

# Spotlight on Agriculture

Ministry of Agriculture, Water and Rural Development • Directorate of Agricultural Research and Training • Private Bag 13184 • Windhoek

No 50

November 2001

## *Seed is Life!*

### INTRODUCTION

What can describe the importance of seed better than these three words? Seed is the starting point of plant life, while the purpose of a plant's life is always to produce seed again.

Two pre-conditions were essential as mankind started to cultivate the earth, namely a suitable agro-ecological environment (e.g. soil, water, temperature) and the availability of seed. Although agriculture has developed today into a sophisticated industry, where productivity is maximised with the use of modern machinery, fertilisers, pesticides and computer technology, what would it be without a seed?

The importance of seed has been realised by all cultures. A functional seed industry, which provides farmers with healthy and high quality seed, has always been the backbone of successful food production.



*Sorghum*

### THE ORIGIN OF CROP SEEDS

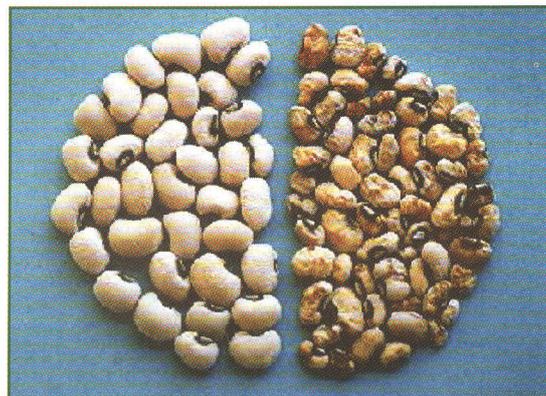
All crops that are cultivated today to provide mankind with food, originated from wild relatives. Thousands of years of selection by our ancestors together with Mendel's Laws of Heritability and the discovery of genes as the carrier of plant characteristics, form the foundation for the varieties that we plant today.

### SEED QUALITY

The aspect of seed quality is a decisive factor for adequate food production. Seed quality has two components.

#### **Physical quality**

Physiologically fully developed healthy seeds are needed to ensure good germination. Only a fast and complete plant establishment can provide the basis for a good yield. Seeds that have been exposed to inadequate storage conditions (such as high temperature, moisture or storage pests) will lose their vitality to germinate. Seeds that have been infected with diseases during their growth or storage may carry these diseases into the fields where they are planted and cause severe yield losses.



**Genetic quality**

The landraces which have been selected and developed by our ancestors could not provide for the increased demand for food in the 20th century. Therefore, plant breeders all over the world started to improve these landraces with different breeding tools. Today, improved crop varieties form the basis of food security in many countries. They are characterized by high yield, early maturity and resistance to or tolerance of all kinds of stresses.

Seed of improved varieties is genetically different from that of landraces. The genetic composition of these varieties needs to be maintained by plant breeders to ensure their continued superiority. This so-called nucleus seed forms the basis of any formal seed production, which ultimately results in the production of certified seeds.

Certified seed of released varieties gives the farmer the assurance that the seed he/she purchases is quality seed, both genetically and physically.

**CERTIFIED SEED IN NAMIBIA**

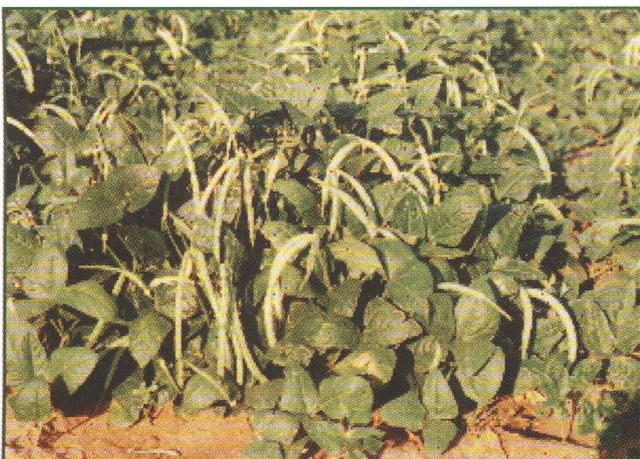
Several improved crop varieties have been released by the Directorate of Agricultural Research and Training in Namibia and certified seed is currently produced by Namibia's only seed producer, the Northern Namibia Farmers Seed Growers Co-operative (NNFSGC).

**Quality seeds are available for:**

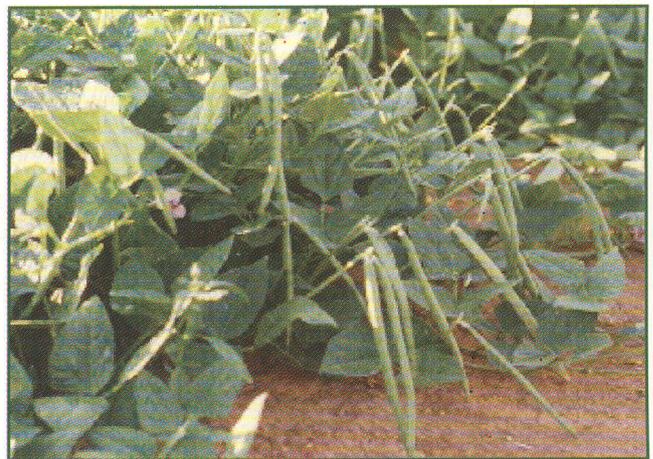
<b>CROP</b>	<b>VARIETY</b>
Pearl Millet (Mahangu)	Okashana I
	Okashana II
	Kangara
Sorghum	Macia
Cowpea (pre-released)	Nakare
	Bira



*Pearl Millet breeding plots*



*Cowpea - Variety Nakare*



*Cowpea - Variety Bira*

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