

vitamin B₁ content of the rice is calculated from the results of the observed value and per cent. recovery of added vitamin B₁.

The vitamin B₁ content of a few varieties of rices by the above procedure are given below:

TABLE III

Rice	Colour	γ Vitamin B ₁ per 100 gms. (observed)	γ Vitamin B ₁ per 100 gms. (computed)	Recovery %
Co. 9 raw husked (wooden huller)	Red	300	500	60
Adt. 11 Do.	White	302	409	74
GEB 24 Do.	"	279	490	57
Co. 4 Do.	"	307	404	76

The details of this paper and further work on the vitamin B₁ content of other cereals and pulses according to our procedure will be published elsewhere.

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¹ Scheunert and Schieblich, *im Hdb. d. Lebensmittel-chemie* hrsg von Bömer, Jukensack u. Tillmans Bd. II/2, S. 1548.

² Cohen, *Rec. Trav. Chim.*, 1935, **54**, 133.

³ Pyke, *J. Soc. Chem. Ind.* 1939, **58**, 338.

⁴ Hills, G. M., *Biochem. J.*, 1939, **33**, 2, 1966.

⁵ Jansen, *Rec. Trav. Chim.*, 1936, **55**, 1046.

A NOTE ON DR. KAJALE'S RECENT PAPER ON THE AMARANTHACEAE

RECENTLY Dr. L. B. Kajale¹ has published an exhaustive work on the Embryology of the *Amaranthaceae* in which he has made some very valuable additions to our knowledge of this family. On p. 610 of his paper he mentions having found one instance in *Cyathula tomentosa* in which the four megaspores of the tetrad were arranged in the form of an inverted "T".

Three other instances of a similar kind are quoted from previous literature:—*Zauschneria latifolia*,² *Angora pallida*³ and *Ludwigia parviflora*.⁴ Since the development of the embryo-sac in all these plants is of the *Cenothera*-type, Dr. Kajale goes on to add that in forms with a normal type of development such an arrangement of megaspores is unknown, his being the first recorded instance of the kind.

Dr. Kajale is right with regard to the rarity of this phenomenon in families other than the Onagraceae. Its more frequent occurrence in the latter is obviously related to the fact that here the micropylar megaspore usually functions in preference to the chalazal and hence any irregularity with regard to the normal position of spindles in the homotypic division would occur in the chalazal rather than in the micropylar dyad cell. Megaspores arranged in the form of an inverted "T" are, however, not unknown in other plants. Schnarf⁵ quotes Baranow (1926) as having seen such an arrangement in *Drimiopsis maculata*, Paetow⁶ has observed it in *Tacca viridis* and Copeland⁷ (1938) in *Styrax officinalis*. I have not particularly hunted the literature for this abnormality and would not be surprised if still other cases of a similar nature are present in earlier records.

While new reports of abnormalities and rarities are always to be welcomed, it seems necessary to warn the enthusiast from being overconfident of the priority of his own observations.

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¹ Kajale, L. B., *Proc. Nat. Inst. Sci. India*, 1940, **6**, 597.

² Johansen, D. A., *Ann. N.Y. Acad. Sci.*, 1931, **33**, 1.

³ — *Amer. J. Bot.*, 1931, **18**, 854.

⁴ Maheshwari, P., and Gupta, B. L., *Curr. Sci.*, 1934 **3**, 107.

⁵ Schnarf, K., *Embryologie der Angiospermen*, Berlin, 1929.

⁶ Paetow, W., *Planta*, 1931, **14**, 441.

⁷ Copeland, N. F., *Amer. J. Bot.*, 1938, **25**, 771.