'Morden Fireglow' Rose

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The breeding program at the Morden Research Station is designed to develop hardy, attractive roses for Canadian prairie conditions. Cultivars developed from this program are known collectively as the Parkland Rose Series of which there have been eight previous introductions (Marshall, 1977). 'Morden Fireglow' is the newest cultivar and

combines winter hardiness with a unique scarlet-red flower, a color rarely seen in hardy roses. The color is due to the presence of three anthocyanins: cyanin, peonin, and pelargonin. 'Morden Fireglow' is believed to be the first cultivar developed through the selection of its parents on the basis of a chromatographic determination of anthocyanin pigment content (Marshall, 1975). High contents of pelargonin typically give scarlet-red flowers, but as the genes for this pigment have recessive characteristics (Marshall et al., 1983), one cannot reliably select parents on the basis of visual flower color. Pigments of

potential parents were analyzed using paper chromatography techniques (Marshall, 1975). Visual ratings of the chromatographic pigment spots were assigned as 0 = no pigment to 5 = intensely colored. The female parent of 'Morden Fireglow', an unnamed selection, F5, had ratings of 4- cyanin, 0- peonin, and 3- pelargonin. The male parent, 'Morden Cardinette', had ratings of 3- cyanin, 4- peonin, and 0 - pelargonin (Marshall et al., 1983).

Looking at the anthocyanin ratings of the parents and knowing the recessive behavior of pelargonin, one would not expect the expression of pelargonin in 'Morden Fireglow'. However, although pelargonin behaves as a recessive, there appears to be an interaction between peonin and pelargonin as shown by the negative correlation between these two pigments (Marshall et al., 1983). 'Morden Fireglow' is an example that shows that pelargonin can be derived from peonin, as noted by Marshall et al. (1983).

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Fig. 1. Pedigree of 'Morden Fireglow'. The terms F5, E0, 84, and 34 are unnamed seedling selection codes.

Fig. 2. Flower of 'Morden Fireglow'

Origin

'Morden Fireglow' was developed using the following parents: *R. arkansana* T. Porter, 'White Bouquet' (floribunda), 'Prairie

Princess' (*R. laxa* Retz. hybrid), and the three *R. arkansana* cultivars 'Assiniboine', 'Morden Amorette', and 'Morden Cardinette' (Fig. 1).

Description

'Morden Fireglow' is a hardy, low-growing, everblooming plant. Plants have consistently survived winters in Agriculture Canada Zones 2b, 3a, and 3b (Ouellet and Sherk, 1967). Field resistance to local populations of powdery mildew [*Sphaerotheca pannosa* (Wallr. ex Fr.) Lev.] and rust (*Phragmidium*) has been good, while field resistance to blackspot (*Diplocarpon rosae* Wolf.) is fair. Plant height averages 0.7 to 1 m and width averages 0.6 m. The average number of leaflets is seven, and may range from five to nine. Each leaflet is 2.3 to 2.8 cm wide, 3.5 to 4.0 cm long, elliptic, serrate, and yellow-green [RHS 147A-B (Royal Horticultural Society, 1986)]. Thorns are 0.7 cm long, dilated at the base, pointed slightly downward, and light brown to tan in color.

The flower bud is pointed and scarlet-red (RHS 43A-B). Flowers are borne singly or in clusters of one to five and are cupped (Fig. 2). Flowers are 6 to 8 cm in diameter, scarlet-red, (RHS 44A-B fading to 44C-45B,C) and average 28 petals. They are produced on current season and older stems throughout the season.

Plants are grown on their own roots and are propagated by softwood stem cuttings. It is important to grow the Parkland Roses on their own roots to eliminate suckering of the rootstock that is prevalent in cold climates.

Availability

'Morden Fireglow' is registered with the American Rose Society (International Registration Authority) and the Canadian Ornamental Plant Foundation (COPF), P.O. Box 725, Durham, Ont. NOG 1R0. A limited supply of propagating material is available from the Research Station, Morden, to COPF members for commercial production, and to research institutions for test purposes. Agriculture Canada reserves the right to collect royalties from this cultivar.

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