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HARDY GRAPES FOR SOUTH DAKOTA

The Concord grape first ripened in 1849 and was grown from seed of the wild Fox grape, Villis Labrusces, by E. N. Bell of Concord, Massachusetts. Several years ago I visited this original vine at Concord, Massachusetts, near the famous bridge still standing in the town. By the rude bridge that arched the flood, Their flag to April's breeze unrolled, Here once the embattled farmers stood And fired the shot heard round the world. The vine is named after a permanent tablet. It seems eminently fitting that this Mother vine is so honored when we reflect that 75 per cent of all the wine raised in eastern America comes from this famous Concord vine and its pure breeds and clones. It is the base vine of the Concord, the Coburger, and a considerable number of the hybrids, great as they are, will not help South Dakota and the prairie Northwest since even careful winter protection they are not sufficiently hardy.

For many years past I have worked on this problem and have grown a lot of seedlings of the wild grape of the Dakotas, but this was very slow work as this wild grape is not equal to the wild Fox grape of Massachusetts in size in its original condition. So I began crossing the wild grape of the Dakotas with some of the choice tame grapes. This was done in the Fruit-breeders greenhouse of South Dakota State College. The work was a success. I now offer for the first time thirty-two of these seedlings. All are hardy at Brookings without winter protection of any kind. This marks the beginning of a new era in grape culture for the prairie Northwest. These original vines were planted first on land that was too low and wet and had to be moved on higher land. Otherwise, these grapes would have come out several years ago; I have been needed at Brookings. Why should it be necessary to crowd such immensely valuable fruit seedlings, like a herd in a box? A display of these varieties has been the past three years at the South Dakota State Fair and have been greatly admired. Of some varieties only a few vines are available and a few cuttings; of other varieties only cuttings are available. Cuttings are more for the expert propagator as they must be buried up about 3 inches of mother earth over, until the root ends are formed, then planted right side up close up to the stock that bud in the field or nursery. I do not recommend cuttings to the inexperienced amateur, however, to those who wish to try, directions will be sent.

The stock is limited so the choice of varieties must be left to me, although individual preference will be recognized if possible.

Price of vine, each $1.00.
Price of cuttings, 2 for 50 cents; 5 for $3.00.

Note on pedigrees: In the following list the pilotstate or seed parent is named first and the pollen parent second. By S. D. Wild is meant the wild grape collected at Fort Pierre, South Dakota. By N. D. Wild is meant the wild grape collected at Bismarck, North Dakota. The names of these grapes are all taken from the Sioux Indian language.

AHIKARA GRAPE
Pedigree: Lady x N. D. Wild. A white grape of good size and quality; strong grower and very productive. Cuttings only.

ATKAN GRAPE
Pedigree: Lady x N. D. Wild. Sweet, medium size, white with pink tinge; long bunch. Cuttings only.

AZITA GRAPE
Pedigree: Beta x Limley. Large, black fruit, five-eighths inch in diameter; flavor rather wild; strong grower, fair crop. Cuttings only.

CADDIO GRAPE
Pedigree: Beta x Agawam. Large, black, sweet grape of good size and quality; nine-sixteenths inch in diameter. Seeds separate easily from the roster of the flesh. Cuttings only.

CHONTAY GRAPE
Pedigree: Massanoit x Beta. Strong grower; fruit very large, bluish purplish; very good flavor. Seeds separate readily from the flesh. Cuttings only.

CHONKKE GRAPE
Pedigree: Lady x N. D. Wild. A yellow white grape of good size and quality. Vine, a strong grower and productive. Cuttings only.

EDAPA GRAPE

EMANA GRAPE
Pedigree: Beta x Agawam. Our largest grape in 1924. Rich, purple, black, fully as large as Concord, borne in close compact clusters, about three-fourths inch in diameter. Flavor poor intermediate between the wild and the cultivated berries; size, rich; sweet, aromatic flavor of Agawam. Cuttings only.

EONA GRAPE
Pedigree: Lady Washington x Beta. A fine white, sweet, very productive grape. Berries about one-half inch in diameter. The ripen berries have a tinge of pink. Vines and cuttings.

LACHALA GRAPE
Pedigree: Lady x N. D. Wild. A white grape of good size and quality; strong grower and very productive. Cuttings only.

LUZA GRAPE
Pedigree: Merrimac x Beta. A fine sweet, much wanted grape; somewhat larger than Beta. Vines and cuttings.

MANDAN GRAPE
Pedigree: Wilber x N. D. Wild. An early and very heavy bearer, the first of all of these hybrids to bear. Fruit black, one-half inch in diameter; good flavor. Seeds separate readily from the flesh. Cuttings only.

MONTAGU GRAPE
Pedigree: Merrimac x Beta. Our largest grape in 1922. Fruit as large as Concord, being three-fourths inch in diameter; color, black with bloom. The quality is the between the fancy quality of Merrimac, its seed parent, and the sprightly wild flavor of Beta, the pollen parent. Seeds separate easily from the pulp. This will probably be very popular. The flavor is really very good. Cuttings only.

NAPRA GRAPE
Pedigree: Merrimac x Beta. A strong grower and very heavy bearer; fruit black, small about Beta size; good flavor; bunches compact. Cuttings only.

NOMPAH GRAPE
Pedigree: Palomar x N. D. Wild. A large, black grape; good flavor; size, eleven-sixteenths inch in diameter. Vines and cuttings.

OGLALA GRAPE
Pedigree: Merrimac x Beta. Vine productive, fruit large, five-eighths inch in diameter. Fruit black, of good flavor; seeds separate very readily from the flesh. Vines and cuttings.

ONARA GRAPE
Pedigree: Betz x Salem. A fine productive, large, sweet, white grape, turning to pink as it ripens. Berry about nine-sixteenths inch in diameter. Seeds separate easily. Cuttings only.

PONTICO GRAPE
Pedigree: Lady x N. D. Wild. Fruit very large, five-eighths inch in diameter; color, white, turning to light red with white bloom; seeds separate readily from the sweet flesh. Vines and cuttings.
OSULI GRAPE
Pedigree: Beta x Agawam. Fruit black, a trifle larger than Beta and of Agawam flavor. Vines and cuttings.

YASOTA GRAPE
Pedigree: Merrimac x Beta. Fruit large, black, eleven-sixteenths inch in diameter; flesh firm and red; productive. Cuttings only.

RIF GRAPE
Pedigree: Lady x D. N. wild. A very heavy bearer of large black grapes borne in large bunches. The largest of the seedlings is one in which the berry being three-fourths inch in diameter, nearly Concord size. The fruit is mealy, rather sour but of good clear flavor; seeds separate easily from the pulp. Vines and cuttings.

SANTIES GRAPE
Pedigree: Merrimac x Beta. Vine a very heavy bearer of large black grapes borne in large bunches. The largest of the seedlings is one in which the berry being three-fourths inch in diameter, nearly Concord size. The fruit is mealy, rather sour but of good clear flavor; seeds separate easily from the pulp. Vines and cuttings.

SIPOSKA GRAPE
Pedigree: Lady x D. N. wild. Large, black grape; five-eighths inch in diameter. Cuttings only.

SONOZA GRAPE
Pedigree: Lady x D. N. wild. A very heavy bearer of large white grapes with light pink tinge turning black with age. Vines slightly less vigorous than the wild grape, but sweet and good when ripe. Vines and cuttings.

TAMARA GRAPE
Pedigree: Lady x D. N. wild. Fruit large, black, sweet. Seeds part readily. Vine, a strong grower and heavy bearer. Berries nine-sixteenths inch in diameter. Cuttings only.

TEPIA GRAPE
Pedigree: Lincoln x D. S. wild. A fancy sweet, good grape; golden green with violets, sweet with a trace of the wild grape, but sweet and good when ripe. Vines and cuttings.

TOSCHA GRAPE
Pedigree: Lady x D. N. wild. Fruit, a heavy bearer of large black grapes; 8x9 inches in diameter. Flesh sweet, somewhat firm and meaty. Bush compact; seeds separate easily. Cuttings only.

WACHEPA GRAPE
Pedigree: Lady Washington x Beta. A heavy, very large grape, good flavor; seeds separate easily. Cuttings only.

WARAPA GRAPE
Pedigree: Merrimac x Beta. Fruit very large, black, good flavor. Bush long. Cuttings only.

WECOTA GRAPE
Pedigree: Lady Washington x Beta. Sweet, meaty, yellow with brown. Bloom small, compact; berry about nine-sixteenths inch in diameter. Cuttings only.

WETONKA GRAPE
Pedigree: Beta x Salem. Large, black grape; strong grower, heavy cropper. Fruit, five-eighths inch in diameter; flavor rather wild; seeds separate easily from flesh. Cuttings only.

YOSOTA GRAPE
Pedigree: Merrimac x Beta. Fruit large, black, eleven-sixteenths inch in diameter; flesh firm and red; productive. Cuttings only.

Horticultural Explorations
October 17, 1924, I returned from my sixth trip to foreign lands in search of new plants of horticultural value and agricultural value. This time the tour was of twelve weeks to North West America, the way of the Yukon and Kuskokwim River, with a search of hardy pears resistant to blight. From many thousands of the fresh fruit gathered in the mountains of North Philip, all of the seedlings of the year's fruit that should be stratified in sand for spring sowing, I have, in my boxes, sent the material out as one year seedlings for spring 1925. Much other material was obtained, including new plums, apricots and other orchard fruits, various ornamentals, some farm seeds, vegetables and especially some new new seedlings. In 1923 I made two trips to Canada to collect new plant material. In 1925 we started the small fruit hybrids project.

State Orchards
Two years ago the legislature appropriated $16,000 annually for two years ending September 1, 1925. The work has been started at several places, especially Siouxs Falls, Waterhouse, Oregon, Philip, Pierre, and Brookings. Cooperative tests are also being carried out at Hot Springs, Custis, City and Plankinton. The object of the work is;

1. To test all the standard varieties of slow growth; 2. To demonstrate the best systems of orchard management; 3. To test out many thousands of new seedlings which I am originating every year.

To establish stock orchards, expecially the little wild Prunus E. J. Petry in the Black Hills to collect new plant material. There are many plants of horticultural value which should be collected and brought into cultivation and further developed.

MAGA CRAB
Introduced 1922. A seedling of Macintosh Red apple top-grafted on Virginia crab. Fruit large for a crab, flat, round, with bright red stripes. The Macintosh evidently contributed its high flavor as the flesh is of the same texture, season evidently late. This tree looks like a good cross of the Macintosh apple and the Virginia crab, and if it proves hardy in propagation, something decidedly worth while. The original tree bore a heavy crop in 1919.

This year buds on seedlings of Yellow Siberian crab, each $1.00.

Russian White Apple
Introduce fall 1924. Noteworthy for its snow white color and a favor- ite at our State Fair this year. A good summer apple; light snow white, juicy, sprightly and subacid. This tree is growing in the old Russian apple orchard here at State College and the name, Russian White, is given until the real name can be determined.

This year buds on Siberian Crab stock, each $1.00.

DOLGO CRAB
A New Red-Jelldy Siberian Crab.

At the annual exhibitions of this Department at the South Dakota State Fair at Sioux Falls, it has been a marked success and considerable numbers have been sold. Red-Jelldy is made up from a cross between Red-Jelldy and Russel crab. It combines the Russian apple with the Siberian crab. It is regular, oblong, fully 1-inch in diameter on the original seedling. Color solid bright cherry red all over with blue bloom; dote distinct, white, many dark spots; skin not very thick, very cavi- tary wide, obsolete with considerable russet. Calyx mostly deciduous. Flesh is yellow with red core out- lines. Very good to eat raw as it melts. The fruit cooks up very quickly as easily as the Japanese apple. It is large and attractive to look on. The trees are popular among the deep salmon red. Under propagation the trees may slightly increase in size of fruit. Much work was done on the Siberian crab because of its sweet flesh and russet skin. This is derived from the word Malinda.

Price of trees, one year buds on seedlings of Yellow Siberian crab, each $1.00.

LINDA SWEET CRAB
Introduced 1923. A seedling of Malinda apple top-grafted on Sweet Rus- sell apple. A large crab apple with skin much redder than wild, subacid sweet. Apparently a late winter crab. The influence of the Sweet Russell is seen in the sweet flesh and russet skin. Linda is derived from the word Malinda.

Price of trees, one year buds on seedlings of Yellow Siberian crab, each $1.00.

BEAUTY CRAB
Introduced 1919. One of our seedlings of Pyrus baccata corefera raised from seed received from the Botanical Garden at Copenhagen. The name Beauty has been given to this seedling because it is perhaps the brightest in color of our crab seedlings. It is a brilliant solid cherry red all over with orange red under- neath especially on the shaded side. Size is about 11/2 inches in diameter. Tree is a very heavy bearer. The fruit makes a bright red at our State Fair, and was a winner this year. The tree has a very short, compact head, the fruit has the astrigency of the Hyslop. We have kept the fruit into January in a rather warm cellar. Tree is very stocky, a vigorous grower with wide and strong forks and strongly re- sistant to blight.

This year buds on Siberian Crab stock, each $1.00.

OLGA CRAB
Introduced 1923 Season. Female parent, Duchess of Oldenburg apple. Male parent, Pyrus baccata corefera, which is a wild Russian crab. This combines the Russian apple with the Siberian crab. It is regular, oblong, 1-inch in diameter on the original seedling. Color solid bright cherry red all over with blue bloom; dots distinct, white, many dark spots; skin not very thick, very cavi- tary wide, obsolete with considerable russet. Calyx mostly deciduous. Flesh is yellow with red core outlines. Very good to eat raw as it melts. The fruit cooks up very quickly as easily as the Japanese apple. It is large and attractive to look at. The trees are popular among the deep salmon red. Under propagation the trees may slightly increase in size of fruit. Much work was done on the Siberian crab because of its sweet flesh and russet skin. This is derived from the word Malinda.

Price of trees, one year buds on seedlings of Yellow Siberian crab, each $1.00.
TAWENA PLUM
Introduced fall 1924. A full sister to the Wapena and Wapita, and nearly
identical at the same time. Not quite as large as Wapena, fruit more round,
with blight-proof fruit. The fruit is very much admired at our State Fair ex-
hibits and the introduction has been
considered as a reversion of the name Wapena.
Prices of trees, one year buds on
native plum stock, each $1.00.

ROSA RUGOSA
The well known beautiful rose like rose will
make charming specimen plants four inches in diameter. Attractive
ornamental in autumn and early win-
ters when the fruit is full, red fruits, which are
used, with soups for food in its native home. Our importa-
tion is from the original intro-
duction from Siberia by the Imperial
Botanical Gardens, at Petrograd, Russia. The Siberian form of this rose is superior to the Japanese form.

Large plants, several years old, each
$1.50.

PINK LEAF SAND CHERRIES
An event for landscape gardeners.

By crossing the Dakota Sand cherry with
the Persian Plum, Prunus Persica, we have a number of beautiful shrubs
where
the dinner plates in stature and
blossoms and a delightful color like
just blooming. Some of these have in
some of our native only because we are building a set for our new plum orchard.
Varieties available this year
are:

1. Asfoullon, Cube, Hamaka, Kasa,
Kohinta, Ojiwa, Opata, Okiya, Pemb-
ifornia, Suta, Teton, Wachamps, Wapit.
Each variety is $1.00.

NEW ORANGE SWEET TOMATOES
A new variety of a native type of tomato
which is being extensively raised in the
western states. The fruits are large, round,

Flint, size, and of finest quality. These
fruit are very desirable for indoor growing and
for outdoor. They ripen early and are of
very good quality. Each variety is
$1.00.

The following varieties are available:

1. Early Spring,
2. Early Winter,
3. Early Fall,
4. Early Summer.

Price of each variety is $1.00.

SEMPALATINS BUSH HONEY

Introduced 1921. In 1915 on the
dry steppe at Sempaltain, Siberia, I found
some choice Bush Honey, a variety of
tall growth with yellow or red bar-
eries. This will be harder far north.
Good for hedges, screens, or as single
specimen plants. Price, each
$1.50.

SPARFISH WHITE CHERRY
Introduced fall 1924. A yellow-
fruited wild cherry from Spar-
fish Creek, North Dakota, a very
novelty. Of value mainly from the
ornamental standpoint because the fruit has
a bluish tint. The most obvious
objection to our native cherry is that the
trees send up so many suck-
er or sprouts from the roots. The
trees offered are one year buds on
May Day tree stock which does not
setuck.
Price of trees, one year buds 50

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WILD BLACK CURRANTS

The wild black currant (Ribes fruticosum) is native to the northern part of the state. I have grown many thousand seedlings of this species through several plant generations, as found at Lake Tsinakjek, Semipalatinsk, and Verkata, beginning in the fall of 1905. But in 1923 there was a decided break and a number of plants appeared with fruit of remarkable size and so productive that they appear worthy of propagation in the semi-arid parts of South Dakota, although the ideal berry in quality has not yet arrived.

The wild black currant is a good ornamental shrub with large yellowish white flowers in drooping racemes and smooth black fruit.

One advantage of the wild black currant as a low shrub is that it endures more partial shade than many other shrubs. In European gardens this species is often found near old walks and the worthy spot in the ornamental shrub collection and it should receive equal consideration here in the home. The foliage turns to a handsome brownish red color in the fall.

TANOR CURRANT

Large plant, bearing heavy crop of fruit of medium size, 12 grams; total weight, 335.7 grams.

ATTA CURRANT

Plant large, good crop. Fruit large, round, 9-14 inches in diameter. Weight of 16 berries, 132.2 grams; weight of total crop, 266.7 grams.

WANKA CURRANT

A very large plant bearing good crop of medium size fruit which is red instead of black. Weight of 10 berries, 9.3 grams. An interesting variation in color of fruit.

Presumably a free-fruiting variety of one year old cuttings of Tsinakjek, Atta, Mate, and Wanka offered for the first time, each $1.00.

GLADIOLUS

The best summer bulb for the garden, and the State Fair at Harris, this Department exhibited over 2,000 spikes in 150 choice named varieties. In 1922, 1923, and 1924 the assortment included over 500 varieties and the entire wing of the Horticultural Building at the State Fair at Harris was transformed in "the Palmyr of Flowers." These bulbs are not for sale, but 12 assorted bulbs will be given as a free premium with one annual membership in the South Dakota State Horticultural Society.

WINTER CULTIVATION

A SWEET CHERRY

Tsinakjek, Brookings Valley, Manitoba, found a tree of the native choke cherry on his farm with fruit so much milder in taste than usual that it may fairly be called a sweet or chokeless choke cherry. Offered for the first time. Mr. Bouch-son has the tree set on rootstock so we will await developments. At any rate this makes a choice ornamental tree for the semi-arid parts of white blossoms in spring.

One year bears on May Day tree and will not bear up suckers from the root, each $1.00.

SIBERIAN ALMOND—EARLIEST SHRUB TO BLOOM

Amelgdalis nana L. All visitors to the college grounds in early spring are attracted by the remarkable color of this flowering shrub, which should be planted in every garden in the Northwest and far north into Canada. A small ornamental with abundant, bright rose pink flowers, the very first of all shrubs to bloom in the spring. Good in front of other shrubs and herbaceous plants. From collections of the dry steppes of the Semipalatinsk region of Siberia.

Strong transplanted plants, each 50 cents; 10 for 50 cents.

COSSACK ALFAILATA SEED

Introduced from Russia and named by Prof. N. E. Hansen. This has the world's record of increasing from a spoonful of seed with a thousand bushels of seed in 1916. Now much more. The acreage of Cossack Alfailata is rapidly increasing because it is extremely hardy and very productive both of forage and seed. For sprout I have only a few pounds of seed, grown in 1923 but we have an old plot here on the Station grounds, available for special experiments. Price of Cossack Alfailata seed per small packet, 50 cents.

SEMPALATINSK ALFAILATA

Described in Bulletins 141 and 167. From my Manahs White Semipalatinsk, Siberia. Some of the farmers who have had excellent results with this alfalfa and bids fair to be worth many millions of dollars as a source of nitrogen for wheat land and for feeding stock. But in Canada this variety has met with difficulties. An introduced variety is not fair to the introducer. If a short name must be adopted it should be called Hancen Alfailata or other name. It will encourage agronomists and introducers of new plants with their monies are kept better managed as provided by the rules of nomenclature.

I found this strain of white sweet clover (Melilotus albus) growing well on the dry steppes of Semipalatinsk, Siberia, in 1913, a region with a total annual precipitation of only eight inches, including both rain and snow, and a temperature range of from 100 degrees in summer to 50 degrees in winter, often with snow on the ground. We have had good luck with the seeds as they are too small, but the plant propagates freely by division of the old plant. On heavy black soil here in Brookings the plants have not attained as large size as on the white alkali soils of Semipalatinsk. The late Prof. Arc- kirkz used the old stems for matting in the tents, but early in the spring the grass is cut and dried to feed the stock. We can spare a few plants, from division of the roots. Some plants I sent to the Experiment Station at the University, Saskawahmik, made a vigorous growth.

Seeds of Hancen Clover, per packet 50 cents.

SPECIAL OFFER

DOUBLE VALUE FOR YOUR MONEY

The Legislature has made this Society the Department of Horticulture for South Dakota and has fixed the annual membership at $1.00. The reports are published by the state, but aside from the State Official book, the report is sent only to members. This provides a fund to help pay the running expenses of the Society.

The Society wishes to increase its membership.

As a free premium, select One Doll- lar's worth of seeds, plants or trees on the list of the experiment station. Orders must be received before April 1, 1925.

As the supply of some of these premiums is very limited, mark your seed list carefully, as there will be no surplus.

Residents of S. D. who become life members may select $10 worth of seeds, plants or trees on the list of the experiment station from this circular as a free premium. This includes a set of 18 annual reports, 300 free shrubs, seeds and one annual report as issued. All premiums sent by express at customers expense. Address, N. E. HAN- SEN, Secretary, Brookings, South Dakota.

In place of seed and plants premium is given, showing what is ready for the fall. Select ONE of the following list for each annual membership.

No. 1—One buck volume of the Annual Report of this Society.
No. 2—Prof. Green's Vegetable Gardening, 216 pages, paper cover.
No. 3—Prof. Green's Popular Fruit Growing, 225 pages, paper cover.
No. 4—Evergreens, "How to Grow Them," 35 pages, paper cover, by C. W. F. "Winter Hardy and Shelter Belts," 60 pages, paper cover, by the late Prof. E. B. Green, Uni- versity of Minnesota.

Cash with order. Positively no credit given. No orders sent out for cash. No orders sold in less than the quantities specified. Ad- dress:

PROF. N. E. HANSEN, Experiment Station, Brookings, South Dakota.

GREETING

FROM DR. N. E. HANSEN

The annual meeting of the South Dakota State Horticultural Society is now being held in the college building on the campus, with the usual good attendance of the members. Many of these new varieties are offered only once or twice as there is an enough land for nursery propagation. Orders for each variety must be received early, as we expect a large demand for the few thousand plants available. It is suggested that only by early orders are you sure of getting what you want. So please order promptly.