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LLOYD GEORGE AND CHIEF RASPBERRIES

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*The studies on which this circular is based were carried on cooperatively by the Bureau of Plant Industry, U.S. Department of Agriculture, and the Oregon Agricultural Experiment Station.

The Lloyd George and Chief raspberries are two new red varieties of promise under Northwestern conditions which are worthy of extensive trial: the Lloyd George as a commercial shipping, canning, and barreling sort to be grown with or to replace the Cuthbert, and the Chief as a very early market and home garden sort. This report is based on studies of a 3-year-old planting at Corvallis, Oregon and of the varieties elsewhere. Results are not yet conclusive, but appear sufficient to justify trial plantings on a commercial basis.

Lloyd George

The Lloyd George is recommended because the plants under trial have so far been hardier and more productive than Cuthbert; the fruit ripens about 10 days before the Cuthbert and the plants bear a fall crop in the Northwest; it is the largest of the commercial varieties yet tested, many berries being as large as the average Logan berry; the berries are very uniform in size and hold up well through the season; they are firmer than the Cuthbert, having a thicker flesh. Its weaknesses are (1) the flavor is not quite so appealing to many as the Cuthbert, the berries being less sweet, and (2) the canes are not so tall so that more stooping is necessary in picking.

The Lloyd George originated as a change seedling in England and was introduced there in 1920. It is now a leading sort there. It was introduced into this country in 1924 and tested by the New York State Experiment Station at Geneva, recommended by them in 1928, and plants were sold by the New York State Fruit Testing Association at Geneva, New York in the fall of 1929. It has also been tested in Canada and is recommended for the milder sections. It has not been hardy in parts of New Jersey and Maryland but is probably adapted to Northeastern regions which have no open periods during the winter.

The plants of Lloyd George are subject to virus diseases but not more so than the Cuthbert and carefully inspected stocks are available. They produce suckers as freely as does the Cuthbert. In New York it is said to succeed best on heavy soils. The canes are stocky but can not hold up the load of fruit without support. The foliage is dark green on the upper surface and light green

underneath. The prickles are short, purple in color and fairly abundant. The canes turn gray during the winter. Two or more strong buds are produced in the axil of each leaf and there is usually at least one strong fruit cluster at each node. On an average 4 1/2-foot cane there were 35 fruit clusters with an average of 9.2 berries each as compared with an average of 17.7 fruit clusters with 8.4 berries each for a 4 1/2-foot cane of Cuthbert or over twice as many berries per unit of cane length. The Cuthbert, however, produces the longer canes. The Lloyd George matures its fruit early and has a long fruiting period. Not only does it bear a hoavier spring crop than the Cuthbert, but at Corvallis, Oregon it has borne a crop of over a ton to the acre on the tips of the young canes beginning about September 1 and continuing until frost. The same young canes bear again in the spring.

The fruit is a brighter, more attractive red than that of the Cuthbert but turns nearly as dark when over-ripe. The berries are large, averaging 171 to the pound, but the larger ones average 106 per pound as contrasted with Cuthbert under similar conditions which averages 210 per pound, and the Logan berry 98 per pound. The berries are long and more cylindrical but not as conic as those of the Cuthbert. The flesh is thick, making the berries heavier than those of most sorts. In one test the berries averaged about 13 per cent larger but about 23 per cent heavier than Cuthbert. The quality is better than that of many raspberry varieties but it is not as sweet as the Cuthbert. It has been tested for canning and is considered promising. Because of its firmness and attractive appearance it may be a very satisfactory shipping variety. It should receive a thorough trial in the Northwest.

Chief

The Chief is recommended for trial because the plants apparently are hardier and more productive than the Cuthbert; the fruit ripens at Corvallis, Oregon about two weeks before the Cuthbert and is of excellent flavor. Its weaknesses are (1) the plants are subject to "wilt" and (2) the berries are not as large as those of the Cuthbert.

The Chief originated at the Minnesota State Experiment Station as seedling of Latham selfed, (Latham being King X Louden) and was introduced in 1930. It has borne full crops in northern Minnesota and North Dakota when even the hardy Latham was killed back to the ground by the cold of winter. It has also proved to be nearly as hardy as Latham in the open winter climate of Maryland. It is now being grown extensively in Minnesota and is being widely tested in eastern regions.

The plants are subject to Verticillium wilt, sucker freely, and produce stocky strong cames that need less support than many sorts. The cames have few prickles and have a bright red color. Most of the buds develop into fruit clusters, a single strong came having 44 fruit clusters with an average of 10.4 berries each. It matures very early, being a few days ahead of the Lloyd George.

The fruit is bright attractive red and does not turn dark as does the Cuthbert. They are smaller than the Cuthbert, averaging about 250 berries per pound, when the Cuthbert average 210 per pound. The berries are nearly round and are uniform in size throughout the season. The quality is very good and nearly equal to that of the Cuthbert. Canning tests gave it a rating in flavor equal to the Cuthbert but apparently of too small size to be important commercially

Because of its hardiness, earliness, productiveness, and dessert quality it may possess some advantages for the local market and for home use in the North-west.

Certified stock of these two varieties is available from eastern nurseries, a list of which may be obtained from the Oregon State College. Special care should be taken that stock certified as being free from virus diseases be gotten. Because of the danger of bringing in virus diseases, the State Coll ege cooperating with the U. S. Department of Agriculture is testing new varieties at Corvallis, Oregon, and reports are issued on promising new sorts.

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