

'Viking' Red Currant

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Abstract

Ribes petraeum Wulf x *R. rubrum* L. cv. Viking originated in As, Norway as 'Rote Hollandische' but was renamed in the United States. Glen G. Hahn originally imported this clone in the early 1930's because of its resistance to white pine blister rust, *Cronartium ribicola* J. C. Fischer. Hahn renamed the cultivar for the United States market to prevent confusion with *R. rubrum* cv. American Red Dutch, which was rust susceptible. 'Viking' is a vigorous, good-yielding, cold hardy cultivar with resistance to North American diseases and pests. White pine blister rust uredia have not been observed on leaves of this cultivar under natural field conditions throughout the United States, although susceptibility to rust has been reported under highly infective laboratory conditions.

Nomenclature and Synonymy

'Viking' a robust hybrid of *Ribes petraeum* Wulf x *R. rubrum* L., was imported in the early 1930's to assist in the study of white pine blister rust, *C. ribicola* A. Fisch. Although the red currant cultivar name 'Viking' was first published in the United States in the mid-30's (5), the currant was actually an old European variety known under several synonyms in the horticultural literature since the early 1800's. In Europe, the plant was known as 'Rod Hollandsk Druerips' in Scandinavia and as 'Rote Hollandische' in Holland, Germany, and Switzerland (2, 5). According to Glenn G. Hahn, a U. S. Department of Agriculture Forest Pathologist, working in cooperation with Yale University in New Haven, Connecticut, "it was deemed advisable to report the foreign introduction under a new name in order that it would not be confused with our domestic rust-susceptible red currant variety, the 'American Red Dutch'" (5).

Plant Habit, Flowering, and Fruiting

Although 'Viking,' (or 'Rote Hollandische') is scarcely planted in Europe this cultivar is commercially available in the United States. In Corvallis, Oregon, the cultivar grows vigorously, with healthy green leaves, and a distinct, erect habit. The flowers, which bloom during the last week in March, are cup-shaped with a

green-yellow hypanthium and light yellow sepals having red dots. The anthers are inserted. The deep-red, translucent fruit ripen about 4 July and harvest season lasts about 1 to 2 weeks. Fruit size, calculated from the weight of 50 berries, is 0.68 g/berry; average strig length, calculated from 10 strigs, was 8.6 cm with about 13 to 20 berries per strig (Table 1). 'Viking' ripens later and has a higher yield than most red cultivars (Table 1). However, the newer cultivar, *R. rubrum* L. cv. Rovada, has higher yield and larger fruit (Table 1). 'Viking' berry size is about average although fruits per strig is high for an older cultivar. Premature fruit fall of currants is termed "run-off," and is measured in percent determined by (the number of empty pedicles on the strig at harvest divided by the total number of pedicles of the strig) times 100. Fruit run-off for 'Viking' was 9% in 1995 but was 27% in 1997 (data not shown). In 1997, the ripening season was compressed and run-off was higher for most cultivars. In the United States, red currants have limited commercial production. 'Viking' is grown in the home market for jams, jellies, and fresh fruit production.

Diseases and Pests

'Viking' is resistant to powdery mildew, *Sphaerotheca mors-uvae* (Schwein.) Berk. & Curt., on leaves and fruit, and was only

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Table 1. Fruit characters of selected red currants (*Ribes rubrum* L.) evaluated in the field collection of the U. S. Department of Agriculture, Agricultural Research Service, National Clonal Germplasm Repository, Corvallis, Oregon, in 1995.

Cultivar	Harvest	Yield ²	Fruit size g ⁻¹ berry	Strig length ^y cm	Fruits per strig ^y	Run-off ^y %
Cascade	June 28	6	1.15	5.3	11.6	15.5
Minnesota 69	June 28	7	0.78	9.0	15.4	11.7
Jonkheer van Tets	June 30	6	0.86	9.2	17.0	8.2
Heros	July 7	7	1.01	12.3	19.6	13.8
Red Lake	July 7	3	0.82	8.9	16.6	15.7
Cherry	July 11	7	0.60	7.8	16.0	3.8
Fay	July 11	7	0.75	7.2	12.8	11.7
Viking^x	July 19	8	0.68	8.6	20.0	9.0
Redstart	July 24	8	0.56	10.1	23.5	8.1
Rovada	July 28	9	1.00	22.4	41.7	6.9

²Yield rated pre-harvest 1 = least to 9 = most.

^yCalculated as an average of 10 strigs at full fruit maturity.

^x*R. petraeum* Wulf x *R. rubrum* L. cv Viking.

slightly infected by gray mold, *Botrytis cinerea* Pers., and leaf spot, *Drepanopeziza ribis* (Kleb.) Hohn (Table 2). Although 'Viking' canes were infested with cane borers, *Synathedon eipuliformis* Cl., the leaves were only slightly infested with aphids *Capitophorus ribis* L., and were unaffected by sawflies, *Pachynematus* spp. (Table 2).

Tubuef (7) performed comparative susceptibility to white pine blister rust on a large number of *Ribes* cultivars and species in Munich, Germany. After intensive study from 1928 through 1932, Tubuef concluded that 'Rote Holländische' was immune to rust. Glenn G. Hahn heard about this cultivar and had it imported from As, Norway into Scotland.

Table 2. Disease and pest characteristics of ten red currants, *Ribes rubrum* L. taken at the US Department of Agriculture, Agricultural Research Service, National Clonal Germplasm Repository, Corvallis, Oregon in 1997. Ratings from 1 = no pest present to 9 = severe. Powdery mildew = *Sphaerotheca mors-uvae* (Schwein.) Berk. & Curt., gray mold = *Botrytis cinerea* Pers., leaf spot = *Drepanopeziza ribis* (Kleb.) Hohn, aphids = *Capitophorus ribis* L., cane borers = *Synathedon eipuliformis* Cl., sawfly = *Pachynematus* spp.

Cultivar	Mildew		Gray mold ²	Leafspot ²	Aphid	Caneborer	Sawfly
	leaf	fruit					
Cascade	2	1	1	2	1	3	3
Cherry	3	1	3	2	5	3	1
Fay	2	1	2	2	3	1	1
Heros	3	1	2	1	3	3	1
Jonkheer van Tets	3	1	1	2	3	2	2
Minnesota 69	3	1	2	2	5	5	1
Red Lake	7	1	1	2	1	3	1
Redstart	5	1	2	2	3	3	1
Rovada	1	1	2	1	1	3	1
Viking^y	2	1	2	2	2	3	1

²Rating for this column was collected in 1995.

^y*Ribes petraeum* Wulf x *R. rubrum* L. cv. Viking.

Hahn performed more rust inoculation testing in Scotland. He observed the invasion of the leaves by *C. ribicola* at different stages of leaf development, and found that the infectious agent could not be established within the leaf (3). Rust uredia did not form on 'Viking' leaves (1, 5). Hahn then introduced the plant, under the name of 'Viking,' throughout the United States and Canada in the mid 1930's. No rust uredia formed on this cultivar in field trials in Maine, New Hampshire, Massachusetts, Connecticut, New York, Oregon, Minnesota, and Ottawa, Canada (4). Hahn also mentioned that 'Viking' seemed homozygous for rust resistance (3). In 2000, Paul Zambino, Plant Pathologist with the U. S. Department of Agriculture, Forest Service, Rhinelander, Wisconsin, inoculated 'Viking' leaves with a suspension of single spore lines of 21 strains of rust (8). He observed that uredia formed on 'Viking' leaves under conditions of 100% relative humidity with alternating temperatures, after a 3 week incubation period (8). This result is in sharp contrast to previous experiments (1, 5) both within the laboratory and under field conditions. Zambino (8) concluded that perhaps the identity of 'Viking' was different than that used by Hahn (5), but perhaps Zambino's laboratory inoculation procedures greatly favored infectivity of the rust.

In agreement with Hahn's (5) and Anderson's (1) observations, but in contrast with Zambino's laboratory study (8), no rust uredia were observed on field grown 'Viking' plants in Corvallis from 1995 through 1997 (6) or at Cottage Grove, Oregon in 1999 (R. Snieszko, per. comm.) Overall, 'Viking' is one of the more resistant red currant cultivars to North American pests and diseases.

Cold Hardiness

'Viking' produces and grows well in locations where winter minima is -40° C or higher, particularly in Canada and the northern tier of the United States. 'Viking' yields consistently in Palmer-Anchorage vicinity, but production is inconsistent in the Fairbanks-North Pole, Alaska, vicinity

where winter minimum may be as low as -60° C (E. Bostrom, per. comm.).

Summary

'Viking' red currant is a vigorous, good yielding, cold hardy cultivar with fair resistance to North American diseases and pests. Neither white pine blister rust uredia or telia have been observed on leaves of this cultivar in field trials. 'Viking' could serve as valuable parental stock for development of rust-resistant red currant cultivars.

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