conducted in the Eastern Cape (Brutsch), Gauteng (Wessels), Limpopo (Potgieter) and Central Karoo (De Kock, undated).
- Since the 1980s intensive, specialised plantations were established in the North West, Limpopo, Mpumalanga, Gauteng and Eastern Cape provinces
- Brutsch (1979) and later Wessels (1988) indicated clonal differences in environmental adaption.
- Limpopo Province probably has the largest cactus pear plantations for fruit production in South Africa (Potgieter, 2002).



Animal production evaluation

- **Fresh material (cladodes and fruits)**
- **Sun-dried feed (balanced diets)**
 - Cladodes
 - Fruit
- **Preserved feed**
 - Silage of cladodes and/or fruits
 - Ingredient of balanced diets
 - Maintenance diets – supplement to winter feeding
 - Fortifying low quality fodders (crop residues)
- **Use as an animal feed**
 - Sheep, cattle, goats
 - Pigs
 - Horses
 - Ostriches
 - Herbivorous wildlife

Conclusions

- Future of the existing gene pool in SA is at risk
- Genetic resources
 - Cultivar DNA identification
 - Description of cultivar characteristics
 - Exchange of students and post-docs - training
 - Exchange of genetic material
 - Need for good quality coloured fruit cultivars
- High density plantings
 - Fertilisation and water requirements
 - Pruning techniques - frequency and intensity
 - Pest and disease control – eco friendly
- Optimal fruit production



Acknowledgements

- UFS for assistance and support
- Dr's Gesine Coetzer en Maryna de Wit
- Dr DF van Tonder and his late father Danie – Owners of Waterkloof
- Edward and Gabriel – technical assistants

