TABLE 1. PERCENTAGE COMPONENT ACIDS OF SEED FATS OF THE GRAMINEAE

Taxon	Source	U.I.*	Habit	Palmitic	Stearic	Oleic	Linoleic	Linolen
Coix lacryma-jobi L.	Philippines	1008	Cultivated	15·8	1·1	49·3	33·7	Trace
	Philippines	1060	Cultivated	14·6	1·3	50·6	33·4	Trace
	Philippines	1011	Cultivated	16·1	1·7	59·0	22·7	0·5
	Nigeria	1061	Weed	15·7	1·5	51·6	31·1	Trace
Sorghum bicolor (L.) Moench.								
ssp. *bicolor*	Botswana	2179	Cultivated	15·8	0·1	29·3	54·8	—
	Botswana	2022	Cultivated	35·3	Trace	39·0	39·2	—
ssp. *arundinaceum*	Nigeria	1619	Weed	16·9	1·5	34·3	44·8	2·2
	Nigeria	1935	Weed	22·0	0·2	36·0	41·8	Trace
Sorghum versicolor J. N. Anress.	Nigeria	1940	Wild	21·7	0·1	39·0	39·2	—
Tripsacum lanceolatum Rupr. ex Fourn	Mexico	1396	Wild	7·8	0·6	22·3	33·7	0·1
Tripsacum pilosum Scrib. & Merr.	Mexico	1370	Wild	8·0	1·2	40·1	50·5	Trace
Tripsacum maizar Hernandez-X and Randolph	Mexico	2323	Wild	14·1	1·8	41·1	42·9	Trace
Zea mexicana Reeves & Mangelsdorf	Mexico	1027	Weed	14·2	Trace	22·3	63·2	Trace
Zea perennis Reeves & Mangelsdorf	Mexico	1071	Wild	13·1	1·5	34·3	51·0	Trace

* Voucher seed number at the Crop Evolution Laboratory Herbarium.

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Key Word Index—Gramineae; Andropogoneae; fatty acids; chemotaxonomy.

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LILIACEAE

NEW SOURCES OF COLCHICINE IN *IPHIGENIA*

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COLCHICINE is widely used for treatment of gout and in plant breeding (for producing

polyploids).[1] Though colchicine is fairly widely distributed[2] in several species of the Liliaceae, the only commercially viable[3] source available at present is *Colchicum autumnale* L., the seeds of which contain 0·3–0·5% colchicine. In a search for new commercially useful sources, we have carried out a systematic study of the genus *Iphigenia*, especially because earlier studies[4] on *Iphigenia indica* (L.) A. Gray had revealed that its seeds contain as much as 0·51% colchicine. A number of *Iphigenia* species occur around Poona. Their seeds were collected in the month of August (1970) and after thorough drying at room temp. (~ 25°) were analysed[5] for colchicine content. Table 1 summarises the results. Since there is considerable confusion about the correct identity and taxonomic status of the various species of *Iphigenia* growing in India as presented in the literature,[6] a few important characteristics of the four species as studied from the living material besides wide range of herbarium collections are also included.

It is clear from Table 1 that *I. stellata* is an exceptionally rich source for colchicine and deserves further study for possible commercial exploitation[7] and such investigations are under way.

TABLE 1. COLCHICINE CONTENT OF SEEDS OF SOME *Iphigenia* SPECIES

		Botanical characters			Colchicine content		
No.	Species	Inflorescence	Flowers*	Fruit	Seed (fresh)	No. of samples analysed	% yield‡
1	*Iphigenia indica* (L.) A. Gray	1–3 flowered raceme, sometimes corymbiform	Greenish-brown to dark purple	Generally oblong-columnar	Brown with prominent addressed band of hilum (resembling Roman helmet hood)	3	0·5–0·6
2	*I. pallida* Baker	Normally 3–6 flowered corymb, sometimes a raceme	White to pale-pink	Generally elliptic oblong	Brown with prominent wavy, crumpled ovate mass of hilum	2	0·5–0·6
3	*I. stellata* Blatter	Generally 2–4 flowered raceme	Bright pink	Obovate or sub-globose	Brown with hilum extremely reduced and seen as white patch	7	1·2–1·9
4	*Iphigenia* sp.†	4- many flowered raceme	Greenish brown to dark purple or purplish brown	Oblong	Brown with thin but distinct round band of hilum	1	0·7

* All flowers have 6 radiating perianth lobes.

† Probably *I. robusta* Baker.

‡ TLC pure material obtained after Al_2O_3 chromatography, m.p. 154–156°. Identification completed by comparison of its IR and PMR spectra with those of an authentic sample.

[1] See O. J. EIGSTI and P. DUSTIN, in *Agriculture, Medicine, Biology and Chemistry*, The Iowa State College Press, Ames (1955).

[2] See W. C. WILDMAN and B. A. PURSEY, in *The Alkaloids* (edited by R. H. F. MANSKE), Vol. XI, pp. 407–414, Academic Press, New York (1968).

[3] F. E. HAMERSLAG, *The Technology and Chemistry of Alkaloids*, pp. 66–80, Van Nostrand, New York (1950).

[4] J. L. KAUL, B. K. MOZA, F. SANTAVY and P. URUBLOVSKY, *Coll. Czech. Chem. Commun.* **29**, 1689 (1964).

[5] Essentially according to the procedure of: F. SANTAVY, *Coll. Czech. Chem. Commun.* **15**, 552 (1950).

[6] J. D. HOOKER, *The Flora of British India*, Vol. VI, p. 357, Reeve, London (1892).

[7] Patent pending.

Key Word Index—Iphigenia; Liliaceae; colchicine.