

COTTON IN SOUTH AFRICA

Dr Tilla vd Westhuizen
ARC – IC



INTRODUCTION

Upland cotton (*Gossypium hirsutum* L.), a member of the Malvaceae family, is considered to be the most important textile fibre crop in the world, providing roughly half of the global fibre requirement



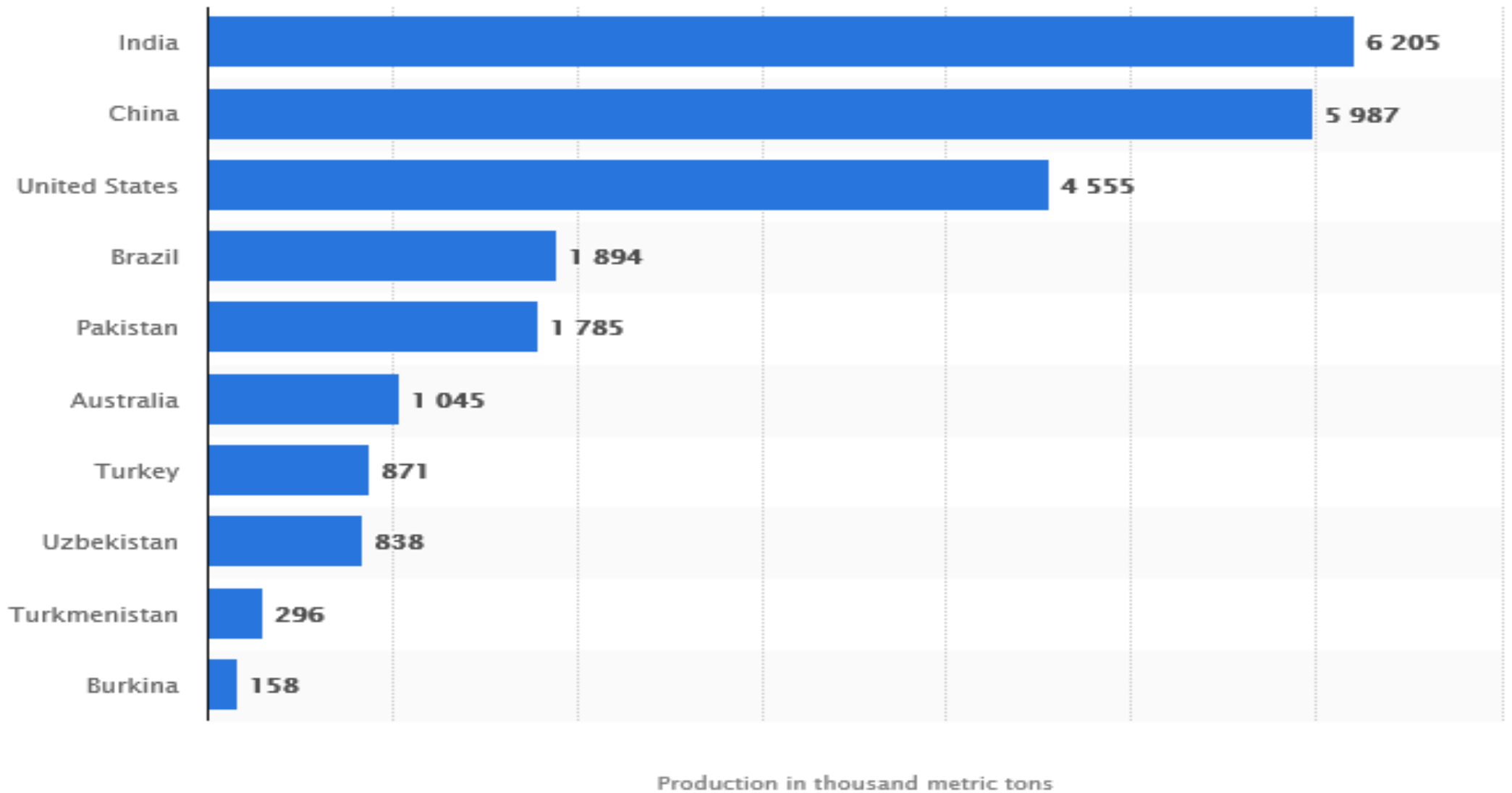
INTRODUCTION

Cotton is grown on more than 32 million hectares worldwide. Out of 50 *Gossypium* species, four have been domesticated. These four species *G. hirsutum*, *G. barbadense*, *G. arboreum* and *G. herbaceum* are widely planted in over 76 countries, including the US, China and India





Figure 1: Fruit formation
a. Flower bud; **b.** Flowers; **c.** Unripe boll; **d.** Mature boll



Graph 1: Leading cotton producing countries worldwide in 2017/2018 (1,000 metric tons)

HECTARES AND YIELD PLANTED FOR SOUTH AFRICA

- Production year: 2017/18
 - Irrigation (ha): 19 677
 - Irrigated yield (kg): 4 446
 - Bales produced: 195 666
- | | |
|---------------------|--------|
| Total (ha): | 37 352 |
| Dryland (ha): | 17 675 |
| Dryland yield (kg): | 853 |

MATERIALS & METHODS

Cultivars: Candia BG RF, Carla, Delta12 BRF, DP1240 B2RF, DP1531 B2RF, DP1541 B2RF

Spacing: Interrow-spacing: 1m; Intrarow-spacing: 20cm

Rows: 4; Row length: 9m

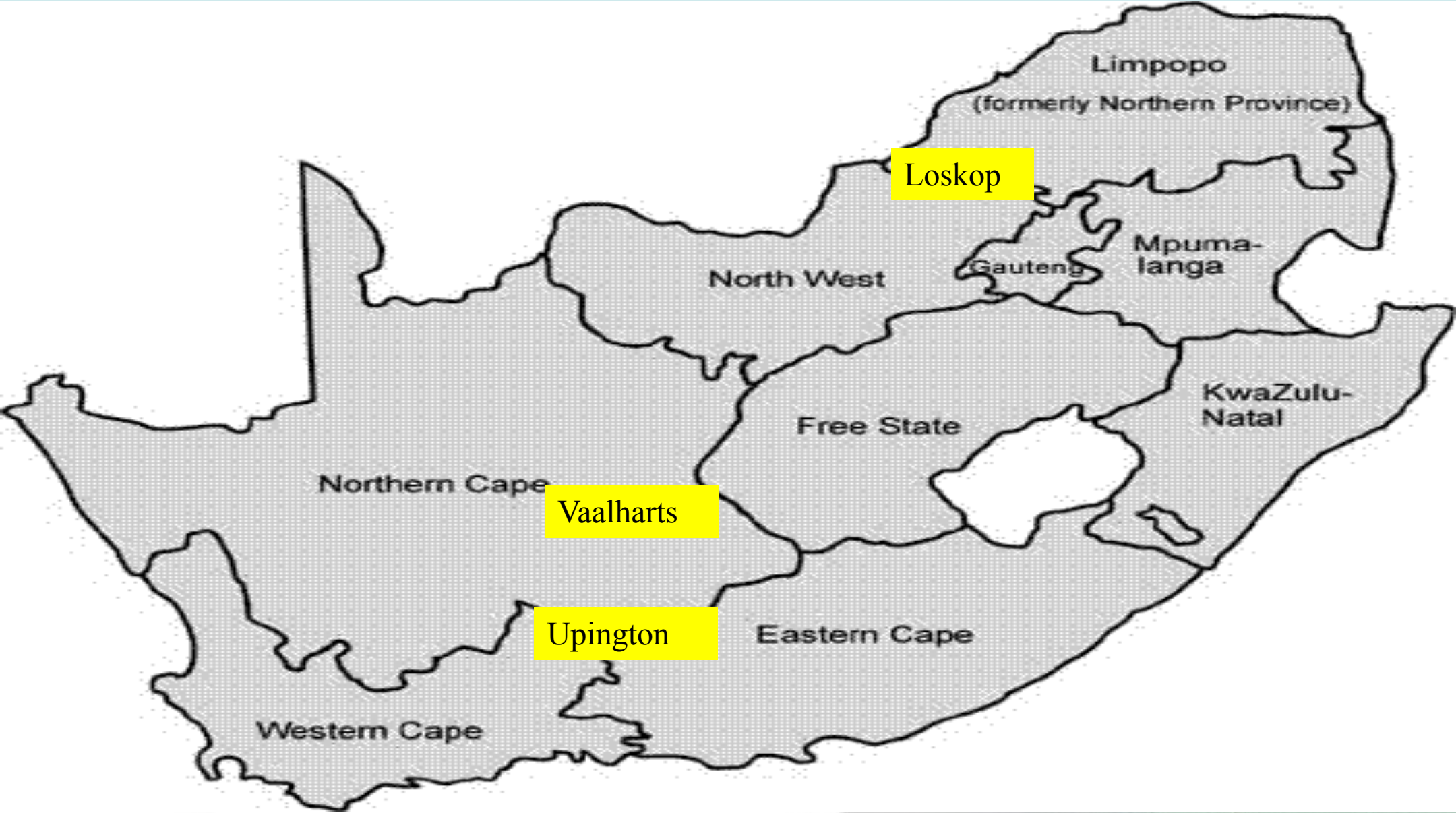


Figure 2: Trial Localities



RESULTS



Variety	Candia BGRF	Carla	Delta 12 BRF	DP 1240 B2RF	DP 1531 B2RF	DP 1541 B2RF
Yield (kg/ha)	2454	2573	2544	2777	2683	2737
Fibre %	42.4	42.1	38.8	39.6	40.6	43.0
Fibre yield (kg/ha)	1043	1087	984	1101	1087	1175
Tukey's LSD (p<0.05)		CV (%)				
Yield (kg/ha)	NS	5.6				
Fibre %	2.3	3.3				
Fibre yield (kg/ha)	98.5	6.9				

Table 1: Summary of cultivar performance in Loskop, 2016/2017

Variety	Candia BGRF	Carla	Delta 12 BRF	DP 1240 B2RF	DP 1531 B2RF	DP 1541 B2RF
Yield (kg/ha)	4694	4369	4703	4886	4074	4327
Fibre %	45.6	42.6	39.7	42.5	44.3	43.8
Fibre yield (kg/ha)	2141	1859	1868	2074	1808	1893
Tukey's LSD (p<0.05)		CV (%)				
Yield (kg/ha)	NS	13.0				
Fibre %	1.9	3.3				
Fibre yield (kg/ha)	NS	13.2				

Table 2: Summary of cultivar performance at Vaalharts, 2016/2017

Variety	Candia BGRF	Carla	Delta 12 BRF	DP 1240 B2RF	DP 1531 B2RF	DP 1541 B2RF
Yield (kg/ha)	6273	5969	6084	6919	6622	6546
Fibre %	43.5	42.6	39.4	41.8	42.9	42.2
Fibre yield (kg/ha)	2732	2541	2414	2887	2842	2764
Tukey's LSD (p<0.05)		CV (%)				
Yield (kg/ha)	NS	10.5				
Fibre %	NS	4.7				
Fibre yield (kg/ha)	NS	13.0				

Table 3: Summary of cultivar performance at Upington, 2016/2017

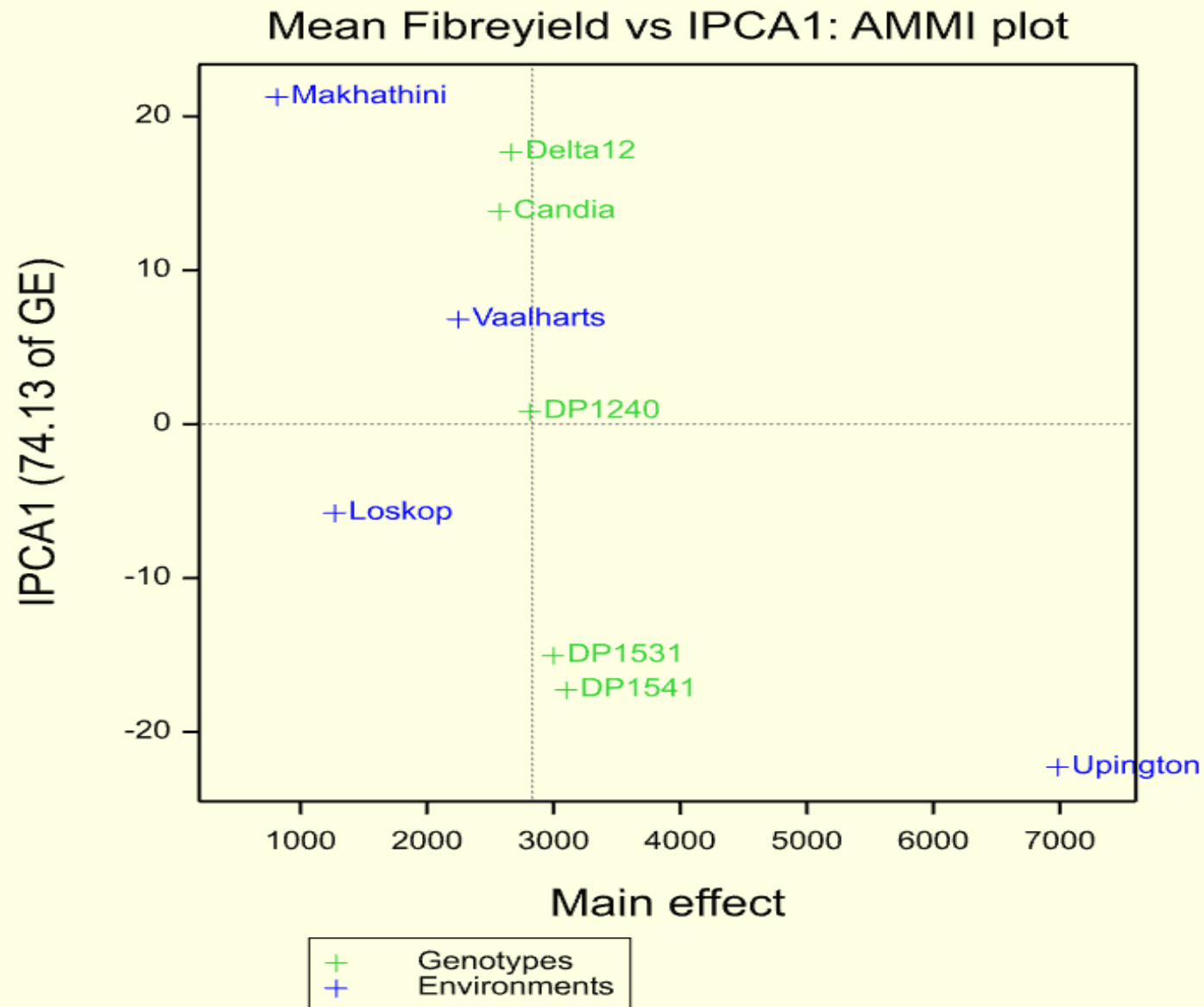


Figure 3: AMMI analysis over 2 years and 4 localities.

THANK YOU AND QUESTIONS

