

## Plans for a Horticulture Garden at the ISU Horticulture Research Station

### RFR-A1514

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In recognition of the Horticulture Research Station's 50<sup>th</sup> anniversary in 2017, a demonstration garden will be developed that highlights cultivars developed by the ISU Department of Horticulture. This garden will be known as the Horticulture Garden (Figure 1). The design and installation is intended to tie together the use of sustainable plants and management practices. The Horticulture Garden will be available for teaching and demonstration of sustainable practices for student classes, interns, tours, and field days.

*Garden Objectives.* The first objective of the Horticulture Garden is to display ornamental and food crops that are sustainable in the Iowa climate. To accomplish this, a historical collection of plants that were developed by ISU staff will be included (Table 1). This collection was chosen because the focus of ISU breeding research in horticulture was to develop plants that thrive in the Iowa climate with minimal inputs. This collection will include some of the earliest varieties such as the Ames Rose, *Rosa rugosa*, developed by Professor Joseph Budd in the 1800s, and the latest varieties like September Sun Alder, *Alnus maritima* released by Dr. William Graves in 2004. Also included will be varieties still in development such as Eastern Leatherwood, *Dirca palustris* and *Viburnum rufidulum*. In addition, new sustainable industry releases whose parentage came from breeding work at ISU will be included such as Knockout rose, *Rosa hybrid*. In addition to historical plant collections, herbaceous perennials used by a horticulture class will be included. Chosen for their sustainability, both native and cultivated varieties are a part of this

collection. Another native collection has been included to demonstrate its usefulness for insect habitat. ISU Research Farms are developing habitat to help the monarch butterfly, whose populations have declined significantly over the last two decades. This sustainable collection will demonstrate native milkweed species that the monarch uses in the egg laying through chrysalis life stages.

The second objective is to utilize and demonstrate sustainable maintenance practices. These practices include the use of wood mulch to reduce the need for supplemental irrigation and reduce weed populations. Drip irrigation will be used in planting beds to reduce the overall amount of water applied to the site. Turf areas will utilize sustainable practices also. Drought resistant turf type Tall Fescue will be seeded and organic fertilizers and pesticides like corn gluten meal (another sustainable practice development by the Department of Horticulture) will be used.

The third objective is to provide an enjoyable experience for the visitor through good design. The garden design will lead the patron through the space engaging them with color, texture, fragrance, and form. It also will be a relaxing and welcoming experience that generates excitement about what is being felt and learned.

The final objective is to provide learning opportunities for ISU students, the public, and industry representatives. Students in plant identification and landscape installation/maintenance courses will be able to use the garden. A landscape maintenance internship opportunity will be developed. The garden will be available for public tours and industry field days. With the eventual

inclusion of interpretative signage, large open lawn areas will be available to set up tents for events/field days and visitors will be able to walk the garden and learn about the sustainable practices in use.

With the development of the Horticulture Garden, a useful teaching tool for student classes, interns, and the landscape industry will be created. Its use of sustainable plants and management practices in a beautiful setting will provide a unique and enjoyable way to demonstrate sustainability.

**Table 1. Horticulture garden partial plant list with ISU connections.**

<b>Scientific name</b>	<b>Cultivar</b>	<b>Common name</b>	<b>ISU plant breeder</b>
<b>Roses</b>			
Rosa species	Carefree Beauty		Buck
Rosa species	Apple Jack		Buck
Rosa species	April Moon		Buck
Rosa species	Aunt Honey		Buck
Rosa rugosa	Ames		Budd
Rosa species	Pink Knockout		Derived from Buck roses
Rosa species	Rainbow Knockout		Derived from Buck roses
Rosa species	Earth Song		Buck
Rosa species	Honeysweet		Buck
Rosa species	Prairie Sunrise		Buck
Rosa species	Pearlie Mae		Buck
Rosa species	Prairie Flower		Buck
Rosa species	Summer Wind		Buck
<b>Shrubs</b>			
Viburnum rufidulum			Iles
Forsythia x intermedia	Sunrise	Sunrise Forsythia	Weigle
Alnus maritima	September Sun	September Sun Seaside Alder	Graves
Weigela florida	Pink Princess	Pink Princess Weigela	Weigle
Weigela florida	Red Prince	Red Prince Weigela	Weigle
Weigela florida	White Knight	White Knight Weigela	Weigle
Dirca palustris		Eastern Leatherwood	Graves
<b>Small fruits</b>			
Rubus occidentalis	Black Hawk	Black Hawk raspberry	Denison
Rubus occidentalis	Liberty	Liberty raspberry	Denison
Fragaria ananassa	Cyclone	Cyclone strawberry	Denison
Fragaria ananassa	Dunlap	Dunlap strawberry	Denison
Fragaria ananassa	Sparkle	Sparkle strawberry	Denison
Fragaria ananassa	Robinson	Robinson strawberry	Denison
Fragaria ananassa	Ozark	Ozark Beauty strawberry	Denison

Scientific name	Cultivar	Common name	ISU plant breeder
<b>Tree fruits</b>			
<i>Malus domestica</i>	Chieftain	Chieftain apple	Beach
<i>Malus domestica</i>	Secor	Secor apple	Beach
<i>Malus domestica</i>	Red Sharon	Red Sharon apple	Beach
<i>Malus domestica</i>	Joan	Joan apple	Beach
<i>Malus domestica</i>	Jonadel	Jon-A-Del apple	Beach
<i>Malus domestica</i>	Domoto	Domoto walnut	Domoto
<b>Vegetable</b>			
<i>Citrullus lanatus</i>	Crimson Beauty	Crimson Beauty watermelon	Hall
<i>Citrullus lanatus</i>	Crimson sweet	Crimson sweet watermelon	Hall
<i>Cucumis melo</i>	Burpee	Burpee muskmelon	Hall
<i>Cucumis melo</i>	Harper	Harper muskmelon	Hall
<i>Cucumis melo</i>	Saticoy	Saticoy muskmelon	Hall
<b>Buck geraniums</b>			
<i>Pelargonium hortorum</i>	Sunbelt Coral	Sunbelt Coral geranium	Buck
<i>Pelargonium hortorum</i>	Sunbelt Hot Pink	Sunbelt Hot Pink geranium	Buck
<i>Pelargonium hortorum</i>	Sunbelt Rose	Sunbelt Rose geranium	Buck
<i>Pelargonium hortorum</i>	Sunbelt Salmon	Sunbelt Salmon geranium	Buck
<i>Pelargonium hortorum</i>	Pink Jade	Pink Jade geranium	Buck
<i>Pelargonium hortorum</i>	Galaxy	Galaxie geranium	Buck
<i>Pelargonium hortorum</i>	Hawkeye	Hawkeye geranium	Buck
<i>Pelargonium hortorum</i>	ISU	ISU geranium	Buck
<i>Pelargonium hortorum</i>	Skylark	Skylark geranium	Buck
<i>Pelargonium hortorum</i>	Summertime	Summertime geranium	Buck
<i>Pelargonium hortorum</i>	Sunbelt Scarlet	Sunbelt Scarlet geranium	Buck
<i>Pelargonium hortorum</i>	Toreador	Toreador geranium	Buck
<i>Pelargonium hortorum</i>	Waltz Time	Waltz Time geranium	Buck
<i>Pelargonium hortorum</i>	Skylark	Skylark geranium	Buck



Figure 1. A schematic of the planned Horticulture Garden at the ISU Horticulture Station