

## An outline of pearl millet research in Namibia

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Research on pearl millet does not have a long history in Namibia

Pearl millet was not taken into consideration in the past, neither by the Ministry of Agriculture nor by the Agronomic Board. This is very clearly stated in the annual reports of the Mahanene Research Station. You can find all kinds of cereals, vegetables and fruits trees there, but not one single trial of pearl millet although it is the staple food in the north of Namibia, where two-thirds of the population are living.

Therefore, pearl millet is as important as maize in Namibia, maybe even more important than maize, as pearl millet is adapted to the northern area and can easily be grown under rainfed conditions. If you take all these points into consideration, the need is clearly indicated that something has to be done in this field.

Even though the history is short, we already have to divide it into two periods; namely before and after independence. The first initiative was taken in 1986 when we first asked ICRISAT for help.

For the 1986-87 season we received an introduction-nursery of 50 varieties from the SADCC regional programme, which were tested at Okashana and in March 1987 the first "Farmers' Field Day" was held. Approximately 100 farmers participated and ICTP 8203 was the most impressive variety. The rainfall during that season was only 170 mm, but nicely distributed.

In the 1987/88 season we requested 200 kg ICTP from the regional programme for seed multiplication and large-scale testing for demonstration to farmers. Another Farmers' Field Day was held in March 1988 and at this day we had approx. 250 visitors.

The 1988/89 season started with a Farmers' Seed Day in November. This was the first time that a proven pearl millet seed was available to farmers in Owambo. More than 500 farmers came to buy seed and about 4 t of ICTP 8203 was sold.

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In agreement with ICRISAT officials, ICTP 8203 was renamed "Okashana I" during that time. In September 1989 it was also the first time that Namibia attended the Sorghum and Millet Improvement Programme (SMIP) during the sixth regional workshop of SADCC-ICRISAT in Bulawayo. During this workshop the programme layout for the 1989/90 season was made.

During the 1989/90 season a breeding programme was initiated by forming the Namibia-Composite 90 (NC-90) which is undergoing the second cycle random mating at Mahanene at this moment. The NC-90 contains the 10 best varieties + 10 % of a local entry. The selection was made by Dr Lee House, Executive Director of SADCC-ICRISAT and Dr Gupta, Principal pearl millet breeder.

After independence Namibia became the 10th member of SADCC in May 1990, and consequently gained straight access to SADCC-ICRISAT. ICRISAT's policy is to work, wherever possible, through the government.

All activities were delegated to the Ministry of Agriculture and therefore the Mahanene Research Station was reopened to start working with the SMIP-NARS Programme. In May 1990 the Ministry of Agriculture also made an immediate request to ICRISAT to multiply and produce seed of the type Okashana I for Namibia. At this time ICTP 8203 was replaced by ICMV 88908, a better performing variety also bred by the ICRISAT Centre. To avoid confusion among the farmers the new introduction is also called Okashana I.

To fulfill this request ICRISAT produced 10,5 t of seed out of season at Mazerabane, Zimbabwe. The seed was distributed by the Farmer Support Centres. During the 1990/91 season we had 10 trials planted with 4 replicas, so that there were more than 1 600 plots to plant and maintain.

Alongside the pearl millet trials, we also did other agronomic trials as well as an introduction nursery of cowpeas and groundnut.

Seed multiplication was carried out at Ogongo and Mannheim. 25 t of seed is available to the farmers for the coming season.

A germplasm collection through northern Namibia was launched from the 17th April to the 6th June, 1991. The head of the mission was Dr Appo Rao, a botanist from ICRISAT headquarters in Hyderabad. At the same time, i.e. from 21st April to 2nd May we were visited by five ICRISAT scientists. The purpose of the visit was to prepare a draft plan for research in Namibia for the near future.

The major activities for the 1991/92 season will be the evaluation of the Namibia pearl millet germplasm and some other breeding activities done by Dr Bidinger, who is spending his sabbatical leave in Namibia.

Based on last year's data, we reduced the programme to 4 trials with 70 entries. These will be planted at Mahanene, Mashare and Katima Mulilo. The agronomic trials will be located mainly at Ogongo with a strong link to the college. A cereals assessment trial will be planted at Uitkomst.

The armoured cricket has become a serious pest in some areas and with the help of the SADCC Regional Entomologist we will also start this season with a research programme regarding this problem.

We are also looking into the storage conditions of the farmers as well as into the storage capability of some varieties. Whereas we endeavour to improve varieties, production technology and hence production, appropriate storage technology and marketing channels have to exist if we are to succeed.

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