No Spray Rose Trial

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Nature of Work: Successful gardening with roses in the humid southeastern U. S. has a tradition of requiring a regular pest management program. Among the problems cited when growing roses in the southeast are blackspot, canker, mildew, Japanese beetles, aphids, thrips and deer (Dirr). Shrub roses are alleged to have fewer of these problems. However, ninety cultivars of just one species are listed by Verrier.

In an attempt to evaluate twelve commonly available shrub roses which are marketed as being carefree or low maintenance, a no spray rose trial was established at Mountain Horticultural Crops Research and Extension Center, Fletcher, NC. Bare root plants were obtained in early summer 1993, planted into 3 gallon containers in a container medium consisting of 8 pine bark:1 sphagnum peat to which 7 lbs of dolomitic limestone and 1.5 lbs of Micromax per yard was added and thoroughly mixed prior to planting. Osmocote 18-6-12 controlled release fertilizer was applied topdressed the day after planting at the rate of 50 g. per pot. Winter protection was provided in an unheated white plastic covered greenhouse.

Three plants of each cultivar were established in unamended soil beds in early April 1994 in a completely random design then pruned to a cane length of approximately 15 inches. Plants were mulched with compost then fertilized a week after planting with Osmocote 18-6-12 at the rate of 3 lbs Nitrogen per 1000 sq. ft. No irrigation or pesticides were applied to this rose bed in 1994. Sixty-eight and two tenths inches of rainfall was recorded at MHCREC during 1994 with 40.9 inches falling during the April through October growing season (1.32 in. per week).

Monthly visual evaluations for plant performance were collected. Maximum height and width measurements were recorded in December 1994.

Results and Discussion: Comments regarding individual plants follow. Plant habit and general attractiveness were considered as important as pest resistance. It should be noted that plants of 'Alba Meidiland' and 'Scarlet Meidiland' were vigorous growers, achieving an average width of over 10 ft. in one growing season in the bed. Both cultivars tip layered into the mulch creating a colony of each cultivar.

Alba Meidiland - A low growing plant with abundant leathery dark green leaves which grew to an average of 11.8 ft. wide in one year while tip layering repeatedly in mulch. Small double white flowers appeared from June until autumn.

Alba-plena - A selected mutation of *Rosa rugosa* 'Alba.' Flowers are double, pure white and fragrant. It has dark green foliage and a dense, low habit growing up to 4 ft. tall. This cultivar does not produce hips. Fall foliage is yellow to orange. Overall, a consistently attractive plant.

Blanc Double de Coubert - Similar to 'Alba-plena'. Flowers are semidouble to double, pure white with showy yellow stamens. It is a vigorous grower with glossy, dark green foliage which turns yellow in fall.

Bonica - This was the first introduction in the Meidiland series and the first shrub rose ever to win All American Rose Selection honors. Flowers have medium pink buds that open to fully double and pastel pink 3 in. wide. Flowers are produced throughout the season but most heavily in spring. Hips are bright orange-red. Habit is upright and arching. Grew to three ft. high by five ft. wide in one year. No fall foliage color change.

Fru Dagmar Haustrup - Most attractive cultivar overall in tests so far. It produces abundant, season long blooms. The single flowers are fragrant and pale pink with showy yellow stamens. Large, plentiful tomato-red hips are produced in full color by mid summer. Foliage is rich dark green turning an excellent yellow to orange in fall. Possesses a neat mounding habit at 3.5 ft. in one year.

Linda Campbell - This vigorous grower has flopping canes that occasionally break in the wind. Crimson flowers, mid green foliage and fewer thorns than other rugosas make this the red flowering rose that first attracts visitors' attention. It grew to three ft. tall by six ft. wide in one year.

Pink Meidiland - The single 2 to 2.5 in. diameter coral pink with white center flowers open from spring to frost and are followed by small reddish fruits. This was the smallest bush of the Meidiland roses in the test with an upright habit, growing to three ft. tall by six ft. wide in one year.

Roseraie de l'Hay - A cultivar of a sport of *R. rugosa* 'Rosea.' Numerous large fully double fragrant flowers appear in clusters in June then sporadically throughout the season. Few hips developed. It grew four feet tall and wide with an open habit after one year.

Rugosa alba - This cultivar of unknown origin had single, white 4 in. slightly fragrant flowers with showy yellow stamens. Orange hips became apparent late in the growing season. This bush has an open upright habit growing to four feet high and wide in one year. Fall foliage is a clear yellow. Spring vegetative growth is slowest to begin of all the roses tested.

Sarah van Fleet - A hybrid with large, double, rose-pink fragrant flowers. Hips are small, green and unattractive. The sprawling, open habit was very leggy. It grew to 4 ft. high by 5.5 ft. wide in one year.

Scarlet Meidiland - Plentiful double 1.5 to 2.0 in. diameter scarlet flowers appeared in early summer then occasionally until frost. Abundant glossy rich green foliage was produced on a bush averaging 2.5 ft. tall by 10.1 ft. in a year. This cultivar tip layered into mulch occasionally but not nearly as often as 'Alba Meidiland.'

Topaz Jewel - This is one of the few yellow flowered rugosa roses and a favorite of visitors. It was a recurrent bloomer with 4 in. diameter semidouble, light yellow flowers and showy orange stamens. It possessed a dense, bushy habit growing to 3.5 ft. tall and wide after one year.

Significance to the Industry: During the 1994 growing season, none of the plants in the test displayed blackspot or canker. Powdery mildew (*Erysiphe cicharocearum*) was a problem only on the cultivar 'Sarah van Fleet.' Petal blight (*Botrytis cinerea*) was a consistent problem on 'Linda Campbell' and 'Rosarie de l'Hay' but may have been reduced or controlled by judicious removal of spent blooms.

All plants became infested with aphids during the spring flush of growth but no growth distortion resulted, possibly because aphid predators in the form of ladybugs arrived soon after the aphids. Japanese beetles were a problem on the foliage of only 'Sarah van Fleet' but they were consistently a problem in consuming flower petals, particularly on Rugosa alba.

Contrary to the performance of other shrub roses, all of these were repeat bloomers. Some, such as 'Fru Dagmar Haustrup' produced at least three distinct crops of flowers followed by hips so that flowers and hips were prominent at the same time after mid summer.

Literature Cited

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