Block planting is giving way to the new trend for mixed planting. Noel Kingsbury looks at the new annual and perennial mixtures appearing in public and private spaces.
Noel Kingsbury

Noel Kingsbury discusses mixed planting systems in Planting the Big Picture (with Piet Oudolf), Timber Press, to be published Spring 2013. Noel manages his own garden near Hay on Wye and runs planting design workshops. He is planning a new ‘citizen science’ survey of garden plant performance. www.noelkingsbury.com

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This year’s Chelsea Flower Show clearly illustrated a new trend in planting design – ‘mixed planting’, where individual plant varieties are blended and intermingled. In the past, it was widely believed that ‘blocks’ – multiples of the same variety – created the greatest visual impact.

In Germany, with its strong tradition of perennial growing and (by our standards) generous public funding for research into public horticulture mixed planting has become an established tool for creating colourful, dynamic and ecologically appropriate designs. The concept arose as a way of making planting design cheaper for projects where perennials were wanted.

A formula mix is created, specifying the variety and the number of plants for a sample area, with individual plants being placed at a regular specified planting distance at random. Most mixes are created by research and teaching institutions. Members of the German Perennial Nursery Association (Bund deutscher Staudengärtnner – BdS) then make the plants available. The specifier buys however many hundred square metres of the mix they need.

The idea of applying random mixes to planted combinations was first developed by Walter Korb and Wolfram Kircher, in the 1990s, with the first public plantings of the mix Silbersommer (Silver Summer) being made in 2001. Since then more than 20 Mixed Plantings have been developed at a number of educational and research institutions in Germany and Switzerland. The trademark Perennemix® is used as a marketing umbrella for some of the mixes.

Public planting

The concept is an example of public investment going into the research and development of plantings which ornament and improve the public realm.

Mixes are designed primarily for different habitats, but also for different heights and with different colour schemes. A successful mixed planting is one which can function with relatively little maintenance. Component plants have to be able to co-exist with little input for at least 10 years together, while the survival of individual plants is less important than the survival of the whole. The species chosen are overwhelmingly long-lived and resilient, but a minority of shorter-lived species may also be included in order to create interest in the early years, while longer-lived but slower species establish. These shorter-lived plants may also self-seed, but will find less and less habitat as more permanent components increasingly dominate the habitat. The same will be true of species which spread rapidly through vegetative means, such as runners, but whose short stature renders them vulnerable to overshadowing by taller plants.

Plants are selected and combined on the basis of being ‘structural’, ‘companions’ or ‘ground-cover plants’. As a general rule, the summer-aspect perennial components of the mixtures include 5 to 15% structure plants, 30 to 40% companion plants and at least 50% ground cover. Some bulbs or other geophytes may also be included.

The ‘Integrated Planting System’

Mixes developed at The Zürich University of Applied Sciences in Switzerland (ZHAW), under the name of the Integrated Planting System, include annuals sown after the completion of the perennial planting; such as Eschscholzia californica, which germinate rapidly from seed, to fill gaps between perennials in the first year and may also self-seed for the second year. Short-lived perennials such as Digitalis lutea are a feature of some mixes too – their survival dependent on how much they are out-competed by longer-lived components. The recently developed, Shade Pearl mix even includes a shrub, Dierella sessiflora, which is coppiced every two to three years.

Trials have experimented with a range of spacings. Generally, more open spacings (4-6 plants per m²) have been found to be preferable. Close spacing
Top left: Liatris pycnostachya; top right: Echinacea paradoxa; bottom left: Achillea filipendulina ‘Terracotta’; bottom right: Amorpha canescens
(8-12 plants per m²) results in early intense competition, high rates of loss, and the dominance of spreading species. Gaps may be filled temporarily with annuals or with miniature varieties of Sedum, which can be introduced simply by scattering shoots onto the soil surface.

The proponents of mixed planting suggest that high numbers of species is a good guarantee of the long-term survival of mixed plantings. The Perennemix® mixtures contain between 15 and 19 species, while Silbersommer has 30. While there is evidence from plant ecology that increased species diversity improves the resilience of planting, as losses and gaps are more likely to be filled if there is a wide range of species able to occupy a variety of ecological niches, there is as yet no experimental evidence in designed plantings.

The main task, removing dead material at the end of the year, can be done with heavy-duty machinery.

Mixes I have designed for traffic spaces for woody plants, dry to moist.