

MISCELLANEOUS REPORT 161 — 1978

MINNQUEEN & ROYAL KNIGHT

New Mums for 1979

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Minnqueen and Royal Knight

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The University of Minnesota's Department of Horticultural Science and Landscape Architecture introduces the 59th and 60th cultivars (varieties) of garden chrysanthemums for the 1979 gardening season.

Minnqueen (69-31-18) is a very vigorous selection with 3-inch flat decorative, lively, rose-pink blossoms atop cushion habit plants. The neat, uniform plants average 12 inches high and 24 inches wide with willowy stems clothed in clean, green foliage. Flowering usually starts in mid-September. Parents are Minnrose and Cheerleader.

Royal Knight (71-142-45) produces 3½-inch, velvety maroon-purple or burgundy colored, reflexed (bent backward) flowers with a silvery underside on upright plants. Flowers have shown above average frost resistance. The neat, fairly uniform plants average 12 to 15 inches across and 20 inches high. Stiff stems bear the clean, dark green foliage. Flowering usually starts by mid-September. Parents are Highline and Minnesota selection 69-47D-50.

Both selections have shown disease tolerance in plant disease nursery tests and isolation and culture of roots from select plants were free of *Vorticillium* in tests by F. L. Pflieger of the Department of Plant Pathology.

Both selections have been raised on a trial basis in branch station plots for at least 2 years.

CHRYSANTHEMUM CULTURE

Planting Time — Plant chrysanthemums in the spring after all danger of killing frosts has passed. Use either small plants derived from rooted cuttings, divisions, or rooted suckers of old plants. Larger plants in various stages of development may be planted anytime during the summer or early fall.

Soil, Site, and Fertilizer — Garden chrysanthemums grow best in a well-drained loam soil and in full sun. Plants grown in semishady locations tend to grow taller, have weaker stems, and bloom later in the fall. Incorporate peat moss, compost, or well-rotted barnyard manure and superphosphate (3 to 5 pounds per 100 square feet) into soil. If you use peat moss or do not add organic matter, use a commercial fertilizer such as 5-10-5 or a 10-10-10 formula in the spring, according to package directions. Sidedressing plants with a complete fertilizer in early August, especially in years of abundant rainfall, also is recommended. If the fertilizer applied in the spring is a slowly available type (released as the plant needs it), such as coated or organic fertilizer, the second application may not be necessary.

Cultivar Selection — Select cultivars that will bloom before the end of September. Later blooming cultivars will fail to bloom before damaging or killing frosts in most years.

Spacing and Pinching — Space plants 18 to 24 inches apart, depending on mature size of the cultivar. When plants are about

6 inches tall, pinch out the tip to induce branching and produce stockier plants. Pinch lateral branches when they have grown 6 inches. Pinching after July 4 delays flowering.

Watering — Do not let plants suffer from lack of water. One good watering or rain, the equivalent of 1 inch of water per week, usually is adequate. More frequent irrigation may be desirable during extremely hot weather, especially with sandy soils.

Insect and Disease Control — Spraying or dusting with an all-purpose insecticide-fungicide mixture twice a month in June through September is recommended.

Late Flowering — Possible causes include:

- Wrong cultivar selection
- Insufficient sun (excess shade)
- Insufficient fertilizer
- Insufficient water
- Late pinching
- Root competition from nearby shrubs and trees
- Unusually hot weather (especially nights) in August, cultivars vary in response
- Unusually cold and/or cloudy weather in August and September
- Insect disease injury

Overwintering — To be reasonably certain of plants surviving over the winter, use one of the following methods:

Dig plants in the fall; plant them in pots, flats or similar containers. Keep them in a cold cellar over winter at a temperature of 33° to 38° F. Occasional watering is the only care needed.

Dig plants in the fall and plant them in a cold frame in a protected location. After freezing weather (November), mulch heavily with leaves, hay, or straw; then cover frame with sash, boards, or plastic film, and cover all with 6 or more inches of mulch.

In late fall, remove some rooted suckers from around the base of the plant. Put them in small pots and carry them through the winter as house plants. Pinch off tips when shoots are 6 inches long. Instead of pinching, you may wish to take 3-inch cuttings when the shoots are 6 or more inches long.

Although no cultivars are consistently hardy under Minnesota winter conditions, parts of plants frequently survive the winter. Divide such overwintered plants if four or more growing points are present.

Dividing — If the entire clump survives the winter, it is preferable to divide it into small clumps with 2 or 3 growing points.

SPRING POT PLANTS

Most of the recent University introductions are suitable for spring flowering pot plant production. After flowers fade, the plants should be cut back to 3 or 4 inches from the ground and planted in the garden for fall flowering.

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