

## Bush Fruits-Cultivation, Diseases and Remedies-Article II.

By W. T. Macoun, Horticulturist of the Dominion Central Experimental Farm

medium in quality. Ripens somewhat unevenly. Season late. Not desirable. unevenly. Season late. Not desirable. Bang Up—A strong grower, moderately productive. Fruit above medium to large, in medium bunches; skin moderately thick; briskly subacid; medium to above medium in quality. Ripens evenly. Season medium. One of the best English varieties. Said by some to be the same as English, but is different as grown here. Buddenborg—A strong grower;

best in quality. More productive than Victoria Black.

Champion—A medium grower; unproductive. Fruit medium to large in size, but in small clusters; skin thick; subacid, of good flavor; quality above medium. Ripens unevenly. Season late. Not desirable.

Collins Prolific—This is a Canadian variety. A strong grower and productive. Fruit mostly large and in large bunches; skin thick; acid; medium in quality. Ripens rather unevenly. Season late. One of the best commercial varieties on the market, although Saunders, Kerry, Eclipse and Clipper are better.

English—A wadium grower; unproductive bunches large. Fruit above medium to large. Skin moderately thick, fairly tender; briskly subacid; of good flavor; quality good. Season medium to large. Skin moderately thick, fairly tender; briskly subacid; of good flavor; quality good. Season medium to large. Fruit above medium to late. One of the most promising.

Ethel—Bush a strong grower and productive. Bunches large. Fruit although Saunders, Kerry, Eclipse and Clipper are better.

English—A wadium grower; unproductive bunches large. Fruit above medium size; skin rather thick; briskly subacid; was a medium to large. Skin moderately thick, fairly tender; subacid; quality good; ripens evenly. Season early. Promising on account of productive. Bunches large. Fruit above medium to large. Skin moderately thick, fairly tender; subacid; of good flavor; quality good. Season medium to large. Skin moderately thick, fairly tender; subacid; of good flavor; quality good. Season medium to large. Skin moderately thick, fairly tender; subacid; of good flavor; quality good. Season medium to large. Fruit above medium to large. Skin moderately thick, fairly tender; subacid; of good flavor; quality good. Season medium to large. Skin moderately thick, fairly tender; subacid; quality good. Season medium to large. Skin moderately thick, fairly tender; subacid; quality good; ripens evenly. Season early. Promising good; ripens evenly. Season early. Promising good; ripens evenly. Season early. Promi

moderately productive. Fruit medium to above medium size in medium to

sufficiently productive.

Ismay Prolific—A medium grower;
unproductive. Fruit medium to above medium in size in small bunches; skin thick; briskly subacid; above medium in quality. Season late. Not Kentish Hero-A medium, spreading

productive. Fruit medium to skin rather thick; briskly sub-

Marveille de la Gironde—A very strong grower and productive. Fruit below medium to medium in size, in medium to large bunches; skin moderately thick, tender; briskly subacid, good flavor; good quality. Ripens evenly. Season medium to late. One or the best in quality, but rather small.

Neeles A strong terms of the season array (Houghton X. Houghton X.

ductive. Fruit of medium size in small bunches; skin thick; briskly subacid; medium to above medium in quality. Season late. Not sufficiently quality. So

Ogden—Bush, a medium to strong grower, and the most productive black currant tested. Bunches medium to save, below max and Eagle, and the Success for small. Fruit uneven in size, below medium to above medium; skin moderately thick, fairly tender; briskly subacid; quality medium. Ripens unsubacid; quality medium. Ripens unsubacid; quality medium. Ripens unsubacid; quality medium to strong grow-like the series of the heaviest that could be obtained, and to make the conditions more favorable clay was drawn and mixed with the soil. None of the varieties have done well, but below will be found descriptions of the eleven which have scriptions of the eleven which have grow-like favorable clay was drawn and mixed with the soil. None of the varieties have done well, but below will be found descriptions of the eleven which have scriptions of the eleven which have grow-like favorable clay was drawn and mixed with the soil. None of the varieties have done well, but below will be found descriptions of the eleven which have grow-like favorable clay was drawn and mixed with the soil. None of the varieties have done well, but below will be found descriptions of the eleven which have grow-like favorable clay was drawn and mixed with the soil. None of the varieties have done well, but below will be found descriptions of the eleven which have grow-like favorable clay was drawn and mixed with the soil. None of the varieties have done well, but below will be found descriptions of the eleven which have grow-like favorable clay was drawn and mixed with the soil. None of the varieties have done well, but below will be found descriptions of the eleven which have grow-like favorable clay was drawn and mixed with the soil. None of the varieties have done well, but below will be found descriptions of the eleven which have grow-like favorable clay was drawn and mixed with the soil. None of the varieties have done well, but below will be found descriptions of the eleven which have grow-like favorable clay was drawn and mixed with the soil. Bush, a medium to strong Prince—A medium to strong grow-r; unproductive. Fruit medium to arge, in small bunches; briskly sub-

above medium in quality. Sea-ate. Not sufficiently productive Victoria—Originated in England. A moderately strong grower and moder-ately productive. Fruit large to very good flavor; good quality. somewhat unevenly. Season to late. One of the best medium to late. One of the best English varieties and one of the larg-

dum to strong grower and moderately productive. Fruit medium to large, in

good. Ripens unevenly. Season medium. Promising on account of productiveness. Eagle—A strong grower and pro-ductive. Fruit medium to large,

mostly large, in medium bunches; skin moderately thick; briskly subacid; medium quality. Ripens somewhat unevenly. Season medium. Although medium to above medium in quality. Ripens evenly. Season medium. One of the best English varieties. Said by some to be the same as English, but is different as grown here.

Buddenborg—A strong grower; moderately productive. Fruit large to very large in medium bunches; skin moderately productive. Fruit large to very large in medium bunches; skin moderately thick; subacid; good flavor, good quality. Ripens fairly evenly. Season late: This is one of the largest fruiting varieties and one of the best in quality. More productive than Victoria Black.

Champion—A medium grower: un.

most promising.

Ethel—Bush a strong grower and productive. Bunches large. Fruit above medium size; skin rather thick; briskly subacid. Quality above medoriskly subacid. Quality above medium. Fruit ripens evenly. Season medium. Promising on account of productiveness and size of fruit.

Magnus—Bush a strong grower and very productive. Clusters medium in size Fruit love.

to above medium size in medium to large bunches. Skin rather thick and tough; subacid, of good flavor and good quality. Ripens unevenly. Season medium. Not sufficiently productive.

Gewohnliche—A medium to strong grower, only moderately productive. Gewohnliche—A medium in size, in small to medium in size, in small to medium in size, in small to medium bunches; skin medium; briskly subacid, above medium in quality. Ripens evenly. Season medium. Not desirable.

Grape—A strong, spreading grower; moderately productive. Fruit medium to above medium size in medium to above medium in quality.

Norton—A strong, rather spreading rower and wery productive. Clusters medium in gize. Fruit large; skin rather thick; subacid, of good flavor; quality good. Season medium. Promising on account of productiveness and size of fruit.

Magnus—Bush a strong grower and very productive. Clusters medium in size. Fruit large; skin rather thick; subacid, of good flavor; quality good. Season medium. Promising on account of productiveness and size of fruit.

bunches; skin moderately thick; brisksubacid, above medium in quality.
Norton—A strong, rather spreading
grower, moderately productive. Fruit
below medium to medium in size; skin
rather thick; briskly subacid, of good
flavor; good quality. Ripens rather
unevenly. Season medium.

Beauty—A medium grower, moderately productive. Fruit medium to above medium in size, in medium bunches; skin medium; briskly sub-Kentish Hero—A medium, spreading grower; moderately productive. Fruit uneven in size, medium to large in medium bunches; skin moderately thick; acid; medium quality. Ripens eunevenly. Season medium to late. Topsy—Bush a strong grower, moderately productive. Bunches large. Fruit above medium to large; clings well; rather thick; briskly subacid; good flavor; quality good to very good. Season medium. Ripens even large; skin rather thick; briskly sub-acid; above medium in quality. Season medium. Not nearly so productive as Saunders and Kerry.

Marveille de la Gironde—A very strong grower and productive. Fruit below medium to medium in size, in

Varieties of Black Currants Recom-mended.

Saunders, Collins Prolific, Buddenborg's, Victoria.

Of those not yet on the market
which are considered equal or better
than those above, the following are

At the Central Experimental Farm
106 English varieties have been tested,
many of them for about fourteen
years, for the purpose of learning
which would be freest from mildew.

Years, for the purpose of learning
which would be freest from mildew.

Years, for the purpose of learning
which would be freest from mildew.

Years, for the purpose of learning
The soil where they were fested is not roundish to eval vallowish than those above, the following are the best:

The soil where they were tested is not roundish to oval, yellowish green;

Kerry, Eclipse, Magnus, Clipper, Clias heavy as was desirable, but it was smooth; skin thick; briskly subacid;

## **ENGLISH GOOSEBERRIES**

In England the gooseberry is one of the most popular fruits, and great quantities of gooseberries are grown there every year. They are used to a large extent for eating out of hand (Cook's), Broom, Bumper, Carleton, when the but are much in deep the cook of when ripe, but are much in demand for making jam. Owing to the large size Chautauqua, Cheshire Lass, Clayton, and their popularity in Conquering Hero, Cox's Late Green, England, they were early imported into Ripens somewhat unevenly. Season medium to late. One of the best making jam. Owing to the large size and good flavor, and their popularity in Conquering Hero, Cox's Late Green, England, they were early imported into Crown Bob, Dan's Mistake, Dickson's Wales (Prince of Wales)—A medica, but it was soon found that Yellow, Duck Wing, Eagle, Early Or-

CRANDALL CURRANT

Cracial—Train—Train—Train—Cracial—Train—

Chapais, St. Denis, who lives in latitude 47 degrees 30, near the St. Lawrence nearly 10 miles below the city of Quebec. Mr. Chapais writes:

"In answer to your letter of January 28, asking for information on the English gooseberiers, I beg leave to English gooseberiers, I beg leave to say that I have had under cultivation the following: Chautauqua, Columbus, Golden Prolific, Industry, Keepsake, Lancashire Lad, Whitesmith. I have dropped Industry and Golden Prolific because they mildewed awfully; Keepsake and Lancashire Lad because they sake and Lancashire Lad because they did not amount to much as to bearing, and I have kept and consider as very good, highly productive and absolutely free from mildew the varieties Chautauqua, Columbus and Whitesmith. Columbus is the best of the three last mentioned. I have these under culture for over ten years. under culture for over ten years.

"I do not know much about other growers cultivating English gooseberries around here.'

Varieties of Gooseberries Recom-

American.—Pearl, Downing, Red Tacket.
English (from experience at the Cen-

Eagle, Glenton Green, Queen of Trumps, Snowball. English Varieties Usually Recom-

ended.-Whitesmith, Industry. Scalding of the Fruit

In a very hot, dry time, gooseberries are often scalded, become unfit for use and fall to the ground. If the gooseand fall to the ground. If the goose-berries are planted in heavy, cool soil and the ground kept well cultivated and the Saw-fly prevented from eating the foliage there will be little troub. Unfortunately, in many plantations the foliage is very scant, either on account of poor cultivation or injury from the worm of the Saw-fly, and it is under such conditions that the altho greatest injury occurs.

Diseases of the Gooseberry Gooseberry Mildew (Sphaerotheca and fruit. When the attack is bad it destroys the foliage, covers the fruit sprayings will be necessary, but if and causes most of it to drop. It weather is unfavorable more may h saps the growing shoots to such an ex-tent that they do not ripen properly, and dry up without setting fruit buds. season in the web-like covering which sprayed. coats the leaves, shoots and fruit. This is the mycelium from which is given ful as potassium sulphide, as one year's off the sports which propagate this test made showed that the disease disease. It is usually noticed first in the lower and most shaded parts of although the foliage was injured When the spores are being season. given off, the mildew has a powdery appearance. Winter spores are formed later which germinate in the spring. As the mycelium and spores are both on the surface it might be thought this disease could be easily controlled, but the weather conditions in this country seem so favorable to the development of spores that the goose-berry mildew spreads with great ra-pidity, and constant and thorough spraying are necessary to prevent it from doing so. American varieties are seldom affected by gooseberry mildew, although occasionally they are slightly attacked.

Experiments were conducted at the Farm in 1891, and the following results obtained:

1. Potassium sulphide, 1 oz. dissolv-

affected with mildew Calcium sulphide, 1 oz. to 2 gallons, The mildew on the fruit was lessened, but the foliage was destroyed by the

fungicide. Formalin, 1 oz. to 1 gallon. The results were not encouraging. While the fruit was not quite as bad as unspray-

ed it was unfit for market. Bordeaux mixture. While this kept the leaves in good condition, preventing the spread of mildew on them, the fruit was considerably affected and unfit for market.

Unsprayed. The leaves and fruit were badly affected.

In 1902 a determined effort was made to prevent the spread of mildew but it was only partially successful. Beginning when the leaf buds were breaking on April 18, the bushes were sprayed thoroughly every week with potassium sulphide in the proportion of 1 oz, to 2 gallons of water. This was continued until June 5, when traces of mildew being noticed the bushes were sprayed twice a week un-

til July 19, making 20 sprayings in all.

Notwithstanding the thorough and
constant application of this fungicide tral Experimental Farm).—Companion, the leaves dropped badly from most Eagle, Glenton Green, Queen of European varieties, though what fruit remained on the bushes was not nearly so much affected as usual. During the past few years asparagus

has been grown between the rows of gooseberries to afford shade, but it de-Remedies

Potassium sulphide (1 oz. to 2 gallons water), has on the whole given the hest results at the Experimental farm. although in some instances the foliage was injured by it. This remedy is recommended by the New York Experiment station, to whom belongs the credit of discovering it in 1887. Early mors-unvae).—The Gooseberry Mildew has prevented the general culture of the English gooseberry in America. This disease attacks the leaves, twigs week to ten days. About five or to be given. The bushes should sprayed from beneath as well as from above. The centre of the bush should It thus practically destroys the crop. receive the spray also. In fact, the The disease is apparent early in the whole bush should be thoroughly

From the experiments conducted at the Central Experimental farm fair results have been obtained by spraying with Bordeaux mixture when the buds are breaking, and again just b fore blooming, following as soon as flowers fall, and continuing at in vals of a week or ten days, with weak solution of Bordeaux mixture lb. to 160 gallons water, or with a moniacal copper carbonate. The spra ing must be thorough and persis are nearly full grown. The under of the leaves should be sprayed disease will not be checked. The applications are very important.

Leaf Spot .- Rust (Septoria ril The disease which causes the sof gooseberry leaves and their prematurely is the same as that affects currants, and may be dealt in the same way.

When a family has but one con been done. This is due to keeping new cream is mixed with the the butter is not good. avoided by churning more frequ it reaches the proper stage of ri and where there is a mixture of of different ages it is imposs



Pearl Gooseberry

one, the Topsy, or ten feet high is another. All these | Companion.-Fruit above medium methods are useful, but unless the air size, roundish, green, but with a more is moist above as it is cool and moist or less bronze shade, almost smooth; tive. is moist above as it is cool and moist or less bronze shade, almost smooth; below the conditions will be still more sweet, but skin is acid; good flavor; or less favorable for the development good quality.

of the disease. The conditions of a thickly planted garden, where there is partial shade, seem the most favorable.

At the Central Experimental Farm 106 English varieties have been tested, many of them for about fourteen growth and the purpose of learning dawny; sweet; good quality.

Eagle.—Fruit above medium size, oval to oblong; bright green, with paler stripes or veins, smooth; sweet, good flavor; quality good.

Glenton Green.—Fruit medium to small, oval, greenish yellow, slightly weets good quality. Topsy is very handsome and of good the soil. None of the varieties have ly downy; sweet good flavor; good

List of English Gooseberries Tested at the Central Experimental Farm, Ottawa

Admiration, Alcock, King, Alma, Am

D G

Queen of Trumps.—Fruit below medium size, oval, yellowish green, slight-Riccardo.—Fruit large, oval, dull or Mr. Stanley Spillett, Nantyr, Simcoe copper red, almost smooth; sweet,

sprightly, good flavor; quality very good. This is one of the best in qual-Snowball.-Fruit large, oval to oblong, bright green with paler stripes; ly mildewed that it all fell off. The smooth; moderately sweet; medium quality. Trumpeter.-Fruit large, oval to ob-

long, somewhat pear-shaped, yellowish green; smooth; skin thick; moderately sweet; quality medium. English Varieties Usually Recommended as Being Least Affected With Mildew

Green Ocean (Green).-Oblong in tive.
Conn or Autocrat (Dark green). About the same size as Whit

very productive, vigorous and hardy;

good quality.

Weatherall (Greenish yellow). Round, very large, slightly hairy, extra fine quality.

Sportsman (Dark red).—Not quite as large as Whitesmith; somewhat shy

bearer, but very early and high quality; one of the best for dessert. Experience of Stanley Spillett, Nantyl Ont., Formerly in Charge of one of the Ontario Fruit Experimental Stations

In the annual report of the Fruit Ex County, Ont., gives his experience with English gooseberries:

"The fruit of the foreign varieties, and their seedlings, was not affected by mildewed that it all fall of "".

1. Fotassium sulpnide, 1 oz. dissolved in 3 gallons of water gave the best results, keeping the foliage practically healthy and free from disease the whole season.

re of Wales)—A med as grower and moderately grower and moderately of the gooseberry mildew the briskly subacid, good unity. Ripens rather where the gooseberry grows.

Midew

"Large Golden Prolific, Columbia, England, Faithful, Fillbasket, Full Moon, Game Cock, Gascoigne, Industry (Whinham's).—Fruit medium to large, roundish to oblong, and the gooseberry grows. Where the gooseberry grows.

Where the gooseberry grows.

Midew

"Large Golden Prolific, Columbia, England, Faithful, Fillbasket, England, Faithful, Fillbasket, Industry (Whinham's).—Fruit medium to large, roundish to oblong, and are very much alike in fruit and that the gooseberry midew the ange, England, Faithful, Fillbasket, Industry (Whinham's).—Fruit medium to large, roundish to oblong, and are very much alike in fruit and the churned as the proper in the gooseberry midew the ange, England, Faithful, Fillbasket, Industry (Whinham's).—Fruit medium to large, roundish to oblong, and are very much alike in fruit and the churned as the proper in the gooseberry midew the ange, England, Faithful, Fillbasket, Industry (Whinham's).—Fruit medium to large, roundish to oblong, and the churned as the proper in the grower and moderately of the gooseberry midew the ange, England, Faithful, Fillbasket, Industry (Whinham's).—Fruit medium to large, roundish to oblong, and the churned as the proper in the grower and moderately of the grower an

Five applications were made in each

2. Potassium sulphide, 1 oz. to 4 galmildew made its appearance on June lons, stood second in order of effective-bate in two weeks the stems were bare of leaves, so the fruit never rip
2. Potassium sarpinder, 102. When a family has but one could be stood second in order of effective-batter is frequently bad, no how carefully the churning may a stood second in order of effective-batter is frequently bad, no how carefully the churning may been done. This is due to keep the stood second in order of effective-batter is frequently bad, no how carefully the churning may be second in order of effective-batter is frequently bad, no how carefully the churning may be second in order of effective-batter is frequently bad, no how carefully b

leaves, so the fruit never ripensed properly, and was not fit for use.

"Autocrat gave the largest crop of fruit of the foreign varieties. The berry is very large, but of poor quality.

"Large Golden Prolific, Columbia, Whitesmith Chautagua, Over 1979.

stances, wh To form a cabibilities task. How to make t their envir all perhaps make at fortune are many a between, or the beaten and occupa ture, yet s shallow th the estima not a. theor opportunit serious of Over aga stands nat to defend needs of he can fling behind him posed sup try, skill a much in the Let every his own r fearlessly a deed be str the reward

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