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**UNICEF/OLS Seed Swop Project 1993/4, Ler, Western Upper Nile**

UNICEF/OLS

23 May 1994

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UNICEF-OLS SEED SWOP PROJECT 1993/4.

LER, WESTERN UPPER NILE - S. SUDAN.

Introduction.

The seed swop project of 1993/4 was a programme carried out by UNICEF-OLS assisted by WFP, RASS and local farmers in Ler S. Sudan. The aim of the programme was to collect local Nuer type of sorghum seed for release to farmers in WUN region in S. Sudan for use during the 1994 planting season.

Justification for the project.

Over the past 4 years, a large variety of seed which were supposedly certified have been supplied to farmers in S. Sudan to use as planting material. What has not been established is suitability of this seed to the S. Sudan AEZ. Despite stress on quality and certification, a number of seed suppliers have not adhered to standards. In a number of cases, this has resulted in poor crop performances which of course largely contributes to the famine crisis largely exacerbated by the ongoing war in S. Sudan.

Agricultural rehabilitation with emphasis on increased and sustained crop production should start by first identifying areas of relative stability and then promoting supply of locally adapted germplasm for use as seed.

In addition to agricultural rehabilitation, it is hoped that the programme will help

- i) Conserve and enhance the local resource base.
- ii) Eventually lead to sustainable food production.
- iii) Overcome extremes of poverty and malnutrition.

#### SORGHUM ( Sorghum spp ).

Sorghum is an important cereal crop in WUN in Sudan. Both white and brown seeded varieties are grown. Generally it requires a rainfall of approximately 420-630mm per annum for good yields. A warm climate is desirable . Though it can withstand some waterlogging, fertile well drained soils are preferred for best production.

Local variety of sorghum known as " Dei " was collected. It is a relatively large brownish - purple colore grain borne on a goose necked stem , with the major advantage of being both flood and drought resistant. It takes 3-4 months to mature.

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The grain is ground for flour which is used in a number of ways, e.g. food ( Khisra: paper food, Walwal: fermented gruel, Kuan, ) and alcohol. The stem on the other hand is sweet and is chewed as a sweet cane. When dry it is used as fencing material and firewood.

Cropping calender for sorghum in Ler WUN.

<u>SEASON</u>	<u>ACTIVITY</u>
January-March. (Winter) * Mai.	Dura ( Sorghum ) is harvested from the field and stored on racks locally known as "jong". The dry grain is then threshed and stored pots known as "Tui".  It is the dry season with most people away at the cattle camps.
April- June. (Spring ) * Ruel.	Land preparation begins. Rains begin in May/June and planting starts after the 2nd/3rd rain falls. Active weeding season.
July- September. (Summer) * Tot.	Weeding continues. Sorghum almost mature.
October-December. (Autumn) * Jiom.	Sorghum crop mature and harvesting begins, with harvested crop being stored on "jong".

Key: \* Local name of season.

## PROGRAMME IMPLEMENTATION.

The programme was divided into two phases, seed collection and seed treatment. For seed collection original target was 250 MT. This amount was not realised due to time limitation. The project was slow, picking up in late December. 110 MT seed was collected and of 2,417 people who registered to exchange their sorghum, 99% were women. Amounts brought in for exchange ranged between 6.25 kgs - 300 kgs per person. The seed was exchanged at a rate of 1:2 with WFP sorghum grain.

To facilitate the exchange programme, local staff were identified to carry out the project followed by identification of a suitable exchange system. To this end grain dispensing chutes were made for both seed collection and grain payment. The chutes also served as a means of quality control as all grain coming in first had to be poured into them and checked for purity before being measured out into buckets which were used as the mode of measurement. Seed was then bagged and the owner issued with a numbered ticket stating amount of seed brought in, amount and owed. All this information was recorded in a ledger book and ticked off after the ticket holder collected his grain. Honoured tickets were subsequently cancelled and retained.

It was noted that as the programme approached an end many more people turned up to exchange their grain.

After seed collection, seed dressing was done using chemical dust commercially known as Murtano. This was done locally after education on chemical application including precautions had been given. After treatment, seeds were bagged in 50 kg and 80 kg sacks.

#### Seed Viability.

It was noted that as the exchange proceeded, seed quality improved. This was attributed to the fact that poor quality grain is threshed first followed by superior quality grain last. This is largely due to the keeping quality of the grain.

Germination tests were performed on 11 randomly selected samples each with n=20 seeds. On average, germination percentage was 88.6%, indicating relatively good viability.

<u>Sample number</u>	<u>Germination percentage.</u>
1	100
2	85
3	90
4	90
5	80
6	90
7	75
8	100
9	95
10	80
11	90

Average: 88.6 %

PROBLEMS ENCOUNTERED.

- i) Local authorities stopped the programme a day after it began.

Reasons given were that no information had been received from RASS headquarters on the project. They also felt that allowing seed collection would lead to the assumption by the UN that they had enough food and would no longer consider them beneficiaries for food aid.



A letter explaining the benefits of the programme and allaying the above fears had to come from the RASS h-quarters before the programme resumed. This problem led to a 2 week delay in implementation.

ii) Occasionally, seed mixtures were brought in by the people and these had to be rejected. Many times, the top half of the bag had good seed, while the bottom had poor / unacceptable varieties.

iii) WFP grain for use in the exchange was not always adequate.

Supply was often constrained due to lack of aircrafts. Frequently the swap temporarily stopped as there was no grain to be used for swapping.

iv) Irregular and inadequate supply of sacks for seed storage was experienced. The bags in which WFP grain came in had to be kept and reused for bagging the seed.

v) Dishonest staff would once in a while try to take sorghum for themselves. A strict and efficient supervisor was therefore essential.

vi) During periods when different staff were left to carry on the programme for short periods (i.e. s/m break)

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strictness was not always observed where mixed seed varieties were involved.

- vii) Insect damage occurred due to delay in treatment against pests and diseases.
- viii) Occasional recording/bookkeeping errors by local staff implementing the swop were noted.

General recommendations.

- i) Before project implementation, it is imperative that clearance for it be obtained from RASS h-quarters and that local authorities on ground be made fully aware of the programme.
- ii) High value low volume commodities should be used for barter.  
  
This will minimize problems of short supply caused by aircraft shortages/logistic problems.
- iii) Stores should be identified for storage of both seeds collected and swop materials.
- iv) Ground transport for seed and swop commodities should be

in place.

- v) Seeds should be treated as soon as possible to minimise damage by pests and diseases.
- vi) As much as possible, adequate swop commodities should be in store on ground to ensure project continuity.

EFFECT OF SEED SWOP PROGRAMME 1993/4.

- i) It established a FFW scheme which gave people a chance to be in employment i.e. those who were employed to carry out the swop.
- ii) It encouraged a form of trade giving a fair return to farmers by providing a way to satisfy their non-agricultural needs as some people used the excess grain they received to barter for items they lacked, sold it for cash or bartered it for seed at a lower rate then came back to the centre to barter at the higher rate of 1:2.
- iii) It encouraged - hopefully- the people to plant more with the hope that the programme would be repeated again during the next season.

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- iv) It may be considered as a form of food aid where people get something for their work and are encouraged to plant more.

All in all prolonged lack of food/famine leads to social, political and economic damages. Food availability greatly helps a country maintain internal stability, political independence and national dignity, not forgetting its' necessity for ones' physical existence. Therefore a programme which encourages household food security such as the seed swop should be highly promoted.