

New Plant Variety Protection (PVP) Forms for Pumpkin/Squash/Gourd

Harry S. Paris

A. R. O., Newe Ya'ar Research Center, P. O. Box 1021, Ramat Yishay 30-095, Israel

Janice Strachan

Plant Variety Protection Office, NAL Building, 10301 Baltimore Av., Beltsville, MD 20705

Gabriele Gusmini

Syngenta Seeds, 10290 Greenway Rd., Naples, FL 34114

William C. Johnson

Seminis Vegetable Seeds, 37437 State Hwy 16, Woodland, CA 95695

Mark Frobish

Abbott & Cobb, Inc., P.O. Box 307, Feasterville, PA 19053

The Plant Variety Protection Office administers the Plant Variety Protection Act by issuing Certificates of Protection in a timely manner. The Act provides legal intellectual property rights protection to developers of new varieties of plants which are sexually reproduced (by seed) or tuber-propagated. Proof of the distinctness, uniformity, and stability of the new variety lies with the owner and is required for obtaining a PVP certificate.

The Plant Variety Protection Office provides upon request application forms for protection of a plant variety with instructions on how to file applications. A PVP application consists of a completed and signed Form S&T-470 accompanied by a number of “exhibits”, among which is Exhibit C, [Objective Description](#) of the variety. The goal of this exhibit is to allow the owner to describe how the new variety differs from all other known varieties of the crop, to indicate which group of varieties or market type the variety is most closely related, and to indicate the single variety that the owner believes is the one most similar to the new variety and describe how the new variety differs from it.

The Objective Description of Variety form (Exhibit C) for Pumpkin/Squash/Gourd (*Cucurbita* spp.) has not been substantially updated since the 1970s. The authors found that this form was inadequate to achieve the goal of this exhibit. We gathered at the George Washington Carver Center in Beltsville, MD in late February 2007, as a team effort of the PVP Office, industry, and public research toward devising a new, readily applicable and practical form.

All of us agreed that the characteristics listed on the form should be clearly defined, quickly and readily distinguishable or measurable, and expressed over a wide range of environments. Measurements of length or width of various plant parts are subject to wide variation due to irrigation, fertilization, and other factors, however relative measurements, for example length-to-width ratio, are much less so. The old Exhibit C form calls for measurements of cotyledons, petioles, laminae, fruits, peduncles, and seeds. The new form constituting exhibit C calls instead for ratios of length-to-width of these plant parts.

Moreover, the old form contains a number of characteristics, such as leaf pubescence, that differentiate *Cucurbita* species rather than varieties (cultivars) within a species and hence are not useful for distinguishing a new cultivar within its particular species. This, together with the overwhelming economic importance and intensive breeding of *Cucurbita pepo* as opposed to other *Cucurbita* spp. and other gourd taxa, led us to the conclusion that there should be two separate forms for Pumpkin/Squash/Gourd, one for *C. pepo* and one for all of the other species of *Cucurbita* and other taxa generally referred to as gourds, such as *Lagenaria* and *Luffa*.

On the *Cucurbita pepo* form, the first descriptor of the new variety is fruit shape, a familiar polygenic characteristic which has been used to establish edible-fruited variety groups (1), thereby focusing and facilitating the assessment of distinctness of the new variety; this basic descriptor is supplemented with an illustration.

On the other form, the first descriptor of the new variety is the full species name with botanical authority, again focusing and facilitating assessment of distinctness.

Photographic evidence of the distinctness of the new cultivar is also encouraged.

The two new forms constituting Exhibit C, one for *Cucurbita pepo* and one for all of the other species of *Cucurbita* and other taxa generally referred to as gourds, such as *Lagenaria* and *Luffa*, are appended below.

To obtain a PVP application by mail, please send an inquiry to:

Plant Variety Protection Office
National Agricultural Library, Room 401
10301 Baltimore Boulevard
Beltsville, MD 20705-2351
or phone: 301-504-5518, fax: 301-504-5291, or
e-Mail: pvpomail@usda.gov
Web site:
<http://www.ams.usda.gov/science/pvpo/apply.htm#proof>

Acknowledgements: We thank Ted Superak of Harris Moran Seed Co., Davis, Calif., for his comments.

Literature Cited

1. Paris, H.S. 1986. A proposed subspecific classification for *Cucurbita pepo*. *Phytologia* 61: 133–138.