



**The University of Georgia**  
College of Agricultural & Environmental Sciences

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**Learning  
for  
Life**

<http://www.caes.uga.edu/extension/>

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The University of Georgia  
**Master Gardener**  
College of Agricultural & Environmental Sciences  
and Cooperative Extension Service

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# Part 1: Annuals For Georgia Gardens



Paul A. Thomas and Bodie V. Pennisi  
The University of Georgia  
College of Agricultural and Environmental Sciences  
Department of Horticulture



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## Learning Objectives

- Lifecycles of annuals, perennials & biennials
- Annuals - cultural requirements
- Annuals- bed layout and planning & planting techniques for
- Annuals- fertilization and maintenance & weed control

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## Learning Objectives

- Common annuals & benefits in container gardening
- Qualities of perennials
- Perennials- cultural requirements of, bed layout and planning considerations.
- Perennials basic planting techniques for & division
- Perennials- fertilization, maintenance, and weed control

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## Terms To Review

**Annual:** A plant which completes its life cycle in less than one year. Annuals, as a group, are unable to withstand both summer's heat and winter's cold.

**Late Summer Annual:** A plant which is vegetative early and mid-summer and finally blooms in late summer only.

**Tender Perennial:** An annual which happens to over-winter. This definition is very weather dependent. Some tender perennials are annuals 7 out of 10 years!

**Perennial:** A plant which completes its life cycle in two or more years and can withstand summer and winter conditions.

**Biennial:** A plant which usually completes its life cycle within two years.

**Deer Tolerant:** A plant usually not preferred by deer.

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## Terms To Review

**Dead-heading:** Removal of spent flowers before seed develops.

**Random Seeding:** Seeds broadcast in fall or spring without pattern.

**Drought Tolerant:** Plant recovers (grows/blooms) after prolonged drought.

**Fertility: Heavy** 3-4 applications : 1 lb of 10-10-10/100 sq. ft. / season.

**Moderate** 2 applications : 1 lb 10-10-10/100 sq. ft. / season,  
i.e. one at transplant and one mid-season.

**Low** 1 application : 1 lb 10-10-10/100 sq. ft. at transplant  
or in early spring before growth resumes.

**Pinch at Transplant:** Removal of top ¼ inch (including flowers) of the terminal growth to promote branching.

**Inconspicuous Bloom:** Blooms not seen, very small or unimportant.

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## Installing Annuals



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## The Perfect Plant?



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## FACT



80% of plant problems result from the inability of the plant to tolerate or adapt to the local environment!

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## Selecting The Proper Annuals

Know their final size.

Know their height.

Know their pH and fertility requirements.

Know their watering requirements.

Know their bloom period.

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### Evaluate The Old Planting



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### Remove Old Plant Materials



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### Remove Old Mulch Materials

Old mulch is less functional due to decomposition.

Removing the old material can reduce disease

Old mulch material can be used in a compost pile



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## Add Compost / Organic Matter And Amendments



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## Dig In Or Till Thoroughly At Least 12" Deep!



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## Plant Spacing

Distance Between Plants	Number of Plants Per 100 Sq. Ft.
6 Inch spacing	400
8 Inch spacing	227
10 Inch spacing	143
12 Inch spacing	70

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## Make Sure The Hole Is Larger Than The Root System.



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## Use Care When Handling Plants

Try not to handle roots

Plant at the same level as the root system of the individual plant

Do not leave root balls exposed as they may later wick water.

Do not crush or press into the ground!



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## Step Away From The Planting



Be sure to check overall uniformity and spacing consistency.

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## How Much Mulch To Apply?

3 to 5 inches is sufficient in gardens!

One bale of pine straw covers 50 – 80 sq. ft., depending on the bale size

Nine, 3 cu. ft. bags of pine bark mulch will cover 100 sq. ft. to a 3-inch depth

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## Irrigate & Fertilize!



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## Fertilization

- Fertilizers only last so long!
- Plants growing in shade require more fertilizer than those in sun, due to competition from tree roots
- Plants growing in sandy soils require more frequent fertilization than those in clay soil due to leaching.
- Rainfall dramatically affects fertility levels in long-term gardens!
- Some plants like low fertility!

**An average recommendation is 1 lb granular 10-10-10 per 100 sq ft. Be sure to test soil first!**

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## Cold Weather Starvation

Symptoms:

- Leaf Purpling
- Few Flowers
- Chlorotic Centers



Viola Starvation

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## Warm Weather Starvation

Symptoms:

- Chlorosis
- Cupped leaves
- Strap Leaves
- Very Slow Growth
- Very Poor Roots



Pansy starvation

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## Over - Fertilization

Symptoms:

- Marginal Chlorosis
- Entire Leaf Yellowing
- Basal Leaf Yellowing
- No New Blooms
- Necrosis / Death
- Root Damage



Overdose of a common fertilizer

Leach with water!

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## The Finished Product!



Macon Master Gardeners Visiting UGA

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## Annuals For Summer Sun



Annual Open House at the UGA Trial Gardens

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## Cockscomb

**Characteristics**  
Drought tolerant  
15 – 30 inches tall

**Location:**  
Full sun bedding

**Plant Spacing:**  
6 inch centers

**Care and Feeding:**  
Moderate fertility

**Bloom Period:**  
May – November

**Culture Concerns:**  
Deadhead first  
flowers and/or  
pinch at transplant  
for bushy growth



*Celosia cristata*

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**Characteristics:**  
 Nectar source  
 Drought tolerant  
 Very floriferous  
 18-24 inches tall

**Location:**  
 Full sun bedding

**Plant Spacing:**  
 8 to 10-inch centers

**Care and Feeding:**  
 Low fertility,  
 Nitrate fertilizer  
 Deer tolerant

**Bloom Period:**  
 June – August

**Culture Concerns:**  
 Keep foliage dry  
 Avoid overhead watering

**Vinca**



*Catharanthus roseus*

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**Moss Verbena**

**Characteristics:**  
 Nectar source  
 Drought tolerant  
 Groundcover  
 4 – 6 inches tall

**Location:**  
 Full sun-bedding  
 Hanging baskets

**Plant Spacing:**  
 8 inch centers

**Care and Feeding:**  
 Low fertility  
 Deer tolerant

**Bloom Period:**  
 May - December

**Culture Concerns:**  
 Spider mites  
 Well-drained



*Verbena tenuisecta* 'Imagination'

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**Bedding Begonia**

**Characteristics:**  
 Groundcover  
 Floriferous  
 12 to 18 inches tall

**Location:**  
 Full sun to partial shade

**Plant Spacing:**  
 8 to 12-inch centers

**Care and Feeding:**  
 Moderate fertility  
 No drought

**Bloom Period:**  
 May – August

**Culture Concerns:**  
 Fades in drought  
 Botrytis



*Begonia spp.*

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## Spider Flower

**Characteristics:**  
Nectar source  
Drought tolerant  
36 to 54 inches tall

**Location:**  
Full sun bedding

**Plant Spacing:**  
4-inch centers or  
random seeding

**Care and Feeding:**  
Moderate fertility  
Deer tolerant  
Well drained

**Bloom Period:**  
June – September

**Culture Concerns:**  
Reseeds



*Cleome hassleriana*

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## Bush Violet

**Characteristics:**  
Mounding  
12 –25 inches tall

**Location:**  
Full sun bedding  
Patio containers

**Plant Spacing:**  
10- inch centers

**Care and Feeding:**  
Moderate fertility  
No drought

**Bloom Period:**  
June – September

**Culture Concerns:**  
Mites



*Browalia americana*

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## Spike Celosia

**Characteristics:**  
Nectar source  
Drought tolerant  
30 –54 inches tall

**Location:**  
Full sun bedding

**Plant Spacing:**  
4 inch centers

**Care and Feeding:**  
Moderate fertility

**Bloom Period:**  
May – August

**Culture Concerns:**  
Deadhead or pinch  
at transplant for  
bushy plant



*Celosia spicata*

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## Fan Flower

**Characteristics:**  
Groundcover  
10-12 inches tall

**Location:**  
Full sun bedding

**Plant Spacing:**  
6 - 8 inch centers

**Care and Feeding:**  
Heavy fertility  
No drought  
Deer tolerant

**Bloom Period:**  
May - September

**Culture Concerns:**  
Must be kept moist  
Early season pinch



*Scaveola aemula 'New Blue Wonder'*

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## Treasure Flower

**Characteristics:**  
Drought tolerant  
12-18 inches tall

**Location:**  
Full sun bedding

**Plant Spacing:**  
5-7 inch centers

**Care and Feeding:**  
Moderate fertility

**Bloom Period:**  
June - September

**Culture Concerns:**  
Well drained soils



*Gazania splendens*

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## Strawflowers

**Characteristics:**  
Late summer color  
as dried flowers  
24-28 inches tall

**Location:**  
Full sun bedding

**Plant Spacing:**  
8-inch centers

**Care and Feeding:**  
Moderate fertility  
Deer tolerant  
Well drained soils

**Bloom Period:**  
June - August

**Culture Concerns:**  
Cut flowers when  
partially open.



*Helichrysum bracteatum*

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## Bloodflower

- Characteristics:**
  - Nectar source
  - Drought tolerant
  - 48-60 inches tall
- Location:**
  - Full sun bedding
- Plant Spacing:**
  - 4 to 6-inch centers
- Care and Feeding:**
  - Moderate fertility
  - Deer tolerant
- Bloom Period:**
  - June - October
- Culture Concerns:**
  - Aphids
  - Well drained



*Asclepias currisavica*

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## Annual Verbena

- Characteristics:**
  - Floriferous
  - 12-15 inches tall
- Location:**
  - Full sun (Morning)
- Plant Spacing:**
  - 4-inch centers
- Care and Feeding:**
  - Moderate fertility,
  - Heat tolerant
- Bloom Period:**
  - June - August
- Culture Concerns:**
  - Mites
  - Well drained soils
  - Mildew



*Verbena spp.*

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## Marigold

- Characteristics:**
  - Floriferous
  - 12 to 32 inches tall
- Location:**
  - Full sun bedding
- Plant Spacing:**
  - 4-inch centers
- Care and Feeding:**
  - Moderate fertility
  - Deer tolerant
- Bloom Period:**
  - May - October
- Culture Concerns:**
  - Mites / Heat



*Tagetes hybrida*

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## Running Lantana

**Characteristics:**  
Nectar source  
Drought tolerant  
Spreading  
groundcover  
12 – 15 inches tall

**Location:**  
Full sun bedding

**Plant Spacing:**  
24 - inch centers

**Care and Feeding:**  
Moderate fertility  
Deer tolerant

**Bloom Period:**  
May – October

**Culture Concerns:**  
Well drained soils  
White flies



*Lantana montevidensis*

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## Mounding Lantana

**Characteristics:**  
Nectar source  
Drought tolerant  
18 – 60 inches tall

**Location:**  
Full sun bedding

**Plant Spacing:**  
1 to 2 foot centers

**Care and Feeding:**  
Moderate fertility  
Deer tolerant

**Bloom Period:**  
June – October

**Culture Concerns:**  
Mildew / Whiteflies  
Well drained soils



*Lantana camara*

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## Mexican Heather

**Characteristics:**  
Nectar source  
15 – 18 inches tall

**Location:**  
Full sun or  
partial shade

**Plant Spacing:**  
12-Inch centers

**Care and Feeding:**  
Moderate fertility  
Heat tolerant

**Bloom Period:**  
June – October

**Culture Concerns:**  
Constant fertility



*Cuphea hyssopifolia*

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## Blackeyed Susans

**Characteristics:**  
Nectar source  
Drought tolerant  
18 – 28 inches tall

**Location:**  
Full sun bedding

**Plant Spacing:**  
6 to 8 inch centers

**Care and Feeding:**  
Moderate fertility,  
Heat tolerant

**Bloom Period:**  
June – August

**Culture Concerns:**  
Deadheading  
Mildew



*Rudbeckia hirta*

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## Throatwort

**Characteristics:**  
Nectar source  
24 – 48 inches tall

**Location:**  
Full sun bedding

**Plant Spacing:**  
6 to 8-inch centers

**Care and Feeding:**  
Moderate fertility,  
No drought!

**Bloom Period:**  
June – September

**Culture Concerns:**  
Mildew  
Well drained soils  
Must not dry out



*Trachelium caeruleum*

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## Mexican Sunflower

**Characteristics:**  
Nectar source  
Drought tolerant  
Late blooming  
36 -78 inches tall

**Location:**  
Full sun bedding

**Plant Spacing:**  
2-foot centers

**Care and Feeding:**  
Moderate fertility  
Deer tolerant

**Bloom Period:**  
July - November

**Culture Concerns:**  
Can get huge!  
Mildew



*Tithonia rotundifolia* 'The Torch'

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## Bedding Petunias

- Characteristics:**
  - Floriferous
  - 12 - 24 inches tall
  - Spring, fall color
- Location:**
  - Full sun bedding
- Plant Spacing:**
  - 6 - 8 inch centers
- Care and Feeding:**
  - Moderate fertility
  - No drought
- Bloom Period:**
  - April - December
- Culture Concerns:**
  - Mid-summer trimming is required



*Petunia hybrida*

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## Cascading Petunias

- Characteristics:**
  - Hanging baskets
  - 6 - 10 inches tall
  - 3 - 4 foot cascades
- Location:**
  - Full sun bedding
- Plant Spacing:**
  - 6 to 9-inch centers
- Care and Feeding:**
  - Heavy fertility,
  - No drought
- Bloom Period:**
  - May - November
- Culture Concerns:**
  - Summer trimming



*Petunia hybrida* 'Cascadia'

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## SuperPetunia

- Characteristics:**
  - Groundcover
  - 8-12 inches tall
- Location:**
  - Full sun
- Plant Spacing:**
  - 24-inch centers
- Care and Feeding:**
  - Heavy fertility,
  - No drought
- Bloom Period:**
  - June - October
- Culture Concerns:**
  - Rampant spreader



*Petunia* 'Purple Wave'

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## Purslane Portulaca

**Characteristics:**  
Groundcover  
6 - 12 inches tall

**Location:**  
Full sun bedding

**Plant Spacing:**  
8-inch centers

**Care and Feeding:**  
Moderate fertility

**Bloom Period:**  
June - August

**Culture Concerns:**  
Well drained  
Flowers close by  
4:00 pm



*Portulaca grandiflora*

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## Ornamental Sweet Potato

**Characteristics:**  
Groundcover  
12 - 15 inches tall

**Location:**  
Full sun

**Plant Spacing:**  
2 foot centers

**Care and Feeding:**  
Moderate fertility  
No drought

**Bloom Period:**  
Inconspicuous

**Culture Concerns:**  
Chewing insects  
Rampant growth



*Ipomea batatas* 'Marguerite'  
& 'Blackie'

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## Globe Flower

**Characteristics:**  
Drought tolerant  
15 - 48 inches tall  
Good dried flower

**Location:**  
Full sun bedding

**Plant Spacing:**  
8-inch centers

**Care and Feeding:**  
Low fertility  
Deer tolerant

**Bloom Period:**  
June - August

**Culture Concerns:**  
Mildew  
Well drained  
Pinch at transplant



*Gompherena globosa*

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## Pentas

**Characteristics:**  
Nectar source  
15-28 inches tall

**Location:**  
Full sun bedding

**Plant Spacing:**  
8-inch centers

**Care and Feeding:**  
Moderate fertility  
No drought

**Bloom Period:**  
June - October

**Culture Concerns:**  
Mildew  
White Flies



*Pentas lanceolata*

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## Geraniums

**Characteristics:**  
Container plant  
18 - 24 inches tall

**Location:**  
Full sun bedding

**Plant Spacing:**  
8 to 10-inch centers

**Care and Feeding:**  
Heavy fertility

**Bloom Period:**  
April - November

**Culture Concerns:**  
Mealy bugs  
Mildew  
Deadheading  
Declines in heat



*Pelargonium hortorum*

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## Four O' Clocks

**Characteristics:**  
Nectar source  
Drought tolerant  
18 - 54 inches tall

**Location:**  
Full sun bedding

**Plant Spacing:**  
24-inch centers

**Care and Feeding:**  
Moderate fertility  
Pinching early  
Early staking

**Bloom Period:**  
June - September

**Culture Concerns:**  
Shrub-like  
Reseeds



*Mirabilis jalapa*

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## Ornamental Tobacco

**Characteristics:**  
Nectar source

**Location:**  
Full sun bedding

**Plant Spacing:**  
6-inch centers

**Care and Feeding:**  
Heavy fertility

**Bloom Period:**  
June – September

**Culture Concerns:**  
Well drained soils  
Declines in drought



*Nicotiana glauca*

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## Creeping Zinnia

**Characteristics:**  
Nectar source  
Drought tolerant  
12 – 20 inches tall  
Cascading

**Location:**  
Full sun bedding

**Plant Spacing:**  
8 to 10-inch centers

**Care and Feeding:**  
Moderate fertility

**Bloom Period:**  
June – October

**Culture Concerns:**  
Mildew  
Well drained



*Zinnia angustifolia*

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## Sunflower

**Characteristics:**  
Nectar source  
Specimen / Border  
Drought tolerant  
4- 8 feet tall

**Location:**  
Full sun bedding

**Plant Spacing:**  
24-inch centers

**Care and Feeding:**  
Moderate fertility

**Bloom Period:**  
June – August

**Culture Concerns:**  
Hugel Staking  
Mildew



*Helianthus annuus*

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## Scarlet Sage

**Characteristics:**  
Nectar source  
18 - 24 inches tall

**Location:**  
Full sun bedding

**Plant Spacing:**  
6 to 8 inch centers

**Care and Feeding:**  
Heavy fertility  
No drought

**Bloom Period:**  
June - August

**Culture Concerns:**  
Defoliates in drought



*Salvia splendens*



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## Bedding Lobelia

**Characteristics:**  
Hanging baskets  
Early spring color  
Mounding habit  
15 - 24 inches tall

**Location:**  
Full / part sun

**Plant Spacing:**  
6-inch centers

**Care and Feeding:**  
Moderate fertility  
Cool, moist soils  
No drought

**Bloom Period:**  
March-May

**Culture Concerns:**  
Well drained



*Lobelia erinus*

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## California Poppy

**Characteristics:**  
Early spring color  
12 - 20 inches tall

**Location:**  
Full sun bedding

**Plant Spacing:**  
4-inch centers  
Random seeding

**Care and Feeding:**  
Moderate fertility  
No drought

**Bloom Period:**  
March - May

**Culture Concerns:**  
Well drained



*Eschscholzia californica*

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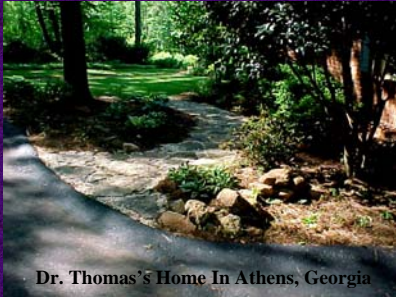
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## Annuals For Shady Location



Dr. Thomas's Home In Athens, Georgia

Imagine What Shade-Tolerant Annuals Could Do For This Site!

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## Impatiens

**Characteristics:**  
Nectar source  
Floriferous  
18 - 24 inches tall

**Location:**  
Full shade  
Partial shade

**Plant Spacing:**  
8 to 12-inch centers

**Care and Feeding:**  
Moderate fertility  
No drought

**Bloom Period:**  
June - August

**Culture Concerns:**  
High organic soils best



*Impatiens walleriana*

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## Double Impatiens

**Characteristics:**  
Nectar source  
High color density  
18 - 24 inches tall  
Hanging baskets

**Location:**  
Full shade  
Partial shade

**Plant Spacing:**  
8 to 12-inch centers

**Care and Feeding:**  
Moderate fertility  
No drought

**Bloom Period:**  
June - August

**Culture Concerns:**  
High organic soils best



*Impatiens walleriana*

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## New Guinea Impatiens

**Characteristics:**  
Nectar source  
14-28 inches tall

**Location:**  
Partial shade

**Plant Spacing:**  
12- inch centers

**Care and Feeding:**  
Heavy fertility  
No drought  
Organic soils

**Bloom Period:**  
June – August

**Culture Concerns:**  
Botrytis  
Absolutely must be kept moist.



*Impatiens hawkeri*

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## Floss Flower

**Characteristics:**  
Nectar source  
12-15 inches tall,  
12 inches wide.

**Location:**  
Full - part shade

**Plant Spacing:**  
4 to 8-inch centers

**Care and Feeding:**  
Moderate fertility  
No drought

**Bloom Period:**  
June – October

**Culture Concerns:**  
Bleaches in sun  
Botrytis



*Ageratum houstonianum*

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## Caladium

**Characteristics:**  
Colorful foliage  
28 – 36 inches tall

**Location:**  
Full / part shade

**Plant Spacing:**  
6 to 8-inch centers

**Care and Feeding:**  
Heavy fertility  
No drought

**Bloom Period:**  
Inconspicuous

**Culture Concerns:**  
Well drained  
Dig tubers in fall



*Caladium 'Miss Muffet'*

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## Elephant Ears

**Characteristics:**  
Full/part shade  
Tolerates wet soils  
36 - 78 inches tall

**Location:**  
Full/part shade

**Plant Spacing:**  
24-inch centers

**Care and Feeding:**  
Moderate fertility  
No drought

**Bloom Period:**  
Inconspicuous

**Culture Concerns:**  
Dig tubers in fall



*Alocasia micholitziana* 'Maxkowskii'

70

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## Coleus

**Characteristics:**  
Tolerates wet soils  
24 - 30 inches tall

**Location:**  
Shade/part shade

**Plant Spacing:**  
8 to 10-inch centers

**Care and Feeding:**  
Moderate fertility  
No drought

**Bloom Period:**  
Must deadhead

**Culture Concerns:**  
Pinch at transplant  
Mildew



*Coleus* 'Wizard Mix'

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## Polkadot Plant

**Characteristics:**  
Colorful foliage  
Rapid growth  
12-18 inches tall

**Location:**  
Full shade/sun

**Plant Spacing:**  
8 - inch centers

**Care and Feeding:**  
Moderate fertility  
No drought

**Bloom Period:**  
Inconspicuous

**Culture Concerns:**  
Mealy bugs  
Summer frimming  
Deadheading



*Hypoestes phyllostachya*

71

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## Torenia

**Characteristics:**  
Nectar source  
12 - 24 inches tall

**Location:**  
Partial shade

**Plant Spacing:**  
6-inch centers

**Care and Feeding:**  
Moderate fertility  
No drought

**Bloom Period:**  
June - October

**Culture Concerns:**  
Fades in bright sun



*Torenia fournieri*

73

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## Persian Shield

**Characteristics:**  
Mounding  
24 - 36 inches tall

**Location:**  
Full / part shade

**Plant Spacing:**  
12 - inch centers

**Care and Feeding:**  
Moderate fertility  
No drought

**Bloom Period:**  
Inconspicuous

**Culture Concerns:**  
Mealy bugs  
Fades in bright sun



*Strobilanthes dyerianus*

74

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## Native Impatiens

**Characteristics:**  
Nectar source  
Mounding habit  
36 - 56 inches tall

**Location:**  
Full/part shade

**Plant Spacing:**  
8-inch centers  
Random seeding

**Care and Feeding:**  
Low fertility  
No drought

**Bloom Period:**  
June - July

**Culture Concerns:**  
Reseeds  
Needs moist soil



*Impatiens capensis*

75

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## Annuals for Fall & Early Spring



Dr. Thomas's Deck In Winter Without Annuals

76

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## Alyssum

**Characteristics:**  
Nectar source  
Groundcover  
6 - 10 inches tall

**Location:**  
Full sun/part shade

**Plant Spacing:**  
4-inch centers

**Care and Feeding:**  
Moderate fertility  
No drought

**Bloom Period:**  
Apr.-June, Sept/Oct

**Culture Concerns:**  
Declines in heat if dry



*Lobularia maritima*

77

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## Pansy

**Characteristics:**  
Nectar source  
Frost resistant  
7 - 10 inches tall

**Location:**  
Full sun

**Plant Spacing:**  
4 to 8-inch centers

**Care and Feeding:**  
Moderate fertility  
No drought  
Requires deer protection

**Bloom Period:**  
August-May

**Culture Concerns:**  
Caterpillars



*Viola wittrockiana*

78

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## Violas

**Characteristics:**  
Nectar source  
Frost resistant  
7 – 10 inches tall

**Location:**  
Full sun

**Plant Spacing:**  
4 to 8-inch centers

**Care and Feeding:**  
Moderate fertility  
No drought

**Bloom Period:**  
August-May

**Culture Concerns:**  
Caterpillars



*Viola wittrockiana*

79

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## Flowering Cabbage And Kale

**Characteristics:**  
Foliage color  
15 - 20 inches tall

**Location:**  
Full sun bedding

**Plant Spacing:**  
12 to 15-inch centers

**Care and Feeding:**  
Moderate fertility  
No drought

**Bloom Period:**  
August-November

**Culture Concerns:**  
Summer planting



*Brassica oleracea*

80

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## Snapdragons

**Characteristics:**  
Tall borders  
15 – 48 inches tall

**Location:**  
Full sun

**Plant Spacing:**  
4 to 8-inch centers

**Care and Feeding:**  
Moderate fertility  
No drought

**Bloom Period:**  
Aug-Nov, Apr-May

**Culture Concerns:**  
Staking/Mildew



*Antirrhinum majus*

81

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## Garden Mums

**Characteristics:**  
Temporary color  
15 - 28 inches tall

**Location:**  
Full sun

**Plant Spacing:**  
12 to 16-inch centers

**Care and Feeding:**  
Moderate fertility  
No drought

**Bloom Period:**  
August - October

**Culture Concerns:**  
Plant in tight bud



*Dendranthemum morifolium*

82

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## Annual & Biennial Dianthus

**Characteristics:**  
Nectar source  
12 to 15 inches high

**Location:**  
Full sun

**Plant Spacing:**  
6-inch centers

**Care and Feeding:**  
Heavy fertility  
No drought  
Well drained

**Bloom Period:**  
June - August

**Culture Concerns:**  
Trim to shape in  
spring of 2<sup>nd</sup> year



*Dianthus barbatus* 'Telstar Series

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## Annual Vines



84

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## Passion Vine

**Characteristics**  
Trellis/groundcover  
Good nectar source

**Location:**  
Full sun

**Plant Spacing:**  
12-inch centers

**Care and Feeding:**  
Heavy fertility  
No drought

**Bloom Period:**  
June – October

**Culture Concerns:**  
Sterile/not invasive  
Caterpillars?



*Passiflora 'Byron's Beauty'*

85

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## Cardinal Climber

**Characteristics**  
Nectar source  
Drought tolerant  
Trellis vine

**Location:**  
Full sun

**Plant Spacing:**  
4-inch centers

**Care and Feeding:**  
Moderate fertility

**Bloom Period:**  
June – August

**Culture Concerns:**  
Mildew & mites  
Reseeding



*Ipomoea sloteri*

86

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## Cypress Vine

**Characteristics:**  
Nectar source  
Trellis vine

**Location:**  
Full sun

**Plant Size:**  
20 to 30 foot vines by  
end of summer.

**Care and Feeding:**  
Moderate fertility

**Bloom Period:**  
June – November

**Culture Concerns:**  
Mildew  
Reseeds



*Ipomoea quamoclit*

87

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## Morning Glory

- Characteristics:**  
Trellis vine  
20-30 feet by end  
of summer season
- Location:**  
Full sun
- Plant Spacing:**  
2-4 inches
- Care and Feeding:**  
Moderate fertility
- Bloom Period:**  
July – September
- Culture Concerns:**  
Reseeds



*Ipomoea tricolor*

88

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## Mandevilla Vine

- Characteristics:**  
Long lasting flowers  
Flowers may be sparse
- Location:**  
Full sun
- Plant Size:**  
4 – 6 foot vines
- Care and Feeding:**  
Moderate fertility,  
No drought
- Bloom Period:**  
June – August
- Culture Concerns:**  
Mealy bugs



*Mandevilla sanderi*

89

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## Allamanda Vine

- Characteristics:**  
Very large bloom  
Trellis vine  
15 feet per season
- Location:**  
Full sun
- Plant Spacing:**  
12-inch centers
- Care and Feeding:**  
Moderate fertility  
No drought
- Bloom Period:**  
May – October
- Culture Concerns:**  
Mealy bugs



*Allamanda cathartica*

90

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## Purple Hyacinth Vine

**Characteristics:**  
Trellis vine  
Good nectar source  
10 foot vine per season

**Location:**  
Full sun

**Plant Spacing:**  
4-inch centers

**Care and Feeding:**  
Moderate fertility  
No drought

**Bloom Period:**  
June – September

**Culture Concerns:**  
Reseeds



*Dolichos lablab*

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## SweetPea

**Characteristics:**  
Mounding or  
trellis vine  
3 foot vines

**Location:**  
Full sun

**Plant Spacing:**  
2-inch centers

**Care and Feeding:**  
Moderate fertility  
No drought

**Bloom Period:**  
May – June

**Culture Concerns:**  
Dies out in mid-summer  
heat if not kept moist



*Lathyrus odoratus*



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## Nasturtium

**Characteristics:**  
Groundcover  
12 feet vines by summer

**Location:**  
Full sun

**Plant Spacing:**  
4-inch centers  
Seeds require cold snap

**Care and Feeding:**  
Moderate fertility,  
No drought

**Bloom Period:**  
June – September

**Culture Concerns:**  
Frequent irrigation



*Tropaeolum majus*

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## Snail Vine

**Characteristics:**

Trellis vine  
10-20 feet per season

**Location:**  
Full sun

**Plant Spacing:**  
2-inch centers

**Care and Feeding:**  
Moderate fertility  
No drought

**Bloom Period:**  
July – October

**Culture Concerns:**  
Slow growing at first



*Vigna caracalla*

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## Annuals Best For Cut Flowers



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## Verbascum

**Characteristics:**

Back of bed plant  
Height to 36"

**Location:**  
Full sun

**Plant Spacing:**  
10-inch centers

**Care and Feeding:**  
Moderate fertility  
No drought

**Bloom Period:**  
June – August

**Culture Concerns:**  
Mites  
Deadheading essential



*Verbascum 'Southern Charm'*

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## Cosmos

**Characteristics:**  
Mass planting best  
Cut flower  
Drought tolerant  
18-48 inches tall

**Location:**  
Full sun

**Plant Spacing:**  
Spring seeding  
or 4-inch centers

**Care and Feeding:**  
Moderate fertility

**Bloom Period:**  
June - October

**Culture Concerns:**  
Great for poor soils



*Cosmos bipinnatus*

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## China Pinks

**Characteristics:**  
Nectar source  
Fragrant flowers  
15-18 inches tall

**Location:**  
Full sun

**Plant Spacing:**  
4-inch centers or  
random seeding

**Care and Feeding:**  
Moderate fertility  
No drought

**Bloom Period:**  
June - August

**Culture Concerns:**  
Fall seeding



*Dianthus chinensis*

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## Peruvian Lily

**Characteristics:**  
Cut flower  
12-24 inches tall

**Location:**  
Full sun/part shade

**Plant Spacing:**  
12-inch centers

**Care and Feeding:**  
Moderate fertility  
No drought

**Bloom Period:**  
June - August

**Culture Concerns:**  
March planting  
Tender perennial in  
south Georgia  
Fades mid-summer



*Alstroemeria aurea*

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## Summer Snapdragon

- Characteristics:**  
Container plant  
Border plant  
24 - 28 inches tall
- Location:**  
Full sun
- Plant Spacing:**  
5 to 7-inch centers
- Care and Feeding:**  
Heavy fertility  
No drought
- Bloom Period:**  
June - October
- Culture Concerns:**  
Pinch at transplant



*Angelonia angustifolia* 'Angel Mist'

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## Bachelor's Buttons

- Characteristics:**  
Spring color  
Cut flower
- Location:**  
Full sun
- Plant Spacing:**  
4-inch centers  
Random seeding
- Care and Feeding:**  
Moderate fertility  
No drought
- Bloom Period:**  
April - June
- Culture Concerns:**  
Reseeds



*Centaurea cyanus*

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## Delphiniums

- Characteristics:**  
Border plant  
Cut flower  
24 - 56 inches tall
- Location:**  
Full sun
- Plant Spacing:**  
4 to 6-inch centers
- Care and Feeding:**  
Moderate fertility  
No drought
- Bloom Period:**  
June - August
- Culture Concerns:**  
Mites  
Aphids



*Delphinium spp.*

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# Zinnia

**Characteristics:**  
Nectar source  
Cut flower  
16 - 24 inches tall

**Location:**  
Full sun

**Plant Spacing:**  
4-inch centers  
Random seeding

**Care and Feeding:**  
Moderate fertility  
No drought

**Bloom Period:**  
June - September

**Culture Concerns:**  
Mildew



*Zinnia 'DreamLand' Series*

103

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# Unusual Annuals For Sunny Locations



The Trial Gardens At The Coastal Gardens, Savannah

104

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# Pigeon Berry

**Characteristics:**  
Nectar source  
Shrub-like  
30 - 50 inches tall

**Location:**  
Full sun

**Plant Spacing:**  
24-inch centers

**Care and Feeding:**  
Moderate fertility  
No drought

**Bloom Period:**  
June - August

**Culture Concerns:**  
Tender perennial  
in South Georgia



*Duranta erecta*

105

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## Sun-Loving Coleus

**Characteristics:**  
Mounding  
36-54 inches tall

**Location:**  
Full sun!

**Plant Spacing:**  
24 to 26-inch centers

**Care and Feeding:**  
Heavy fertility  
No drought

**Bloom Period:**  
Must deadhead

**Culture Concerns:**  
Mealy bugs



*Coleus 'Solar Flare'*

106

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## Ugandan Glorybower

**Characteristics:**  
Shrub-like  
45 - 60 inches tall

**Location:**  
Full sun

**Plant Spacing:**  
24 to 26-inch centers

**Care and Feeding:**  
Heavy fertility,  
No drought  
Even moisture

**Bloom Period:**  
June - October

**Culture Concerns:**  
Needs early  
shaping for best  
results.



*Clerodendrum myricoides*

107

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## Tall Cigar Plant

**Characteristics:**  
Nectar source  
Shrub-like  
36 - 48 inches tall

**Location:**  
Full sun

**Plant Spacing:**  
24 to 26-inch centers

**Care and Feeding:**  
Heavy fertility  
No drought

**Bloom Period:**  
June - November

**Culture Concerns:**  
Aphids



*Cuphea micropetalum*

108

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## Angel's Trumpet

**Characteristics:**  
Tree-like  
4 - 5 feet tall

**Location:**  
Full sun

**Plant Spacing:**  
30 to 36-inch centers

**Care and Feeding:**  
Heavy fertility  
No drought

**Bloom Period:**  
June - September

**Culture Concerns:**  
All parts poisonous  
Brought indoors



*Brugmansia suaveolens*

109

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## Mealy Cup Sage

**Characteristics:**  
Nectar source  
Mounding  
24 - 28 inches tall

**Location:**  
Full sun

**Plant Spacing:**  
5 - 6 inch centers

**Care and Feeding:**  
Moderate fertility  
No drought

**Bloom Period:**  
June - October

**Culture Concerns:**  
Well drained soils  
Aphids



*Salvia farinacea*

110

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## Globe Allium

**Characteristics:**  
Nectar source  
Back border  
Specimen plant  
36 - 54 inches tall

**Location:**  
Full sun

**Plant Spacing:**  
10 to 12 - inch centers

**Care and Feeding:**  
Moderate fertility  
No drought

**Bloom Period:**  
June - August

**Culture Concerns:**  
Well drained



*Allium giganteum*

111

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## Joseph's Coat

**Characteristics:**  
Tall back border  
Specimen plant  
Drought tolerant  
36 - 54 inches tall

**Location:**  
Full sun

**Plant Spacing:**  
14- 18 inch centers

**Care and Feeding:**  
Moderate fertility  
Staking

**Bloom Period:**  
June - August

**Culture Concerns:**  
Huge!  
Mildew



*Amaranthus tricolor*

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## Hibiscus

**Characteristics:**  
Nectar source  
Shrub-like  
30 - 48 inches tall

**Location:**  
Full sun

**Plant Spacing:**  
26 to 30-inch centers

**Care and Feeding:**  
Moderate fertility  
No drought

**Bloom Period:**  
June - October

**Culture Concerns:**  
Brought indoors



*Hibiscus rosa-sinensis*

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## Ornamental Peppers

**Characteristics:**  
Colored fruit  
Container plant

**Location:**  
Full sun bedding

**Plant Spacing:**  
12 to 15-inches tall

**Care and Feeding:**  
Moderate fertility  
No drought

**Bloom Period:**  
June - October

**Culture Concerns:**  
Very hot peppers!



*Capsicum annum*

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## Texas Firebush

**Characteristics:**  
Nectar source  
Shrub-like  
14 - 24 inches tall

**Location:**  
Full sun

**Plant Spacing:**  
12-inch centers

**Care and Feeding:**  
Moderate fertility  
Deer protection

**Bloom Period:**  
June - October

**Culture Concerns:**  
Well drained



*Hamelia patens*

115

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## Leadwort

**Characteristics:**  
Nectar source  
Shrub-like  
24 - 36 inches tall

**Location:**  
Full sun

**Plant Spacing:**  
24 to 26-inch centers

**Care and Feeding:**  
Heavy fertility  
No drought  
Organic soil

**Bloom Period:**  
June - October

**Culture Concerns:**  
Tender perennial  
in South Georgia



*Plumbago auriculata*

116

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## Cat Whiskers

**Characteristics:**  
Unusual flowers  
Height to 28 inches

**Location:**  
Full sun/part shade

**Plant Spacing:**  
6 to 8-inch centers

**Care and Feeding:**  
Heavy fertility  
No drought

**Bloom Period:**  
June - August

**Culture Concerns:**  
Declines in heat



*Orthosiphon stamineus*

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## Cannas

**Characteristics:**  
Tall - vigorous  
48 - 84 inches tall

**Location:**  
Full sun

**Plant Spacing:**  
8-inch centers

**Care and Feeding:**  
Moderate fertility  
No drought

**Bloom Period:**  
June - September

**Culture Concerns:**  
Pull flower canes  
Leaf rollers  
Lift tubers in fall



*Canna x hybrida*

118

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## Yellow Bleeding Hearts

**Characteristics:**  
Unusual flowers  
Trellis vine  
6 - 7 feet per season

**Location:**  
Full sun

**Plant Spacing:**  
6-inch centers

**Care and Feeding:**  
Moderate, fertility  
No drought

**Bloom Period:**  
June - August

**Culture Concerns:**  
Never expose to drought!



*Dicentra scandens*

119

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## Medallion Flower

**Characteristics:**  
Mounding  
Drought tolerant  
36 - 48 inches tall

**Location:**  
Full sun

**Plant Spacing:**  
4 to 6-inch centers  
or random seedling

**Care and Feeding:**  
Low fertility

**Bloom Period:**  
June - October

**Culture Concerns:**  
Reseeding!



*Melampodium paludosum*

120

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## Black-Eyed Susan Vine

**Characteristics:**  
Trellis vine  
7 - 8 feet per season

**Location:**  
Full sun

**Plant Spacing:**  
4-inch centers or  
2-inch seeding

**Care and Feeding:**  
Moderate fertility  
No drought

**Bloom Period:**  
June - October

**Culture Concerns:**  
Reseeds



*Thunbergia alata*

121

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## Princess Flower

**Characteristics:**  
Specimen plant  
36 - 48 inches tall

**Location:**  
Full sun

**Plant Spacing:**  
24-inch centers

**Care and Feeding:**  
Moderate fertility,  
No drought

**Bloom Period:**  
August -September

**Culture Concerns:**  
Slow starter



*Tibouchina urvilleana*

122

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## Purple Calico Plant

**Characteristics:**  
Foliage effect  
Mounding  
36 - 48 inches tall

**Location:**  
Full sun

**Plant Spacing:**  
36-inch centers

**Care and Feeding:**  
Heavy fertility,  
No drought  
Keep moist

**Bloom Period:**  
Inconspicuous

**Culture Concerns:**  
Well drained soils



*Alternanthera dentata* 'Wave Hill'

123

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## Purple Heart

**Characteristics:**  
Groundcover  
Drought tolerant  
12 - 15 inches tall

**Location:**  
Full sun/part shade

**Plant Spacing:**  
6 to 8-inch centers

**Care and Feeding:**  
Moderate fertility

**Bloom Period:**  
Inconspicuous

**Culture Concerns:**  
Tender perennial in  
middle and south  
Georgia



*Setcreasea pallida*

124

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## Lion's Ear

**Characteristics:**  
Nectar source  
Drought tolerant  
Tall border plant  
28 - 40 inches tall

**Location:**  
Full sun

**Plant Spacing:**  
8-inch centers

**Care and Feeding:**  
Moderate fertility

**Bloom Period:**  
August-September

**Culture Concerns:**  
Well drained



*Leonotis leonurus*

125

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## Twinspur

**Characteristics:**  
Nectar source  
Groundcover  
12 - 18 inches tall

**Location:**  
Full sun

**Plant Spacing:**  
8-inch centers

**Care and Feeding:**  
Moderate fertility  
No drought

**Bloom Period:**  
June - August

**Culture Concerns:**  
Growth slow in heat



*Diascia rigescens*

126

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