

RHODODENDRONS AND AZALEAS



Ministry of
Agriculture
and Food

ONTARIO

Jack Riddell, Minister
Clay Switzer, Deputy

A.W. Smith

Horticultural Research Institute of Ontario
Vineland Station

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INTRODUCTION

Garden rhododendrons and azaleas are shrubs of compact growth, well suited for planting in home gardens. Where soil conditions permit, low-growing types may be placed in foundation plantings.

The name rhododendron refers to the evergreen kinds. The small-leaved type is referred to as Lepidote or scaley-leaved, and the large-leaved type as Elepidote or non-scaley. Although botanists classify all azaleas as rhododendrons, gardeners continue to use the name azalea for most deciduous or leaf-shedding types.

Rhododendrons are pleasing at all seasons of the year. In winter, when most shrubs are bare, the foliage of the evergreen kind is very attractive. During the flowering season, few garden shrubs can equal the spectacular floral display of rhododendrons. Azalea bloom is often so profuse that the foliage is completely concealed. The leaves of many azaleas turn brilliant colors in the autumn.

Rhododendrons and azaleas grow best in regions having mild, humid climates, and in soils that are naturally acid and high in organic matter. Southern Ontario only partly meets these requirements, but if care is taken to choose the hardier kinds, the right soil and location, success can be achieved.

LOCATION

The choice of planting site can mean the difference between success and failure. Rhododendrons and azaleas grow best in sites protected from wind, and with light shade provided by coniferous trees and shrubs such as pine, fir, cedar and juniper, which also form an excellent background. Exposed plants invariably suffer from windburn and desiccation.

A site sloping to the north or east is beneficial. Such a site will be less affected by cold, drying winds and rapid changes of temperature occurring in late winter and early spring. In southern Ontario the prevailing winds are westerly. Therefore, plants should be located on the east side of a building or among a dense group of trees or tall shrubs. Full exposure to the sun in winter and early spring may cause leaf scorch. The bare branches of deciduous trees such as oak provide a certain amount of shade during the winter. This is often adequate for the hardier rhododendrons.

Low areas should be avoided wherever possible. These are often poorly drained and may be frost pockets. Avoid planting rhododendrons and azaleas under or close to shallow-rooted trees such as maple, ash and elm. Tree roots compete for water and plant food to the detriment of rhododendrons and azaleas.

SOILS AND THEIR PREPARATION

The soil for rhododendrons and azaleas should be acid (pH 4.0 to 5.5), well drained, coarse-textured and high in organic matter. Such soils are rare in Ontario home gardens, and it is nearly always necessary to improve the soil before planting.

Rhododendrons and azaleas are by nature long-lived plants. Thorough preparation of the soil is necessary if they are to thrive. Once they are planted, little can be done to improve the soil around them because they root close to the surface, and disturbing the soil damages the roots.

Sandy soils can be made suitable for rhododendrons and azaleas by spreading 10 to 15 cm of acid peat over the bed, and mixing it into the top 15 cm of soil. If half the quantity of peat is first mixed in and then the remainder added, mixing is easier and more thorough.

Alkaline soils are difficult to adapt for rhododendrons and azaleas. One solution is to excavate the entire bed to a depth of 50 cm, break up the subsoil, and place 8 cm of coarse material such as boiler ash over the bottom of the excavation. If the site is sloping, place a tile drain leading from the bottom of the excavation to an outlet at a lower level. Replace the unsuitable soil with a mixture of 50% sandy topsoil and 50% acid peat. The finished level of the bed should be 10 cm above grade level to allow for settling, and to improve surface drainage.

Do not excavate deep beds in heavy clay soils because the drainage may not be adequate. The best procedure is to build raised beds using the same mixture suggested above. Excavate the bed to a depth of 20 cm. Break up the subsoil and add 8 cm of drainage material. Raise the beds 30 cm above grade level, using logs or stones to contain the medium. For a more formal effect, build a retaining wall of wood, brick or stone (Figure 1). In a raised bed situation, the plants will not be



Figure 1. A raised bed of peat and sandy soil. Stones and logs are used to contain the medium.



Figure 2. A raised bed of rhododendrons. The curled leaves result from severe cold weather. The bed is mulched with pine needles and oak leaves.

affected by soil conditions below them since the beds are well drained. Raised beds should be large enough to accommodate several rhododendrons because the plants benefit from a large volume of prepared soil. Raised beds dry out more quickly, so more water will be needed during dry weather.

PLANTING

In previous years when rhododendrons and azaleas were sold balled-and-burlapped, few problems arose after transplanting since the root system adapted easily to the new planting area. Today most rhododendrons and azaleas are sold in containers because this nursery practice allows ease of shipping and handling, and a greater number to be grown per unit area of growing space.

There are a few guidelines to follow in the selection of container-grown plants at the garden centre. Among a group of healthy looking plants, choose the container with the lightest weight. This may indicate that it has not been overwatered. Take the plant at the base of the stem and gently tap to remove the container. If the root system appears to be active, whitish and healthy all is well; if roots are brownish and mushy to the touch choose another. Container plants need not be planted immediately but can be kept until you are ready for planting.

The growing media in containers may be composed of various ratios of one or more of the following: peat, perlite, sand, turface, sphagnum moss, styrofoam and bark. Perhaps the biggest mistake in planting container-grown rhododendrons and

azaleas is to remove the container and plant without disturbing the root system. Roots at the edge of the container curl to the shape of the container. If the root system is not scarified or pulled apart, the plant often fails to adapt to its new planting area. Therefore, to successfully plant container-grown rhododendrons and azaleas, remove the root system from the container and pound the root ball till half the container mix is removed. Spread the roots out in the planting hole in direct contact with the planting medium.

Plant rhododendrons and azaleas in groups rather than dotted about the garden. This permits more efficient use of prepared soil. Furthermore, the medium around an individual plant rapidly becomes alkaline, and may fill up with water during wet seasons, causing waterlogging and killing of roots.

Many planting failures are due to overwatered container-grown plants being watered again at planting time. Overwatered plants develop root rot with leaf wilt often following. A common procedure often recommended is to soak the planting area after planting. Do not water if the planting medium is damp. Simply mist the leaves two or three times a day for a week. This allows the roots to “go looking for water”.

MAINTENANCE

Rhododendrons and azaleas require relatively little care once properly established. To maintain moisture and prevent soil temperature extremes, a mulch is required. Good mulching materials in order of preference are: pine needles, oak leaves and wood chips. The few weeds which grow through the mulch can easily be pulled by hand after a good rain. Peat moss used as a mulch tends to prevent penetration of water when dry, and hold too much water when wet.

If all other conditions of soil, sun, shade, moisture, mulch and site have been met, and the plants are not growing well, it may be necessary to apply a fertilizer to the soil. Azalea and rhododendron fertilizers are available. It is important that the nitrogen portion of a commercial fertilizer be largely in the ammonia form. Do not apply nitrogen fertilizer later than June. Fertilizing after this date encourages new growth which matures too late in the season and is prone to winter injury.

After the flowering season, remove the dead flower heads in the summer. This prevents seed formation and will encourage new growth.

Very little winter protection is required if the planting location is well chosen. Cut back on watering before mid-September to induce plant tissues to mature before winter. However, a thorough watering before freeze-up in late November is beneficial.

Rather than throw out or burn your Christmas tree, cut the boughs and place them around the rhododendron plants. This added protection will help prevent drying out in winter (Figure 2).

PROPAGATION

Ground Layering

Ground layering is the simplest method of propagating rhododendrons and azaleas. Select a branch that bends easily to the surface of the soil. Make a slit on the undersurface of the branch using a knife. Treat the cut surface with a root-promoting hormone, bury the branch in the soil and peg firmly in place. Branches layered in the spring will usually form roots before fall, but the layer is best left for a second year before separating it from the parent plant.

Cuttings

Many rhododendrons cultivars can be propagated easily from cuttings. Unfortunately, even with the best techniques available, certain cultivars are slow and sometimes practically impossible to root.

Cuttings of large-leaved rhododendrons that fail to root when taken from late September to late October should be selected from mid-July to mid-August.

Cuttings 8 to 10 cm in length are easiest to use. Remove the flower buds and leave three or four leaves at the top. Notch the cuttings on both sides of the stem about 3 cm from the base, removing about 2 cm of the bark (Figure 3.) Remove $\frac{1}{3}$ to $\frac{1}{2}$ of each leaf to lessen water loss from the cutting and to avoid overlap in the rooting system. Cuttings thus prepared produce a balanced root system. Dip cuttings in a fungicide solution such as Benlate, then apply liquid or powdered rooting hormone. The best rooting medium is 50% peat and 50% perlite.

The use of mist under greenhouse conditions with bottom heat at about 24°C has proven successful with most rhododendrons and azaleas. However, this facility is rarely available to the home gardener.

A useful method for the home gardener is to cover a flat with plastic, and spray the leaves with a fine mist several times a day during the rooting period (Figure 4). The small-leaved evergreen azaleas root in about six weeks. The large-leaved rhododendrons require three to four months (Figure 3). Deciduous azaleas are more difficult to root, and this method is not recommended for these hard-to-root forms.

Once the cuttings have rooted, pot or transplant them to flats containing a mixture of 60% peat and 40% perlite. Fertilize once a month with an acid-based azalea plant food.

To produce sturdy plants, pinch or remove the vegetative terminal bud (Figures 5 and 6). This induces early branching. Under greenhouse conditions, two flushes of growth can be produced in one year. Exposure to 14-hour photoperiod under fluorescent lights will accelerate development and growth.

The following spring, plant rooted cuttings in a protected, shaded area. In colder areas, leave them in cold frames for added protection. It takes about three to four years from rooted cutting to produce a good-sized plant for garden use.



Figure 3. Cutting at left as taken from plant. Cutting at right with flower bud removed, lower leaves removed and upper leaves trimmed and wound showing on one side of stem.



Figure 4. Young rhododendron seedlings under polyethylene cover and fluorescent lighting.



Figure 5. One-year-old cuttings. Vegetative terminal bud should be pinched to induce branching (left). Leggy development is prevented by terminal flower bud and natural branching occurs (right).

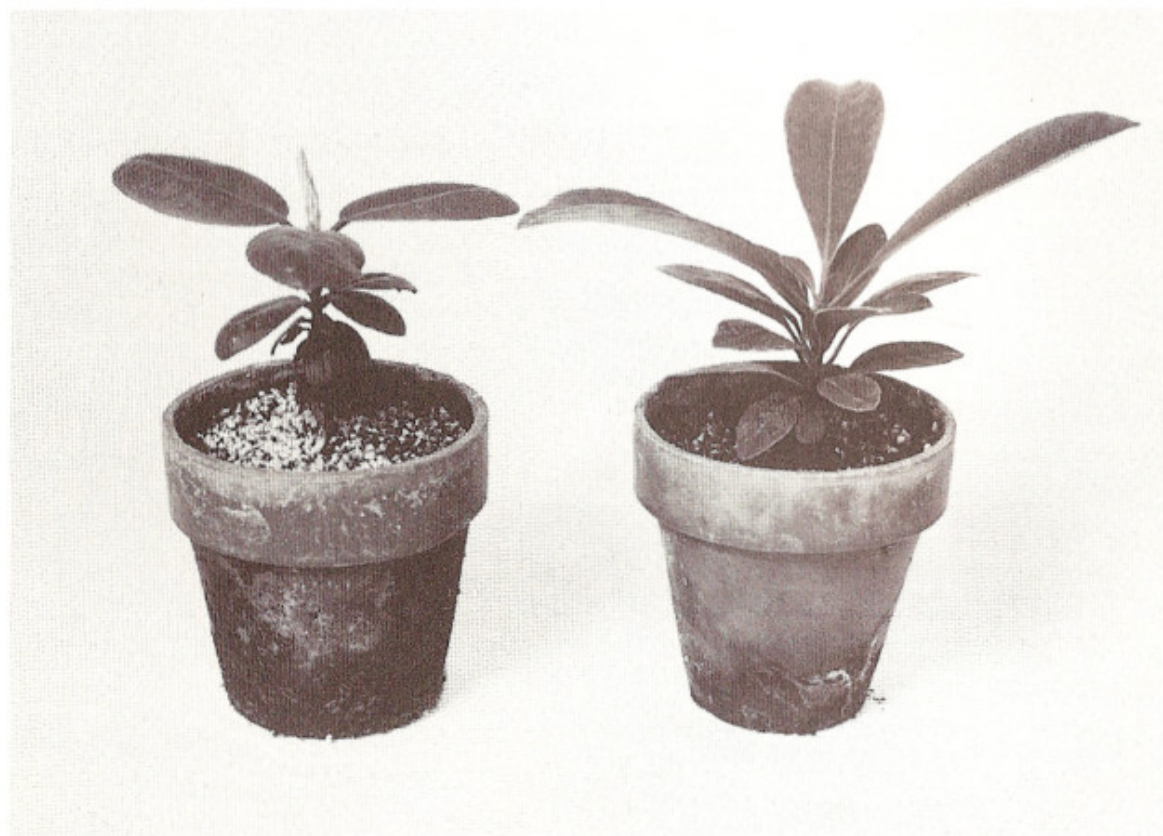


Figure 6. One-year-old seedlings. Pinched out vegetative bud (left). Well-branched seedling (right).

Deciduous Azaleas

Take cuttings of deciduous azaleas when the new growth is soft and pliant. This is often coincident with time of bloom in early June. The ability to root decreases rapidly as new growth matures. Select cuttings daily for best results.

Rinse cuttings in a fungicide solution, trim below a node (overall length 8-12 cm), and insert in a medium of 60% peat and 40% perlite. In late August, transplant cuttings that are rooted and grow on in the greenhouse with supplementary light (14-hour day) to prevent dormancy and induce new growth. At the end of the year, transfer to a cool, frost-free (2°-5°C) environment to induce dormancy. As new growth develops in the spring, transfer plants to a shaded environment.

PLANT BREEDING

For the amateur rhododendron enthusiast, making your own crosses offer exciting possibilities.

One objective in creating new hybrids should be to obtain plants that will withstand the colder climates and at the same time display the bloom quality of the chosen parents. Another goal that merits some attention is the creation of hardy, large-leaved, yellow-flowered rhododendrons. Many breeders have been working toward this objective. A third goal is to improve the red-flowered rhododendrons, especially one that will propagate readily from cuttings. With these aims in mind, the doors are open to every rhododendron grower to try his luck at creating new and better hybrids for Ontario gardens.

Making the Cross

Before the flower buds of the designated female flower open completely, remove the petals and the anthers, leaving the pistil to develop (Figure 7). From the flower of the male flower, nip the filament below the anther. Holding the filament, gently dab the anther to the stigma of the female flower, leaving a deposit of pollen. Isolate individual pollinated flower or group of flowers for one to three days with a paper or plastic bag with the base tied below the flowers.

Pollen must be placed on the stigma of the female parent flower when it is receptive, that is, when it becomes sticky. The pollen may be applied a few days in advance of this receptive period, and repeated if necessary. To prevent contamination, bag the flower while waiting for the stigma to become receptive. Be sure to label the cross with the parent names.

Seed Germination

In early fall, gather the seed capsules when they turn brown. Allow them to dry, remove the seeds and keep them in an envelope. In February, sow the seeds in a small pot containing a germinating medium of 50% perlite and 50% milled sphagnum moss. Do not cover the seeds with the medium. The germinating mixture should have been sterilized with boiling water and allowed to cool before sowing.

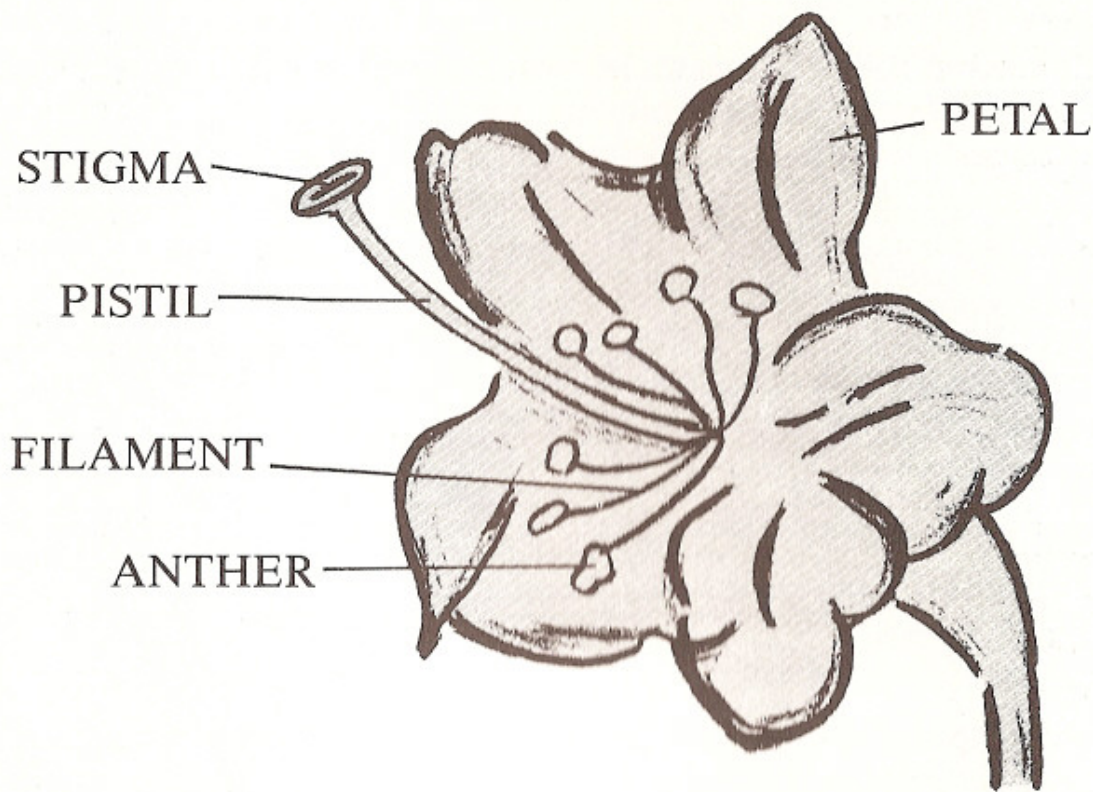


Figure 7. Rhododendron flower parts

Tie a plastic bag around the pot. Keep at room temperature (21°C). When seeds begin to germinate (2 to 4 weeks) open the plastic bag. Transplant the seedlings as the first set of true leaves appear (6 to 12 weeks) into a mixture of 60% peat and 40% perlite, and feed as outlined for cuttings (page 6). Grow seedlings until late spring before planting outdoors in the garden.

Under 14-hour supplementary lighting, germination and growth of seedlings will occur more rapidly. Traditionally, the duration between seeding and time of first flower formation requires three to four years for azaleas and six to seven years for rhododendrons. The recent Weldon Delp accelerated method of culture, now being used at the Horticultural Research Institute, involves the use of supplemental lighting under optimum greenhouse conditions. This method enables plant breeders to produce budding rhododendron plants from seed in 24 months. In many cases deciduous azaleas will set buds in 12 months.

INSECT, DISEASE AND ENVIRONMENTAL PROBLEMS

Sunscald

The large-leaved evergreen rhododendrons are sometimes susceptible to sunscald, especially if plants did not receive ample moisture before freezing of the soil. The leaves curl in severe winter weather, exposing the central part of the leaf but not the edges, resulting in the area near the main veins first becoming scorched. To prevent this, water plants thoroughly before November, protect from drying winds, apply mulch, and locate in partial shade.

Chlorosis

Chlorosis is the term used to describe leaves when they turn yellow while the veining remains green.

Inspect the plant thoroughly if this condition is evident. Poor drainage, planting too deeply, heavy soil with poor aeration and lack of moisture induce chlorosis. Insect or fungus damage at the root zone is also a factor.

After these possible causes are eliminated, conduct a soil test to determine possible iron deficiency. If present, apply iron sulfate to correct this problem.

Frost Injury

Several plants at Vineland have developed a leaf distortion that appears similar to virus infection. In early spring, the developing vegetative buds are sometimes injured by late frost. This causes distorted leaves to develop with scalloped edges and roughened, uneven surfaces. If the temperatures are low, tissues may be killed outright.

Leaf Notching

This can be caused by weevils, caterpillars, cut worms and loopers. Since many of these insects are nocturnal feeders, checking for their presence at night with a flashlight is recommended.

Powdery Mildew

This grey fungus is more prevalent on deciduous azaleas. Spray with a registered fungicide at first sign of the disease. Use cultivars that are mildew resistant.

RECOMMENDED SPECIES AND CULTIVARS

The following hardiness rating, based on the American Rhododendron Society system, may be used as a guide:

Hardiness Ratings

H-1 Hardy to -32°C

H-2 Hardy to -26°C

H-3 Hardy to -20.5°C

H-4 Hardy to -15°C

The minimum temperature for the Vineland area is about -21°C . Therefore, any rhododendron or azalea with a rating of H-3 or less has a good chance of surviving. If the temperature becomes colder for a short time, plants may not be killed, although a longer period of colder weather can result in serious damage.

Many factors (snow cover, wind protection, and soil moisture) other than temperature determine hardiness. Some plants that are rated as an H-3 have done very well at Vineland, while cultivars that are H-2 have not survived. Thus, various environmental factors must be considered for individual plants in different microclimates.

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The following abbreviations apply to all accompanying tables:

E = early

M = mid

L = late

Low = 30-40 cm

Medium = 45-120 cm

Tall = over 120 cm

Plant and bud injury (none or slight) is based on a 5- to 10-year record period in the Niagara region.

TABLE 1
Rhododendron species grown at the Horticultural Research Institute, Vineland Station,
or known to be grown in the Niagara Region

Name	Hardiness Rating	Bloom Date	Height	Color	Plant & Bud Injury
<i>R. atlanticum</i>	H-1	L. May	Tall	White	None
- <i>R. brachycarpum</i>	H-2	L. June	Tall	White	None
<i>R. calendulaceum</i>	H-2	M. June	Tall	Yellow-Orange	None
<i>R. canadense</i>	H-1	L. May	Medium	Rose-Purple	None
- <i>R. carolinianum</i>	H-1	M. May	Medium	Lav.-Pink-White	None
- <i>R. catawbiense</i>	H-1	E. June	Tall	Lavender	None
- <i>R. dauricum</i>	H-2	E. May	Medium	Lav. or white	None
<i>R. fargesii</i>	H-3	L. April	Tall	White to pink	Slight
<i>R. hippophaeoides</i>	H-3	M. May	Low	Mauve	Slight
<i>R. impeditum</i>	H-2	M. May	Low	Mauve-Purple	Slight
- <i>R. japonicum</i>	H-2	E. June	Medium	Red to orange	None
- <i>R. kaempferi</i>	H-2	L. May	Tall	Orange to pink	None
- <i>R. keiskei</i>	H-2	E. May	Medium	Yellow	Slight
<i>R. longesquamatum</i>	H-2	E. June	Tall	Pink to rose	Slight
<i>R. makinoi</i>	H-2	L. May	Medium	White to rose	Slight
- <i>R. maximum</i>	H-1	L. June	Tall	Purplish	None
<i>R. metternichii</i>	H-2	M. May	Tall	Rose to white	None
- <i>R. mucronulatum</i>	H-2	L. April	Tall	Rose to purple	None
<i>R. nudiflorum</i>	H-1	L. May	Tall	Pink to rose	None
<i>R. poukhanense</i>	H-2	M. May	Medium	Lilac to purple	None
- <i>R. schlippenbachi</i>	H-2	M. May	Tall	Lav. to pink	None
<i>R. smirnowii</i>	H-2	E. June	Medium	Light Rose	None
<i>R. vaseyi</i>	H-2	L. May	Tall	White to pink	None
- <i>R. yakushmanum</i>	H-2	L. May	Medium	Pink to white	None

TABLE 2

Lepidote (Small-Leaved) Rhododendron cultivars grown at the Horticultural Research Institute, Vineland Station, or known to be grown in the Niagara Region

Name	Hardiness Rating	Bloom Date	Height	Color	Plant & Bud Injury
<i>Blue Tit</i>	H-2	E. May	Low	Bluish Mauve	Slight
<i>Conewago</i>	H-1	M. May	Medium	Pink	None
<i>Cornell Pink</i>	H-2	L. April	Tall	Pink	None
<i>Dora Amateis</i>	H-2	M. May	Medium	White	None
<i>Faisa</i>	H-1	M. May	Medium	Purple	None
<i>Huggs</i>	H-2	M. May	Medium	Purple	None
<i>Jenny</i>	H-2	M. May	Medium	Pink	None
<i>Little Boy Blue</i>	H-1	M. May	Medium	Bluish Mauve	None
<i>Olga</i>	H-2	M. May	Medium	Mauve	None
<i>P.J. Mezzitt</i>	H-1	E. May	Medium	Lav. pink	None
<i>Pink Diamond</i>	H-2	M. May	Low	Pink	Slight
<i>Pink Pom Pom</i>	H-1	M. May	Medium	Pink	None
<i>Pioneer</i>	H-2	L. April	Tall	Pink	None
<i>Ramapo</i>	H-1	L. May	Low	Violet	None
<i>Robby</i>	H-2	M. May	Medium	White	None
<i>Sharp Impression</i>	H-2	M. May	Medium	Purple	None
<i>Vinestar</i>	H-2	E. May	Medium	Pale Yellow	None
<i>Windbeam</i>	H-1	M. May	Medium	Pink	None

TABLE 3
Elepidote Rhododendron cultivars grown at the Horticultural Research Institute, Vineland Station,
or known to be grown in the Niagara Region

Name	Hardiness Rating	Bloom Date	Height	Color	Plant & Bud Injury
<i>America</i>	H-1	L. May	Medium	Red	None
<i>Anna Hall</i>	H-2	M. May	Medium	White	None
<i>Arthur Bedford</i>	H-3	E. June	Tall	Mauve/dark blotch	Slight
<i>Ben Mosley</i>	H-2	L. May	Medium	Purple pink	None
<i>Besse Howells</i>	H-2	L. May	Medium	Rosy Red/blotch	None
<i>Blue Peter</i>	H-2	E. June	Medium	Lavender/blotch	Slight
<i>Boule de Neige</i>	H-1	E. June	Medium	White	None
<i>Boule de Rose</i>	H-2	E. June	Medium	Rose	None
<i>Calsap</i>	H-1	E. June	Medium	White/blotch	None
<i>Caroline</i>	H-2	L. May	Tall	Lavender	None
<i>Catawb Boursault</i>	H-1	E. June	Tall	Lilac	None
<i>Cat. Grandiflora Purple</i>	H-1	M. June	Tall	Mauve	Slight
<i>Christina Delp</i>	H-2	E. June	Medium	Lavender/blend	None
<i>Dr. Dresselhuys</i>	H-2	E. June	Tall	Red	Slight
<i>English Roseum</i>	H-1	E. June	Tall	Pink	None
<i>Everestianum</i>	H-2	E. June	Tall	Rose to lilac	None
<i>Harrisville</i>	H-1	M. May	Tall	Red-purple	None
<i>Holden</i>	H-2	E. May	Tall	Light Red	Slight
<i>Ice Cube</i>	H-2	L. May	Medium	White	None
<i>Ignatius Sargent</i>	H-1	L. May	Medium	Deep rose	None
<i>Indian Chief</i>	H-1	L. May	Medium	Red	None
<i>Janet Blair</i>	H-2	E. June	Tall	Light pink	None
<i>Jolly Red Giant</i>	H-2	L. May	Tall	Red-purple	None
<i>Judith Anne</i>	H-2	E. June	Medium	Pale Purple	None

TABLE 3 (cont'd.)
 Elepidote Rhododendron cultivars grown at the Horticultural Research Institute, Vineland Station,
 or known to be grown in the Niagara Region

Name	Hardiness Rating	Bloom Date	Height	Color	Plant & Bud Injury
<i>Ken Janeck</i>	H-2	E. June	Medium	Pink to white	None
<i>King Tut</i>	H-2	E. June	Medium	Pink	Slight
<i>Lee's Dark Purple</i>	H-2	E. June	Tall	Purple	Slight
<i>Lodestar</i>	H-2	E. June	Medium	White	None
<i>Madras</i>	H-2	E. June	Medium	Red	None
<i>Mars</i>	H-3	E. June	Medium	Red	Slight
<i>Meadow Brook</i>	H-2	M. May	Medium	Pink-white	None
<i>Nova Zembla</i>	H-1	E. June	Tall	Red	None
<i>Old Port</i>	H-2	L. May	Tall	Red purple	Slight
<i>Opal</i>	H-2	M. June	Tall	Pale lavender	None
<i>Pink Cameo</i>	H-2	L. May	Medium	Pink	None
<i>Pinnacle</i>	H-2	E. June	Tall	Pink	Slight
<i>Ritchie</i>	H-2	L. May	Medium	Purple/blotch	None
<i>Rochelle</i>	H-2	L. May	Medium	Rose/blotch	None
<i>Rocket</i>	H-2	L. May	Tall	Coral to pink	Slight
<i>Scintillation</i>	H-2	L. May	Medium	Pink	None
<i>Sham's Ruby</i>	H-2	L. May	Medium	Red	None
<i>Slippery Rock</i>	H-1	L. May	Tall	Red purple	None
<i>Stokes Bronze Wings</i>	H-1	M. June	Tall	Pink/blotch	None
<i>Tony's Gift</i>	H-2	L. May	Medium	White/blotch	None
<i>Wheatley</i>	H-3	E. June	Medium	Pink	Slight
<i>Wyandanch Pink</i>	H-2	L. May	Tall	Rose pink	None
<i>Yaku Prince</i>	H-2	L. May	Medium	Red to apple blossom	None
<i>Yaku Princess</i>	H-2	L. May	Medium	Pink to white	None

TABLE 3 (cont'd.)
Elepidote Rhododendron cultivars grown at the Horticultural Research Institute, Vineland Station,
or known to be grown in the Niagara Region

Name	Hardiness Rating	Bloom Date	Height	Color	Plant & Bud Injury
New cultivars selected from the Rhododendron Breeding Program at the H.R.I.O. Vineland Station					
<i>Vinebelle</i>	H-2	L. May	Tall	White	Slight
<i>Vinecrest</i>	H-2	M. May	Medium	Yellow	None
<i>Vinedale</i>	H-2	L. May	Tall	Lav/pink/blotch	None
<i>Vinemount</i>	H-2	L. May	Tall	Rose/blotch	None
<i>Vinerouge</i>	H-2	L. May	Medium	Red	None

TABLE 4
Evergreen Azalea cultivars grown at the Horticultural Research Institute, Vineland Station,
or known to be grown in the Niagara Region

Name	Hardiness Rating	Bloom Date	Height	Color	Plant & Bud Injury
<i>Alexander*</i>	H-3	L. June	Low	Red	—
<i>Amoena</i>	H-2	L. May	Medium	Pink	None
<i>Boudoir</i>	H-2	L. May	Medium	Rose pink	None
<i>Cascade</i>	H-2	L. May	Medium	White	None
<i>Desiree</i>	H-2	L. May	Medium	White	None
<i>Elsie Lee</i>	H-2	L. May	Medium	Lavender	None
<i>Girard's Rose</i>	H-3	L. May	Low	Rose	Slight
<i>Helen Curtis</i>	H-2	L. May	Medium	White	None
<i>Herbert</i>	H-2	L. May	Medium	Purple	None
<i>Hino-Crimson</i>	H-3	L. May	Medium	Red	Slight
<i>Louise Gable</i>	H-3	L. May	Medium	Rose pink	Slight
<i>Maries Choice</i>	H-3	L. May	Medium	White	Slight
<i>Maybelle</i>	H-3	L. May	Medium	Pink	Slight
<i>Mt. seven star*</i>	H-3	L. June	Low	Pink	—
<i>Palestrina</i>	H-2	L. May	Medium	White	None
<i>Phyllis Moore</i>	H-2	L. May	Medium	White	None
<i>Pink Pancake*</i>	H-3	L. June	Low	Pink	—
<i>Purple Splendor</i>	H-2	L. May	Medium	Purple	None
<i>Rosebud</i>	H-2	E. June	Medium	Rose	None
<i>Stewart stonian</i>	H-2	M. May	Medium	Red	None

**Nakaharai Hybrids*

TABLE 5
Deciduous Azalea Cultivars grown at the Horticultural Research Institute, Vineland Station,
or known to be grown in the Niagara Region

Name	Hardiness Rating	Bloom Date	Height	Color	Plant & Bud Injury
<i>Annabella</i>	H-2	E. June	Medium	Orange Apricot	None
<i>Ballerina</i>	H-2	E. June	Medium	White	None
<i>Berry Rose</i>	H-2	E. June	Medium	Orange - red	None
<i>Bouquet de Flore</i>	H-1	L. May	Tall	Orange - red	None
<i>Brazil</i>	H-2	E. June	Tall	Orange	None
<i>Chelsea Reach</i>	H-2	E. June	Tall	Cream	None
<i>Coccinea Speciosa</i>	H-1	L. May	Tall	Orange	None
<i>Debutante</i>	H-2	E. June	Medium	Pink	None
<i>Fanny</i>	H-1	L. May	Tall	Violet - red	None
<i>Gibraltar</i>	H-2	E. June	Medium	Orange	None
<i>Homebush</i>	H-2	E. June	Tall	Neyron - rose	None
<i>J. Jennings</i>	H-2	E. June	Medium	Red	None
<i>Kathleen</i>	H-2	E. June	Tall	Pale Salmon	None
<i>Klondyke</i>	H-2	E. June	Tall	Tangerine	None
<i>Nancy Waterer</i>	H-1	L. May	Tall	Yellow	None
<i>Narcissiflora</i>	H-1	L. May	Tall	Yellow	None
<i>Oxydol</i>	H-2	E. June	Medium	White	None
<i>Pallas</i>	H-1	L. May	Tall	Orange - red	None
<i>Pavanne</i>	H-2	E. June	Medium	Peach pink	None
<i>Strawberry Ice</i>	H-2	E. June	Medium	Chinese coral	None
<i>Sweet Sue</i>	H-2	E. June	Medium	Purple - pink	None
<i>Vineland Flame</i>	H-2	E. June	Tall	Red	None
<i>Vineland Flare</i>	H-2	E. June	Tall	Yellow	None
<i>Vineland Glow</i>	H-2	E. June	Tall	Orange - red	None
<i>Vineland Sensation</i>	H-2	E. June	Medium	Pink	None

COMPANION PLANTS

There are a large number of plants that enjoy the same acid soil conditions as Rhododendrons and Azaleas.

Small Trees

Acer japonicum
Cornus
Halesia
Ilex (holly)
Oxydendron
Styrax

Shrubs

Calluna
Enkianthus
Erica
Kalmia
Leucothoe
Pieris
Vaccinium

Wildflowers

Cornus canadensis
Epigaea
Erythronium
Gentian
Lobelia cardinalis
Primula
Sanguinaria canadensis
Trillium

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