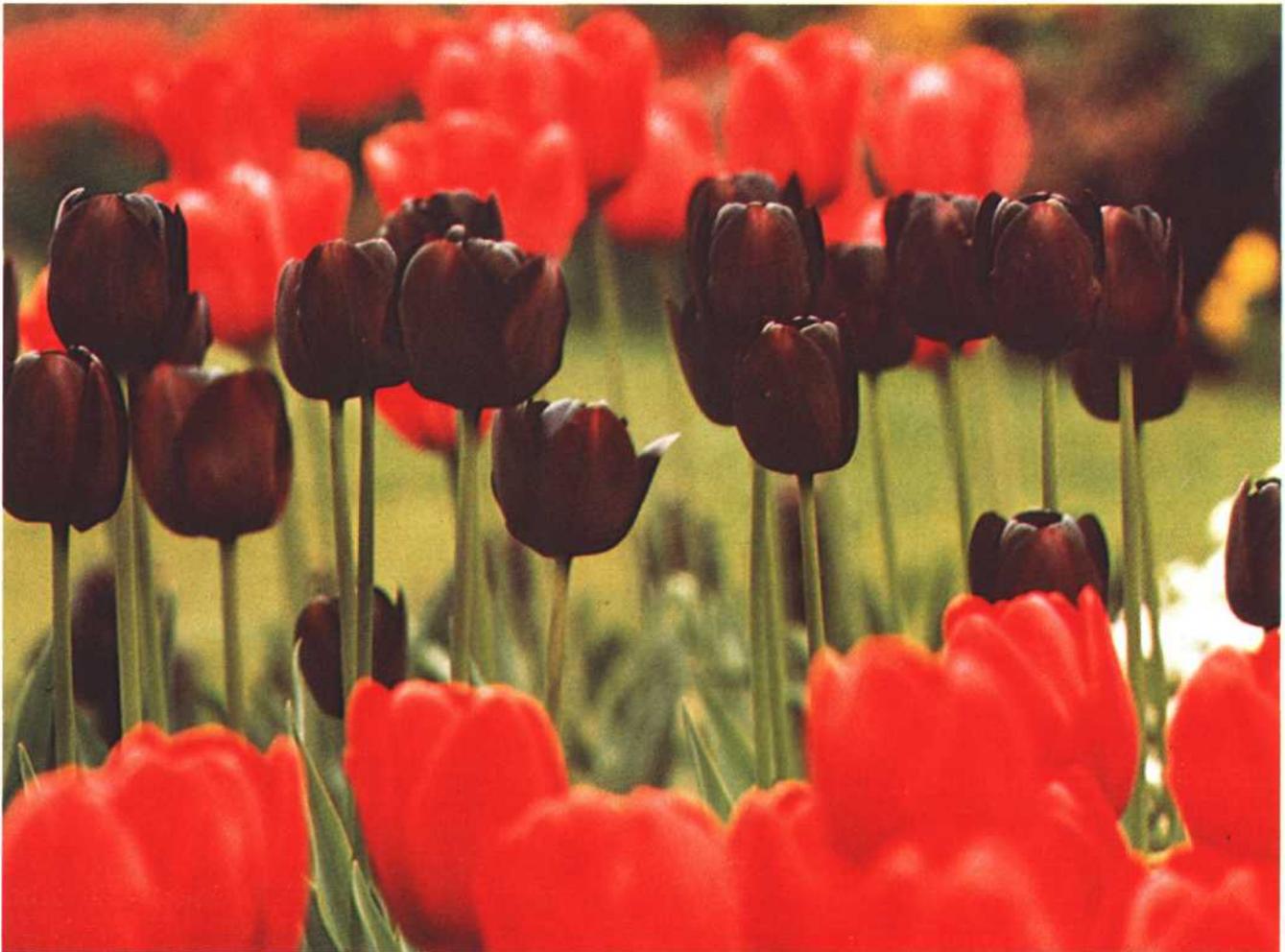


Hints on Growing Tulips

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Introduction

The tulip is a spring flowering bulb with a wide range of shapes and colors. Tulips are classified according to their form and time of bloom, and with proper selection, blooms may appear over a period of six-to-eight weeks.

Common Classes

Early Flowering

- Single early
- 10-16 inch stems

- Large flowers
- Usually the first tulips to appear in the spring

Double early

- 6-12 inch sturdy stems with flowers up to 4 inches in diameter
- Many petals with long-lasting double flowers

Mid-Season Flowering

Mendel

- Stems up to 20 inches
- Single flowers

- Hybrids of crosses between Darwin and 'Duc van Tol'

Triumph

- Stems up to 20 inches
- Hybrids of single early and late-flowering types

Darwin hybrid

- Stems up to 30 inches
- Among the largest of all tulips

Late Flowering

Darwin

- Stems 22-30 inches
- Large oval-shaped blooms

which are squarish at the base

Lily-flowered

- Single narrow blooms with pointed petals resembling a lily

Cottage

- Long oval blooms with pointed segments
- Related to tulips found in old English and French gardens

Rembrandt

- Mutated Darwin tulip
- Red, white or yellow background with stripes or spots

Parrot

- Stems 20-22 inches
- Fringed and ruffled blooms
- Can be striped or marked with other colors

Double late

- Stems to 24 inches
- Orange, yellow, rose or white blooms
- Form resembles a peony

Species Tulips

Includes varieties and hybrids of:

Tulipa fosterana

- 4-inch blossoms on 8-20 inch stems
- Early bloomer
- Leaves sometimes mottled or striped

Tulipa greggii

- Thick 8-12 inch stem
- Long lasting late bloomer
- Blooms striped or mottled on a scarlet or yellow background
- Leaves always mottled or striped

Tulipa kaufmanniana (waterlily tulip)

- 4-8 inch stems
- Early bloomer with pointed petals
- Mottled leaves on some cultivars

Selecting Bulbs

Select quality bulbs which are heavy, firm and free from soft spots and deep blemishes. The basal plate (a modified stem from which the roots emerge and which holds the scales to-

gether) should be firm and solid. Loose tunics (skins) will not affect development. Generally, larger bulbs mean larger flowers.

Whether you obtain your bulbs by mail or from your local garden center, plant them as soon as possible. Otherwise, store them in a cool place (60°F) in an open paper bag — bulbs require ventilation to remain viable. Handle bulbs carefully at all times — a tulip bulb is never dormant.

When to Plant

Plant bulbs from late September to early December, depending on location. Plant before deep frost hardens the ground, but make sure cool weather has set in so that bulbs don't begin to grow in the fall.

Where to Plant

Tulips can be planted anywhere in your garden, along borders or terraces, around a fence or tree. For the most dramatic color effect, plant in clusters of 10-25 bulbs of the same variety.

Tulips need full sun or light shade in Hardiness Zones 4 and 5 (Michigan, Indiana, Ohio area), but will perform better in partial shade in Hardiness Zones 6 and 7 (states to the south of Michigan, Ohio, Indiana). Bulbs planted in shady areas will grow taller and last longer. Plant bulbs away from the house where soil tends to be cooler to avoid early flowering.

Preparing to Plant

Plant bulbs in a well drained soil; for clay soil, add peat or vermiculite; for sandy soil, add peat or compost. Before planting bulbs, work the soil thoroughly to a depth of 12-18 inches.

Before planting, fertilize the soil. Choose 10-10-10 all-purpose fertilizer applied at the rate of 2 pounds per 100 square feet.

Planting Your Bulbs

There are two approaches to planting: either dig a hole for each bulb, or

dig an area large enough for an entire bulb cluster. Place base of bulb approximately 6 inches from soil surface; 8-12 inches in sandy soil. Plant 4-6 inches apart, firming the soil around bulbs. Cover with soil.

After Planting

Immediately after planting, water thoroughly. Saturation is necessary in order for bulbs to begin strong, early root formation for optimal spring bloom. This initial watering should provide adequate moisture through the winter. However, water your bulbs if there is an extended dry spell to replenish natural moisture.

In cold areas, after the frost has penetrated 1-2 inches, cover bulb beds with a 3-inch mulch of leaves, peat moss, straw or evergreen boughs.

In the Spring

Remove mulch in the spring before shoots develop more than an inch or two.

Flowers should be cut when petals begin to drop or they will go to seed, depleting food needed to form a new bulb the following season.

Do not remove the foliage until it is yellow, limp and can be easily pulled free. If space is required for other plants once flowers have bloomed, plant flowers in among stems of the tulips to provide color for the remainder of the season. Most bulbs can be left undisturbed for a 3-to-5 year period.

Harvesting and Storing

If bulbs are to be dug up for reuse next season, dig them when leaves turn yellow. Remove loose soil and dry them for about one week in a shady, protected area with adequate ventilation. Then remove any remaining soil and dust with a fungicide to control rot and other diseases.

To prevent drying out, store bulbs in dry peat moss, perlite, vermiculite or sand in a porous bag or shallow tray. Store them in a cool (35°-50°F), dry, well-ventilated area for replanting in the fall.

Diseases

In general, preventative care is the best method to control diseases and pests. Practice sanitation by removing weeds and rubbish. Spray growing plants as needed for protection against both diseases and insects.

Botrytis Blight (Tulip Fire)

Symptoms

- Appearance of scattered stunted plants that emerge with twisted, tightly rolled blighted leaves in the spring
- Yellowish-white spots surrounded by water-soaked areas on the leaves, stems and flowers
- Leaves and flowers become slimy and collapse
- Gray, fuzzy mold on plants

Control

- Purchase only the largest, blemish- and disease-free bulbs available.
- Dig bulbs in dry weather and not later than three weeks after petals have fallen. Remove stems. Always handle bulbs with care.
- Examine all bulbs carefully before storage and again before planting. Discard all bulbs which are cut, bruised or diseased.
- Apply either Botran or Benomyl fungicide as a soil drench at planting time and just before emergence at recommended rates.

Tulip Break (Virus Disease)

Symptoms

- Variegated flowers, and leaves become striped with lighter green or white

- Reduced plant size and vigor with production of fewer bulbs

Control

- Remove and destroy diseased plants as soon as they appear.
- Use Malathion at recommended rates to control aphids which transmit the virus.

Insects

Tulip Bulb Aphid — grey to yellow-white insects 1/10-inch long build up on bulbs in storage

Symptoms

- Curled or twisted leaves
- Yellowing of foliage

Damage

- Spread of virus disease
- Honeydew secretion attracts ants

Control

- Dust with Malathion prior to storage or
- Wash aphids off with garden hose before storage.

Tulip Leaf Aphid — clusters of green insects 1/16-inch long occur on stems and leaves; overwinter on bulbs and move to foliage after planting

Symptoms

- Feeding kills foliage
- Prevents flower opening

Control

- Spray foliage when aphids appear with Malathion, Diazinon or Orthene at recommended rates.

Mites

Symptoms

- Speckled leaves

- Lack of growth

Control

- Spray plants with Malathion or Diazinon at recommended rates.
- Destroy badly infested bulbs.

Other

Gophers and Other Ground Dwelling Animals

Damage

- Eat bulbs

Control

- Plant in raised beds or containers.
- Set traps.
- Plant bulbs in underground baskets constructed of 1-inch or smaller wire mesh.

Slugs and Snails

Damage

- Holes in leaves
- Young shoots eaten
- Slime trails

Control

- Set out snail and slug bait when first shoots emerge.

Tulips as Cut Flowers

Pick tulips when buds are fully elongated prior to opening. The flower will last up to a week. Cut tulips turn toward the light so rotate the vase a quarter turn each day to maintain an attractive arrangement.

Suggested References

McNair, James. 1981. *All About Bulbs*, Ortho Books.

Wentzell, G. K. 1979. *How to Grow Bulbs*, Sunset Books.



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