

WHAT IS A NEW CROP?

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The question of what or what does not constitute new crop research is one which scientists often debate. With the possible exceptions of planned intergeneric crosses such as *X Fatshedera* and assemblages of individuals which are resynthesized only by cross-breeding (e.g. F1 hybrids), there are very few "new" plants. Today many scientists working in the field of new floricultural crops are working with species which have existed for millennia but are only now finding their way into cultivation. However, new crop research can be broadened to include species where some prior selection has been done. In general, 3 main areas have evolved based on prior selection within the species. The first area is the evaluation of new selections or clones of existing crops and species with the highest degree of prior selection. This procedure has been a common means of screening potential cultivars as commercial crops. Improvements through breeding and selection have led to much improved cultivars, which may tolerate pot or cut flower culture better than their predecessors. This is the main thrust of new plant research in seed firms, especially those which concentrate on annual plants.

The second area of new crop research concerns some new use (e.g. pot culture) for a common species. For example research on *Armeria maritima* (Mill.) Willd. as a new pot crop is currently being conducted at several locations; however, this species has been well known to garden enthusiasts for many years. The degree of prior selection varies considerably with species tested. Other examples of Group 2 crops include *Calendula*, *Ajuga*, *Bougainvillea*, orchids, hybrid lilies, *Aquilegia*, *Fuchsia* and *Liriope*. Research with all of these plants involves a new use for established species.

The third and most exciting area of new crop research is research on a species about which very little garden or greenhouse cultural information exists. In general little or no prior selection has been done, and these plants usually exist as single selections or clones; few if any cultivars have been named. Examples include *Trachelium caeruleum* L., *Tacitus bellus* Moran and Meyran, *Pentas lanceolata* (Forsk.) Deflers, *Chrysothemis pulchella* (J. Donn ex Simms) Deene and *Centradenia inaequilateralis* Don. The grouping of species is dynamic and changes rapidly. It does not take long before Group 3 species are relegated to Group 2 plants as breeders select for more ornamental traits within the species. For example, cultivars of *Trachelium* and *Pentas* have now been produced and these species may now be thought to be part of Group 2 plants.

Of course all commercial crops in existence today had their beginnings in Type 3 research.

There is much work being done today on Type 1 research which does not fall into the category of new crops. For example, vigorous programs for clonal evaluation are being conducted on crops such as *Rosa hybrida* Hort. and *Chrysanthemum x morifolium* Ramat, but in my opinion these species no longer can be included as new crops. A discussion of the definition of a new crop invariably leads to heated arguments, but a new crop is, by definition of the word "new", a minor floriculture crop.

New crop research has been going on for as long as there have been consumers who wanted "something different". One of the most significant trends to have occurred in floriculture in the last decade is an appreciation of the importance of this kind of work by research establishments around the world. One of the benefits of this trend is that institutions specifically for new crop research have developed in most major flower producing countries. The evolution of this symposium on new crops is also significant, as it is impossible for any one institution to fully investigate but a small portion of potential species, and the free exchange of ideas in such an open forum can only benefit floriculture as a whole.