

Cultural Information for: Ranunculus Bloomingdale Annual
Common Name: Ranunculus
Botanical Name: Ranunculus asiaticus
Seed Count: 37,000 /ounce 1,300 /gram
Optimum Germination Temperature: 50-59°F / 10-15°C
Optimum Growing Temperature: 46-59°F / 8-15°C
Optimum pH: 5.8 – 6.2
EC – Plug: 0.4 – 0.8 mmhos/cm (1:2) / 0.9 – 2.0 (SME) / 1.1 - 2.6 (Pour Thru)
EC – Finishing: 0.9 – 1.3 mmhos/cm (1:2) / 2.1 – 3.5 (SME) / 2.7 - 4.6 (Pour Thru)

Plug Stage – 7 weeks (288 / 12 x 24 tray)

Stage One (day 1-14) Use a sterilized soil media with plenty of organic matter. A mixture of 70% peat and 30% fine perlite has been found to be highly efficient and accelerates germination and seedling growth. Cover the seed with a very thin layer of medium vermiculite or peat/perlite mixture and water thoroughly. Select a well-ventilated place and avoid strong sunlight. Place seed flats in the coolest possible location in the greenhouse, 55-57°F/13-14°C. **Never allow the growing media to dry out until the seed germinates!**

Stage Two (day 15 - 21) After seedlings begin to emerge, reduce moisture and place flats in a well-ventilated and shaded greenhouse (2,000-foot candles/22,000 lux). Maintain 60-64°F/16-17°C during the day and 50-55°F/10-13°C at night. Apply a light fertilizer of 100 ppm N to strengthen the seedlings. Provide 13 hours of darkness (< 10-foot candles/110 lux) for active growth as a long photoperiod promotes dormancy (corm production).

Stage Three (day 22 - 42) Maintain cool greenhouse conditions and avoid temperatures above 77°F/25°C during this period. Fertilize every 10 days with 100-150 ppm N for strong growth, but avoid excess salts. Gradually increase light level to 3,000-foot candles / 32,000 lux.

Stage Four (day 43-50) Seedlings have developed 4 true leaves and are now ready for transplanting into pots. Ranunculus becomes reproductive at the fourth true leaf stage. **Do not delay transplanting. Late transplanting creates smaller plants with poor foliage and plant body development.**

Transplanting to Finish: 12-14 weeks

Transplanting: When seedlings reach the fourth true leaf stage, transplant them into 4- 5 inch/10-12 cm pots with a starting soil pH of 5.5 - 6.0. Select a highly fertile soil with good drainage, low in peat contents, with abundant organic matter and well-rotted leaf mulch. Initial growth after transplanting will be slow and it is important to maintain temperatures as low as possible, 45-55°F/7-13°C and never allow daytime temperatures to exceed 77°F/25°C. Place one plant per 4-5 inch/10-12 cm. pot and three per 6 inch /15 cm. or 1-gallon/4-liter pot. Be careful not to damage the delicate root system.

Production: Approximately 2 months after sowing, the plants will begin to grow rapidly. Ranunculus requires adequate nutrition by incorporating slow release fertilizer in the potting medium or applying liquid fertilizer every 7-10 days. Initially apply calcium nitrate-based feeds switching to

higher potassium fertilizers once flower buds are visible. Water thoroughly and regularly, and if grown with heat monitor the temperature carefully.

NOTE: Seedlings require 13 hours of continuous darkness (< 10-foot candles/100 lux) for active growth. Long photoperiods promote corm development. Always allow enough space between plants to enable maximum growth. Also, apply boron at 0.25 ppm at each watering to avoid a deficiency characterized by leaf cupping and stunting.

Flowering: Approximately 4-6 weeks after potting the plants should grow to a reasonable size. Flowering occurs 12-14 weeks after transplanting, (19 to 21 weeks from sowing), depending on temperature. For early pot sales maintain a daytime temperature of 60-68°F/16-20°C and a night temperature of 45-50°F/7-10°C.

Growth retardant: At higher temperatures, both stems and leaves may show excessive growth. Applications of B-Nine (daminozide) at the rate of 2,500 ppm will yield good results. Apply B-Nine on bright sunny mornings when soil is relatively dry, and buds first show at the base of the plants. To control flower stem stretch, increase potassium to nitrogen ratio, lower temperatures, regulate watering and provide good air circulation.

Insects: Aphid, fungus gnat, leaf miner, spider mite, thrip, whitefly

Diseases: Botrytis, leaf spot, pythium, powdery mildew, wilt

Good culture and nutrition create healthy plants that are less susceptible to disease!

Schedule (northern hemisphere)

Sow*	Transplant	Flower
Mid-August	Early October	Mid-February to Mid-March

*Growers often wish to produce an early crop of ranunculus, germinating and growing young plants in the heat and long days of summer. Under these conditions plant growth often stalls, or plants produces very weak growth. This is because under long days, (>12 hours), Ranunculus naturally want to produce corms rather than produce vegetative growth. Providing an 11-hour dark period (< 10-foot candles/100 lux), maintains active vegetative growth. Excessive high temperature will also weaken growth. The optimum growing temperature is 59°F/15°C days and 46°F/8°C nights.

“All information given is intended for general guidance only and may have to be adjusted to meet individual needs. Cultural details are based on North American conditions and Sakata cannot be held responsible for any crop damage related to the information given herein. Application of recommended growth regulators and chemicals are subject to local and state regulations. Always follow manufacturer's label instructions. Testing a few plants prior to treating the entire crop is best.”