Readers' Forum

Highbush = Rabbiteye = Lowbush Blueberries?!?... Another Perspective

Another perspective should be offered to the article of Hancock and Goulart (*HortTechnology* 3:254-255, Apr.-June 1993) "A Blueberry by Any Other Name..." as well as a few additions and corrections. That article asserted that highbush, lowbush, and rabbiteye blueberries are terms that no longer have any valid use based on contemporary taxonomy and modern plant breeding practices, which have produced introgressed species germplasm.

First, technical correction needs to be made regarding the germplasm percentages of at least seven of the cultivars they list (Table 1). As in Hancock and Goulart's article, we have followed older taxonomic treatment for purposes of clarity regarding germplasm origin. While these corrections do little to alter the total sense of their original table, a few other additions and labels will serve to clarify just how different or similar other cultivated blueberry types are.

The reader will note that, at present, all lowbush cultivars are 100% *Vaccinium angustifolium*, and all rabbiteye cultivars are at least 50%, and in many cases 100%, *V. ashei*. All the material listed in the previous article's table should be considered introgressed highbush, southern highbush, or half-highs, but *not* simply generic blue-

berry. Considering the many differences in climatic adaptation, cultivation practices, ripening period, pollinator adaptations, and fruit quality (Eck, 1988; Ballington et al., 1984; Ehlenfeldt et al., 1994) between these three different types, it seems unlikely that anyone growing any of these com-

Table 1. *Species composition of several blueberry types.*

Type/cultivar	Species composition*
<i>Introgressed highbush</i>	
Sunrise	84% <i>V. corymbosum</i> , 16% <i>V. angustifolium</i>
Sierra	50% <i>V. corymbosum</i> , 20% <i>V. darrowi</i> , 13% <i>V. constablaei</i> , 15% <i>V. ashei</i> , 2% <i>V. angustifolium</i>
Avonblue	86% <i>V. corymbosum</i> , 5% <i>V. darrowi</i> , 8% <i>V. ashei</i> , 1% <i>V. angustifolium</i>
Flordablue	60% <i>V. corymbosum</i> , 23% <i>V. darrowi</i> , 15% <i>V. ashei</i> , 2% <i>V. angustifolium</i>
O'Neal	85% <i>V. corymbosum</i> , 3% <i>V. darrowi</i> , 4% <i>V. ashei</i> , 11% <i>V. angustifolium</i>
Reveille/ Bladen	90% <i>V. corymbosum</i> , 3% <i>V. darrowi</i> , 2% <i>V. ashei</i> , 4% <i>V. angustifolium</i> , 1% <i>V. tenellum</i>
Misty	86% <i>V. corymbosum</i> , 6% <i>V. darrowi</i> , 6% <i>V. ashei</i> , 1% <i>V. angustifolium</i> , 1% <i>V. tenellum</i>
<i>Lowbush</i>	
All cultivars	100% <i>V. angustifolium</i>
<i>Rabbiteye</i>	
All cultivars	50% to 100% <i>V. ashei</i>

*For cultivars that had an ancestor resulting from a cross between *V. ashei* and a diploid species selection, it was assumed that the hybrid was pentaploid (three chromosome sets *V. ashei*, two sets species), and relative contributions from the two species were proportioned accordingly.

mercially would say that they are all the same thing. Vander Kloet (1988) has reclassified *V. ashei* and grouped it into *V. corymbosum*, based on overlapping geographic occurrence and overlapping phenotypes. But, even Vander Kloet (personal communication) recognizes the utility of common names to convey a sense of the origin and diverse qualities of various germplasms. The situation in blueberry is very similar to that in cultivated *Brassica*.

While everyone agrees that cauliflower, broccoli, brussels sprouts, and cabbage are all *Brassica oleracea*, we are not necessarily ready to say that we can grow, eat, and use them interchangeably. So, while the most recent taxonomic treatment has now consolidated several blueberry species into *V. corymbosum*, the cultivated types of blueberries have by no means been rendered completely indistinguishable. Breeding has blurred the boundary of what we typically consider highbush, but it has not erased it.

Finally, regarding the definition and use of the word "wild." The word is easily defined in plant genetics... "wild" means the plant is not the product of any selective breeding. Hence, blueberries may be selected from the wild, and cultivated, but they are still, by origin and definition, wild blueberries. So, while not all may agree with the retention of these terms, we believe that there is still room for the use of the terms "wild," "lowbush," "rabbiteye," and "highbush" as descriptors for blueberries. Scientific communication is based on the use of specific and precise descriptive language, not generalities, and, within the limits of scientific precision, we should retain descriptors if they are useful. Thus, if materials arise that do not fit into established categories, people will at least know what is meant. But please, let's not just say that everything is all the same and make the situation worse.

Literature Cited

Ballington, J.R., W.E. Ballinger, W.H. Swallow, G.J. Galletta, and L.J. Kushman. 1984. Fruit quality characteristics of 11 *Vaccinium* species. *J. Amer. Soc. Hort. Sci.* 109:684-689.

Eck, P. 1988. Blueberry science. Rutgers Univ. Press, New Brunswick, N.J.

Ehlenfeldt, M.K., F.I. Meredith, and J.R.

Ballington. 1994. Unique organic acid profile of rabbiteye versus highbush blueberries. HortScience (In press.)

Vander Kloet, S.P. 1988. The genus *Vaccinium* in North America. Agr. Canada, Ottawa, Publ. 1828.

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Speaking Through Translators II

I concur with Grierson's comments on the importance of cooperating with simultaneous translators (*HortTechnology* 3:253-254, Apr.-

June 1993). May I add several further suggestions that I have found to be helpful in this regard?

As mentioned previously, the speaker should watch the translator closely. This is rendered very much more effective if a few simple hand signals have been agreed upon previously. These can be very simple; i.e., palm down, motioning downwards for "speak slower"; both hands, palms up, motioning upwards for "speak louder"; one hand waving side-to-side meaning "I need you to clarify a word, term, or phrase. We don't know or use that term in our language." When this occurs (i.e., confusion), it should be cleared up immediately so that the audience understands the specific term in question.

All too many speakers speak much too rapidly for effective translation. Speak rather slower than you would with a purely English-speaking audience. Also, remember that some languages require more words than English to say the same thing; therefore, necessarily take more time.

At the end of my presentation, I always request that the translator ask the audience if there were any items that might still be confusing or not understood clearly. This is the time to discuss such matters, while we still have the services of an able translator.

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Errata

In "Speaking Through Translators" (*HortTechnology* 3:253-254, Apr.-June 1993), Dorothy Parker's witty pun should have read "You can lead a horticulture (not "horticulturist"), but you can't make her think." Also, a criticism of unnecessarily faddish speech should have read "President Clinton's workmanship" (not workmanship).

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