A NEW CHROMOSOME RACE IN *HETEROPOGON CONTORTUS*

Heteropogon contortus Roem and Schult, a member of the tribe Andropogoneæ of the family Gramineæ, is well represented in the tropics and sub-tropics of both the new and old world flora. It is used commonly as a fodder plant. Chromosome races in this species are known to occur as $n = 10$,[1] $n = 20$,[2] $n = 22$[3] and $n = 30$[4]. Besides these, variable chromosome numbers are also reported[5] in this species. During the course of present investigation in the Gangetic plains of Bihar and U.P. (India), a new chromosome race $n = 25$ was found. This race is not very common and so far only few plants have been collected.

Polymorphism in *H. contortus* is quite conspicuous but the variations at the different ploidy levels or of the chromosome races have not been studied. Hence an effort is made to present in Table I the morphological characteristics of the new race ($n = 25$).

Cytologically these plants were very irregular during the meiotic division consisting principally of univalents and multivalents at diakinesis and metaphase I; bridges, fragments, and lagging chromosomes at anaphase; and micronuclei at the diad and tetrad spore stage.

TABLE I

Morphological characters of an intraspecific race ($n = 25$) *in* H. contortus

Characters studied	Observations
Growth habit ..	Decumbent
Flowering period ..	October February/March
Culm length ..	200–500 mm (400 mm.)*
Leaf length ..	30–100 mm. (61 mm.)
Leaf breadth ..	2·5–5·5 mm. (3·9 mm.)
Epidermal cells (length) ..	60·5–95·6 (82·3 μ)
,, (breadth)	15·4–22·4 (23·5 μ)
Stomatal breadth ..	21·8–46·3 (30·6 μ)
Spike length (with awn) ..	90–120 mm.
Awn length ..	67–90 mm. (79 mm.)
No. heterogamous pairs-spike	7–10 (9·1)
No. homogamous pairs-spike	1–8 (4·3)
Total No. of spikelets-spike	11–17 (13·4)
Length-breadth of lower glume of sessile spikelet	6·5/1·5 to 8·2/1·9 (7·5/1·7)
Pollen grain (diameter) ..	32·9–39·95 (36·66 μ)
Seed weight ..	81·5 mg. (50 seeds) (1·63 mg.) (per seed)

* Average values within parenthesis.

Morphologically the tetraploid plants differ conspicuously from the pentaploid race. However, the differences between the latter and the hexaploid race were very little except for some minor details. This could explain one of the difficulties in their ($n = 25$) proper identification and collections. An assumption is made for the hybrid origin of the pentaploid race from the possible crosses between the tetraploid and hexaploid races. Thus once such plants are produced and obtain selective advantage, they are able to perpetuate in nature with the help of apomixis which is quite prevalent in this species.

A detailed comparative morphological study of the different chromosome races in *H. contortus* is in progress and shall be reported later.

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Patna-5, *December* 22, 1964. P. K. Gupta.

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