



Fig. 10. Sequence of flowering on 'Gallatin 50' and 'Oregon 58' bean plants.

lateral branches did not appear simultaneously, as indicated by Ojehomon (7). One branch always developed before the others at the same node and the triad primordia of the branch were not observed at the same time as comparable branches at different nodes.

Literature Cited

1. Dale, J. E. 1964. Leaf growth in *Phaseolus vulgaris* L. I. Growth of the first pair of leaves under constant conditions. *Ann. Bot.* 28:579-589.
2. Douth, M. T. 1932. Anatomy of *Phaseolus vulgaris* L. var. Black Valentine. *Michigan Agr. Expt. Sta. Tech. Bul.* 128:1-31.
3. Inoue, Y., and M. Shibuya. 1954. Studies on the reproductive physiology of the common beans (*Phaseolus vulgaris* L.) I. On the differentiation and development of the flower buds. *J. Hort. Assoc. Japan* 23:9-15.
4. Jensen, W. A. 1962. Botanical histochemistry. W. H. Freeman and Company, San Francisco.
5. Leopold, A. C. 1949. Flower initiation in total darkness. *Plant Physiol.* 24:530-533.
6. Machlis, L., and J. G. Torrey. 1956. Plants in action. W. H. Freeman and Company, San Francisco.
7. Ojehomon, O. O. 1966. The development of flower primordia of *Phaseolus vulgaris* L. Savi. *Ann. Bot. N.S.* 30:487-492.
8. ———, and D. G. Morgan. 1969. A quantitative study of inflorescence development in *Phaseolus vulgaris* L. *Ann. Bot. N.S.* 33:325-332.

Inheritance of Light Yellow Corolla and Leafy Tendrils in Gourd (*Cucurbita pepo* var. *ovifera* Alef)¹

John Scarchuk²
University of Connecticut, Storrs

Abstract. Two independent monogenic recessives in *Cucurbita pepo* var. *ovifera* are described: light yellow corolla (*ly*) and leafy tendril (*lt*).

Two new phenotypic characters (light yellow corolla and leafy tendril) were found in gourd. In a single plant of one breeding line a plant with light yellow corolla was associated with normal tendrils. The light yellow color is described as Y6 by the Fisher Color Chart (2) and normal color as lighter orange yellow or OY5. In another

separate breeding line a plant was found with leafy tendrils and normal corolla color. The leaf blades of the leafy tendrils were small and produced on the ends of the branched tendrils borne in the axils of the leaves. They are not identified with the leaf, because the vascular supply from the axis comes entirely from the bud trace.

These 2 plants were selfed and intercrossed. Each plant bred true but the F₁ plants were all normal corolla color and normal tendrils. The subsequent F₂ segregated 79 normal corolla color to 29 light yellow and 84 normal tendril to 24 leafy tendril. Each was not significantly different from a 3:1 ratio ($p = 50-70\%$). The combined F₂ ratio was 60 normal colored corolla, normal tendril, 19 normal colored corolla, leafy tendril, 24 light yellow

corolla, normal tendril, and 5 light yellow corolla, leafy tendril which does not differ significantly ($p = 70-95\%$) from a 9:3:3:1 ratio indicating that the traits are independently inherited. The gene symbols proposed are *ly* (light yellow corolla) and *+* (orange yellow corolla); and *lt* (leafy tendril) and *+* (normal tendril).

No other corolla color variants have been reported in *Cucurbita*. The only reference to color variation of corolla in the Cucurbitaceae is a report by Hutchins (1) who found a green flowered sterile variant in *Cucumis sativus* L. inherited as a simple recessive. No previous reference to leafy tendrils is known in the Cucurbitaceae. Tendrils are generally associated with squash having a vine habit (3) but tendrils are also found in bush or dwarf lines.

Literature Cited

1. Hutchins, A. E. 1935. The inheritance of a green flowered variation in *Cucumis sativus*. *Proc. Amer. Soc. Hort. Sci.* 33:513.
2. New England Gladiolus Society. 1944. Fisher color chart. Boston, MA.
3. Whitaker, T. W., and Glen N. Davis. 1962. Cucurbits: botany, cultivation, and utilization. World Crop Books, London.

¹Received for publication March 14, 1974. Scientific Contribution No. 573, Storrs Agricultural Experiment Station, The University of Connecticut, Storrs, CT.

²Department of Plant Science.