Warm Season Annuals

Plant List 9 HORT 308 Spring 2019

Assigned Readings
for Plant List 9

Read the pages in your textbook associated with the family descriptions and individual taxa covered on Plant List 9 that was distributed in lab. These plant lists are also available on the course website.

http://aggie-horticulture.tamu.edu/syllabi/308/home/frameset.htm

Warm Season Annuals

– Adapted to the peak of summer’s heat
– Many languish or stunt in cool weather
– Not necessarily drought or sun tolerant
– Some tropical perennials or woody plants are used as summer annuals in cooler regions
  • Definition of annuals is regionally dependent
  • Old-fashioned practice enjoying a resurgence of popularity

Warm Season Annuals

– Be bold
  • Emotional / time commitment is short term
  • Limited expense
  • Opportunity for change / something new
– Watch for short life cycles & invasive potentials
– Great potential to augment pollinator support
Timing sowing / transplant for fall displays

- Native S. Texas woody subshrub used as an annual in cooler climates
- Source of most commercial edible pepper cultivars
- Tolerates sun or partial shade, more fruit in sun
- Tolerant of variable soil pH

*Capsicum annuum*
Ornamental Pepper

- Caution can easily be confused with poisonous relatives

*C. annuum var. glabriusculum*

- Heat, but not particularly drought tolerant
- Fruit are primary asset, variegated foliage on some cultivars
- Sap from fruit and foliage can be an irritant

*C. annuum var. glabriusculum*

- Major economic crop
- Great for design element for edible landscapes

*Capsicum annuum*
Ornamental Pepper
Summer Annuals For Foliage

Caladium bicolor
Caladium

• Tropical perennial used as summer annual
• Valued for large variegated heart-shaped leaves
  - Smaller version of elephant ear with variegation
  - Green, red, pink, white leaves, flower insignificant
• Upright 1’ - 2’ leaf stalks from tuber

Caladium bicolor
Caladium

• Needs rich moist organic soil, fertility, and shade
• Fade and / or foliar burn in sun; slugs can be a problem
• Shade massing & borders, tropical groundcover, patio pots / containers, interiorscaping (high light only)
• Buy established plants, very slow to grow from tubers

Harmonious color combinations, nice blending of textural contrasts, and interesting use of forms
**Solenostemon scutellarioides**
*(Coleus × hybridus)*
- Tropical USDA z. 10-13 perennial treated as a summer annual
- Excellent shade color plants, 1'- 3'
- Grown for variegated foliage
  - Green, red, yellow, pink, bronze, white, ruffled, multi-tone

**Solenostemon scutellarioides**
*Coleus*
- Flowers are usually a detraction
- Majority of cultivars in shade, a few for sun in Texas
  - Ex. ‘Burgundy Sun’ & ‘Plum Parfait’
- Heat but not drought tolerant, some insect problems
- Massing, containers, baskets, interiorscapes

**Senecio cineraria**
*Dusty Miller*
- Perennial, USDA z.9 (8) - 13, subshrub grown as a spring / transition / cool or warm season annual
- Grown for silver-gray to silver-white foliage
- Subshrub to 3’ tall, mostly 6” to 12” rosette
- Blooms signal end of useful life as an annual

**Senecio cineraria**
*Dusty Miller*
- Survives drought, but best in moist well drained soil
- Root rots in wet soil and high humidity, scraggly in summer of second year, shrub-like in USDA z. 9-13
**Summer Annuals For Bedding/Massing in Shade**

- **Begonia semperflorens-cultorum**
  - **Waxleaf Begonia**
  - USDA z. 9b-13 perennial used as summer annual
  - Mostly squat 6” to 12” tight mounds of foliage
    - Foliage thick & waxy, glossy, green to bronze-red
    - White, pink, or red single or double flowers
    - Flowers tend to be partly hidden by foliage
  - Full sun to medium shade, cultivar dependent
  - Reduce soil splashing to avoid bacterial rots; do not shear
  - Bedding, edging, hanging baskets, containers, interiorscaping

**Begonia spp. Other Begonias**

- Mostly useful in interiorscapes or shaded containers/hanging baskets
**Impatiens wallerana**

**Impatiens**
- Tropical USDA zone 10-13 perennial treated as summer annual
- Good annuals for summer flower color in shaded locations, mounding 6” to 2’ tall plants; colorful pillow of singles/doubles

**Impatiens wallerana**

**Impatiens**
- Melt in Texas sun, sun acceptable in north
- Require constant moist but well drained soils
- Can be used as indicator plants for drought
- Recent problems with viruses

**Impatiens × ‘New Guinea Hybrids’**

**New Guinea Hybrid Impatiens**
- Good substitutes for *I. wallerana* in regions with milder summers
- Usually poor performer in Texas summer
- Darker glossier leaf & variegated forms
- Wider flower color range than *I. wallerana*

**Summer Annuals For Bedding/Massing in Sun**
**Catharanthus roseus**

**Vinca or Periwinkle**
- Subtropical used as summer annual
- 1’ to 2’ mound of dark glossy green foliage
- Season long 1” diameter white, pink, lavender, purple flowers

**Catharanthus roseus**

**Vinca or Periwinkle**
- Best in moist well drained organic matter soils, full sun to part shade, **DO NOT PLANT EARLY** (after June 1)
- Aerial Phytophthora is a major limitation; can be weedy
- Bedding, massing, annual groundcover, patio containers, window boxes, hanging baskets

**Evolvulus glomeratus subsp. grandiflorus**

**Blue Daze**
- Tropical used as summer annual
- Flat mound, 2’ - 3’ wide x 4”- 8” tall
- Frosted green - blue-green foliage
- Sky blue to purple-blue 1” flowers
  - Spring to frost, profuse in summer heat, reduced in shade
- Very heat tolerant, moderate salt, & high pH tolerance, but not overly drought tolerant
- Survives full sun, but best with light afternoon shade
- Edging, bedding, tropical or summer groundcover, containers, hanging baskets

*Aerial Phytophthora on Catharanthus roseus*

*Courtesy of Dr. Larry Barnes, formerly Texas A&M AgriLife Extension*
**Gazania rigens**

- **Gazania**
  - Clump-forming evergreen perennial [USDA z.9 (8b) - 13] or season-long annual in cooler zones
  - Dark lustrous green leaves above, silver beneath or allover, basal rosette with flower stalks above foliage to 6” to 8” tall
  - Striking nearly iridescent 2” to 3” diameter composite heads
    - Rays pinwheel-like; single, bi-, or tri-colored
    - Wide color range; nearly year-round bloom

- **Plant on close spacings for full effect; full sun to partial shade in nearly any well drained soil**
- **Heat, drought, sun, and wind tolerant**
- **Edging, bedding, containers, high light conservatories; rock gardens; xeriscapes**
- **Gazania rigens var. uniflora**, Trailing Gazania, is vine-like groundcover form with silver foliage & yellow flowers; less cold hardy; USDA z. 9a (9b) - 13

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**Do We Really Want A Focal Point Here?**

**Helenium amarum**

- Bitterweed
  - Native wildflower to Eastern & Central U.S., including Texas
  - Light airy filamentous foliage with small yellow daisies from spring to fall
  - Form variable; wild types more upright and open at base, especially in competition
    - ‘Dakota Gold’ is a short spreader developed from TAMU genotypes
Helenium amarum  
Bitterweed

- Tolerates heat, drought, wind, some salt exposure, and poor fertility soils
- Can be sheared or mown; low maintenance bedding and naturalizing
- Needs a well drained soil, but clay is acceptable
- Root and crown rots in wet soils
- Agromyzid flies bore into stems in late summer

Gomphrena globosa  
Globe Amaranth

- Summer annual
  - 1' to 2' (3') tall rounded to sprawling mound
- Globe shaped flower elongating to tubular
  - White, purple, or pink
  - Very long bloom time, good cut or dried flower
  - Peak in late summer heat

Gomphrena haageana  
Red Gomphrena

- Very similar to G. globosa, but lankier, sprawling & open in habit
- Flowers red to orange, elongating cone-shape
- Similar tough mid- to late-season bloom
**Gomphrena ‘Fireworks’**
Fireworks Amaranth

Too well adapted?

**Pentas lanceolata**

- Evergreen subtropical / tropical shrub (USDA zones 9b-13) most often used as a summer annual
- Variable in habit; older cultivars upright and leggy to 3’ or more; newer dwarf cultivars compact & 8”-18”
- Dark green leaves contrast with terminal corymbs of star-shaped flowers
- Bright lip-stick red, pink, lilac, or white

**Pentas**

- Aphids, white flies, spider mites, root rots
- Cultivar performance is highly variable even within a series
- Good fertile well drained soil and mostly sunny site; bit temperamental

**Rose Moss or Moss Rose**
Portulaca grandiflora

- Reseeding summer annual, 6” - 10” tall
- Succulent-like foliage, adds xeric flavor
- Rainbow of solid, bicolors, single, & double flowers, most close in afternoon
- One of our best summer annuals; any well drained soil, tolerant of salt, heat, drought, high pH soils, full sun
- Bedding, rock gardens, containers, edging, hanging baskets, seasonal groundcover
**Portulaca oleracea**

**Purslane**
- Similar usage and growth requirements to *Portulaca grandiflora*, but less refined
- Flowers can be more striking than *P. grandiflora*, but tends to be weedier and coarser; tropical groundcover
- 8” mat, denser than *P. grandiflora*
- Widely used in tropics, good for summer color

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**Zinnia angustifolia**

**Mexican Zinnia**
- Single orange to white daisy-like flowers, 8”-12” tall
- Very heat and mildly drought tolerant, better if grown in less humid climates

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**Hybrids of Z. angustifolia x Z. elegans**

(Zinnia x marylandica) are variable in performance

Initially marketed as Profusion Series names, now others like Zahara series are available

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**Summer Annuals For Height or Cut Flowers**
**Helianthus annuus**  
**Common Sunflower**
- Classic old-fashioned summer annual
- Grown for landscape, floral ornament or commercial seed production, edible seeds, wildlife food
- Tend to bloom themselves to death & very coarse
- New varieties from 2' to 10' tall, flowers with more & showier ray flowers in yellow, orange, red, & maroon are available
- Plant in succession

**Tithonia rotundifolia**  
**Mexican Sunflower**
- Coarse textured annual with yellow, yellow-orange, to red-orange composite flowers
- Species type and older selections 4' to 6' tall, newer compact dwarf forms only about 2' tall
- Seldom last all summer in our area, tending to bloom themselves out by mid-summer
- Successive sowings are possible

**Tithonia rotundifolia**  
**Mexican Sunflower**
- Nearly any sunny site with well drained soils
- Cold intolerant; prone to white fly, aphid, and slug damage during production
- Seasonal accent; children’s gardens; cut flowers (sear base at cutting); butterfly & hummingbird gardens

**Rudbeckia hirta var. pulcherrima**  
**Black-Eyed Susan**
- A short-lived herbaceous perennials, USDA zones 5 (4) - 9, often grown regionally as annuals
- Winter or early season rosettes becoming mounds of erect stems with terminal daisy-like flowers
- Typically yellow ray flowers surrounding dark brown disk flowers; newer selections & hybrids may have yellow disks
**Rudbeckia hirta var. pulcherrima**
Black-Eyed Susan
- Gets powdery mildew in heat & humidity
- Most any moderately well drained soil; full sun to part shade; irrigation and deadheading will prolong bloom
- Texas native; perennial & annual borders; massing; naturalizing, wildflower mixes, cut flowers

**Ricinus communis**
Castor Bean
- Handsomely coarse textured tropical shrub / small tree used as an old-fashioned summer annual elsewhere
- Green to bronze foliage; lushly tropical appearance & rapid growth
- Spikes of pink to red flowers

**Ricinus communis**
Castor Bean
- Locate where children will not access, highly poisonous
- Restricted in some locations
- Source of the toxin ricin and commercial castor oil
- Grows in most any sunny location; responds vigorously to irrigation and fertilization

**Senna alata** (formerly *Cassia alata*)
Candlestick Tree
- Small tropical tree, USDA z. 10(9) - 13, often used as a summer annual
- Boldness is key: size, flowers, foliage
- Dark rich dense rounded canopy
- Rapid growth to 6’ or 8’ tall from seed
- Off-season late summer/early fall bloom
- Spectacular golden yellow candles
- Grows in almost any sunny location