Plants are classified by the number of growing seasons required to complete their life cycle. Generally, these groups are annuals, biennials, and perennials. Annuals will provide continuous blooms throughout the growing season, while biennials provide blooms during their second year of growth. Perennials will bloom for 2 to 8 weeks or longer, however, bloom time will vary and can occur during the beginning, middle, or end of the growing season.

**Annuals**

Annuals take a single year to complete a full life cycle. Most are planted in the spring, bloom in the summer, and die in the fall. A few, known as winter annuals, germinate in the later summer and autumn, are dormant during the winter, and grow during the next spring and summer. Many plants treated as annuals in northern climates such as Pennsylvania are actually perennials when grown in southern climates. These plants are not cold hardy and are not able to withstand winter temperatures in our hardiness zones (zones 4b to 6b, average annual minimum temperature between -25 F and 0 F). Except for those that reseed themselves, annuals will not grow a second year unless they are replanted. Annuals are frequently grouped as “hardy,” “half-hardy,” or “tender.” This refers to:

- When seed can be sown outdoors in the spring
- Their capability to tolerate early spring and fall frosts and winter temperatures

**Hardy annuals**

- Include plants such as pansies, ornamental kale, and dusty miller
- Are able to withstand cold soil and hard frosts

- May be winter hardy, and able to survive winter temperatures if sown in the fall, depending on the severity of the winter
- Ideal for cool weather gardens although they often will die in the heat of summer.

**Half-hardy annuals**

- Include plants such as snapdragon, petunia, and alyssum
Can withstand a limited amount of cold temperatures and light frost. Although, if the seed is sown too early and germinates, even a light frost may damage the seedlings.

Summer heat may cause half-hardy annuals to decline, but cooler fall temperatures seem to revive the plants, often inducing growth and blooming.

**Tender annuals**

- Include plants such as impatiens, vinca, and zinnia
- Cannot withstand freezing temperatures
- Should be sown outdoors only after the danger of frost has passed.
- Seed is often sown in a greenhouse during the spring and grown to small plants that are transplanted in the garden after the last frost
- Will grow fairly well and bloom throughout the heat of the summer

A plant might grow as a hardy annual, or even be treated as a hardy biennial or perennial, in the lower Delaware Valley area of southeastern Pennsylvania. Yet these same plants may be considered a half-hardy or tender annual in the Laurel Highlands of southwestern Pennsylvania.

**Biennials**

Biennials take twice as long to complete a full life cycle as annuals. They require a dormant period, induced by cold temperatures, between plant growth and blooming. Biennials are usually sown in the spring, vegetative during the summer, dormant that fall, live in this inactive state through the winter, flower the second summer, set seed, and die during the following fall. If biennials are grown in regions where winter temperatures are colder than the plants hardness, a cold frame can be used as a temporary shelter for plants.

Some biennials can be treated as annuals by sowing seed in the summer that will germinate and be exposed to chilling temperatures to induce flowering in the fall and over winter, and resume growth and flower the next spring.

**Perennials**

Perennials used in Pennsylvania landscapes are cold hardy enough to survive winter temperatures, hence they live longer than both annuals and biennials. Perennials are classified as either herbaceous or woody. Characteristics of herbaceous perennials include:

- Plants send up new growth the following spring
- Usually live for at least two years

Herbaceous perennials have top growth that completely dies back to the ground during the winter, however, roots and crowns remain alive. Herbaceous perennials that are not cold hardy or cannot tolerate really cold climates usually die when the soil freezes. These perennials are often treated as annuals.

Bulbous plants are often referred to as bulbs, tubers, corms, or rhizomes. True bulbs are actually fleshy food storage centers for underground stems from which the next season’s plants will grow. Corms are also food storage centers but are more scaly and solid. Rhizomes and tubers are actually thick underground stems. To be classified correctly, this group belongs with perennial flowers because bulbous plants come back and flower year after year.

Characteristics of woody perennials include:

- Top growth does not die back in the fall (deciduous plants drop leaves, but stems do not die)
- Larger plants each year as new growth grows from existing stems
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