

high leaves plus inflorescence to stem ratio were selected.

The herb yield per bush varied from 0.318 kg to 0.825 kg while the oil percentage and oil yield per bush ranged from 0.067% to 0.67% and 0.41 ml to 4.38 ml respectively. Progeny testing for correlating the herb and oil yield and oil percentage with the different morphological characters are in progress.

Aromatic and Medicinal
Plants Division,
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Bhubaneswar-4, June 21, 1976.

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A NOTE ON A POLYHAPLOID DERIVATIVE IN *SORGHUM*

THE polyhaploid derivative of *Sorghum* IS 3122 showed a number of altered morphological characters when compared to the mother tetraploid plant. It was late to flower by about 10 days and the increase in plant height, leaf length and width were striking. The panicles produced were longer and there was an increase in length of primary branches and size of grains. In addition, increase in stomatal size and pollen diameter was also observed (Table I). The polyhaploid plant did not show any meiotic irregularity and regular bivalent formation was observed. Pollen fertility and seed set were comparable to the mother tetraploid plant.

TABLE I

Comparison of stomatal length and breadth and pollen diameter (in microns) in natural tetraploid IS 3122 ($2n=40$) and its polyhaploid derivative ($2n=20$)

Character	Polyhaploid ($2n$)	Tetraploid ($4n$)
Stomatal length	50.6 ± 1.9	43.5 ± 1.7
Stomatal breadth	28.5 ± 1.7	25.0 ± 1.4
Pollen diameter	47.7 ± 1.4	36.5 ± 1.3

\pm indicate standard deviation value.

A similar polyhaploid plant was also reported by Duara and Stebbins² (1952) in the F_2 generation of hybrid between the autotetraploid *S. vulgare* var. *sudanense* and *S. helpense* ($2n=40$). However, this appears to be in contrast to the situation obtaining in autotetraploids induced through colchicine¹. In

general, induction of tetraploidy was reported to be associated with gigantism in some plant parts by many workers. However, the increase in various plant parts observed in polyhaploid derivative suggests that the reduction in chromosome number might also lead to gigantism in plant parts. Basing on these observations it may be postulated that when the chromosome number is altered, either doubled or reduced to half, in a stabilized plant type it may lead to gigantism in plant parts.

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INTERFERTILITY STUDY OF *POLYPORUS* *GRAMMOCEPHALUS* BERK.

THE interfertility has created more interest after Nobles¹ pointed out its significance in the taxonomy of fungi. So far, none has studied *Polyporus grammacephalus* Berk. from this point of view. The present communication gives the result of interfertility study of *Polyporus grammacephalus*, a common wood-rotting polypore of India.

The sporophore of *Polyporus grammacephalus* was collected from the campus of Burdwan University, on a dead trunk of *Ficus benghalensis* L. (Bat.). Twenty-five monosporous cultures were made from the spores of this sporophore following the usual dilution method on 2.5% malt agar slants. When each of the 25 monosporous cultures showed good growth, they were checked carefully for clamp connections. Finally 20 monokaryotic cultures were taken into consideration and were paired among themselves in all possible combinations on 2.5% malt agar slants. The culture tubes were left at room temperature ($28 \pm 2^\circ$ C) for about a fortnight and the line of contact between the paired mycelia was examined from time to time.

The result of this examination is recorded in Table I where (+) and (-) signs indicate the presence or absence of clamp connections respectively.

From Table I it will be evident that the mycelia fall into four groups which mean that the species has the "tetrapolar" type of interfertility. The four sexual phases are designated as AB, ab, Ab and aB. As expected in a tetrapolar species, clamp connections

TABLE I

Pairings of 20 monosporous mycelia derived from a single sporophore of *Polyporus grammacephalus* Berk.

		AB				ab					Ab					aB					
		2	3	11	17	4	7	8	13	20	23	10	12	14	19	21	5	6	15	16	24
AB	2	-	-	-	-	+	+	+	+	+	+	-	-	-	-	-	-	-	-	-	-
	3	-	-	-	-	+	+	+	+	+	+	-	-	-	-	-	-	-	-	-	-
	11	-	-	-	-	+	+	+	+	+	+	-	-	-	-	-	-	-	-	-	-
	17	-	-	-	-	+	+	+	+	+	+	-	-	-	-	-	-	-	-	-	-
ab	4	+	+	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	7	+	+	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	8	+	+	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	13	+	+	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	20	+	+	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ab	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	+	+	+
	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	+	+	+
	14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	+	+	+
	19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	+	+	+
	21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	+	+	+
aB	5	-	-	-	-	-	-	-	-	-	-	+	+	+	+	+	-	-	-	-	-
	6	-	-	-	-	-	-	-	-	-	-	+	+	+	+	+	-	-	-	-	-
	15	-	-	-	-	-	-	-	-	-	-	+	+	+	+	+	-	-	-	-	-
	16	-	-	-	-	-	-	-	-	-	-	+	+	+	+	+	-	-	-	-	-
	24	-	-	-	-	-	-	-	-	-	-	+	+	+	+	+	-	-	-	-	-

occur only in pairings between AB × ab or Ab × aB, i.e., between mycelia having no common allele.

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Burdwan (W.B.), April 10, 1976.

A. B. DE.

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ANNOUNCEMENTS

AWARD OF RESEARCH DEGREES

Karnatak University, Dharwar, has awarded the Ph.D. degree in Mathematics to Shri Prakash Gimmallappa Umarani; Ph.D. degree in Chemistry to Shri Shivanappa Khandappa, Haibatti; Ph.D. degree in Botany to Shri Ravindra Ramakrishna Hegde. Ph.D. degree in Chemistry to Sri Veluri Ananta Ramam.

The M.S. University of Baroda has awarded the Ph.D. degree to the following candidates for subjects mentioned against each: Shri Ramchandra Keshavlal Patel (Mathematics), Shri Kamalasanan M.N. (Physics), Shri Mammen Daniel (Botany), Shrimati Sunanda Prakash (Biochemistry), Shrimati Kailash Parimal Sanghvi (Chemistry), Srimathi Kumari Pratibha Devidayal Kathuria (Zoology).

Osmania University has awarded the Ph.D. degree to the following candidates for subjects mentioned against each: Shri Syed Gulam Samdari (Technology), Shri Nadimapalli Rama Krishna Raju (Chemistry)

Kum. K. Lakshmi Prasunamba (Chemistry), Shri K. Subbash (Botany), Shri S. T. P. V. Jagannadha Swamy (Physics), Shri G. L. David Krupadanam (Chemistry), Shri C. V. Chalapati Rao (Chemistry).

Sri Venkateswara University, Tirupati, has awarded the Ph.D. degree to the following subjects mentioned against each: Shri V. Venkata Reddy (Zoology), Shri K. V. Siva Kumar (Physics).

Tamil Nadu Agricultural University, Coimbatore, has awarded the Ph.D. degree to the following: Shri T. R. Srinivasan, Shri K. K. Subbaya, Shri B. G. Rajasekhnara, Shri S. Krishnamurtty, Shri V. Krishnasamy, Shri R. Bhaskaran, Shri P. Muthavel, Shri A. Regupathy.

Utkal University, Bhubaneswar, has awarded the Ph.D. degree in Chemistry to Shri Trijana Ranjan Mohanty.

Berhampur University has awarded the Ph.D. degree in Chemistry to Shri Surendra Nath Manapatra.