

A Rapid Survey of Chickpea Cultivation:

III. Wad Hamed, Sudan, 1989/90

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Sudan is not a major chickpea-producing country, but in some areas such as Wad Hamed and Rubatab in the northern region along the river Nile it is an important crop (Fig. 1). The local variety is a small-seeded kabuli, 100-seed mass of about 15 g. Only recently, a somewhat larger-seeded variety called Shendi (NEC 2491) has been released. It has a 100-seed mass of about 20 g. The FAO Production Year Book of 1987 shows the chickpea-growing area in Sudan at 2000 ha, and the mean yield at 1045 kg ha⁻¹. Usually the crop is sown in November-December, the middle of November being considered optimal.

To obtain data on main aspects of the chickpea crop in the Wad Hamed area, we conducted a survey similar to that described in "A rapid survey of chickpea cultivation I" by Woldeamlak Araya et al. in this newsletter issue. The results of the survey have been compiled in Table 1.

They show that:

- The sowing date varied little as expected under well controlled irrigated conditions.
- The plant density was rather low and could easily be improved.
- The nodulation was on 3 out of the 5 farms, it was rather low.
- In diseases, only fusarium wilt was causing severe damage at 2 places. In contrast to the 1988/89 season this year stunt incidence was low.
- Pod borers were hardly seen.

It was also found that all the chickpeas grown were of small-seeded kabuli type. They were broadcasted after irrigation, and subsequently the land was prepared. The irrigation frequency after sowing varied from nil to frequent irrigations at 10-day intervals. Wherever water was abundant, the crop was vigorous and of high yield potential. Where no irrigation was given after sowing, which was rather common, the crop growth was markedly reduced. Most chickpeas were grown as sole crops. A variety with medium-large seeds, short duration, resistant to soilborne diseases and proper adaptation would be a good addition to the present germplasm, especially where the land is flooded only once. Inoculation with *Rhizobium* in farms with poor nodulation might increase the yield.

Table 1. Survey results of chickpea farms in Wad Hamed, Sudan, visited on 26 Jan 1990.

Characteristics ¹	Serial number of farms visited				
	1	2	3	4	5
Soil type	HA	HA	LA	LA	LA
Growth stage	LP	MP	MP	MP	MP
Plant population	2	2	3	3	2
Nodulation	2.5	3.5	0.1	1.0	1.5
Diseases:					
collar rot	-	-	-	-	-
fusarium wilt	3	4	-	1	-
dry root rot	-	-	-	1	1
stunt	1	1	1	1	1
Pod borer	1	-	-	1	-

1. For key see the paper: A rapid survey of chickpea cultivation: I. Gojam, Ethiopia, in this newsletter issue.



Figure 1. A chickpea field in Wad Hamed area of Sudan.