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Northern Novelties for 1920

1. Some New Fruits and a Rose

2. Some New Alfalfas and a Cereal

3. Three Ornamental Crab Apple Trees Hopa Red-Flower, Cathay, Red Tip

LANDSCAPE ARCHITECTS PLEASE TAKE NOTICE

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Brookings, South Dakota

First Edition February 10, 1920

More Land Needed

The most important orchard problem is a hardy winter apple. After raising fully 10,000 apple seedlings along many lines of pedigree, I have no seedling that I am sure will be the one needed. The evolution of this apple will probably be a step-by-step process rather than a single step. My present plan is to make many combinations, especially of new and complex pedigree, and to bud from the resulting seedling as soon as possible, even before fruiting. This is to determine the growth in nursery and freedom from blight. These trees are budded on Siberian Crab apple roots.

The new seedlings that have fruited the past two seasons have encouraged me greatly. I feel that the work is planned along the right lines and will result in a long list of desirable varieties. What is now needed is several hundred acres of additional land upon which these new seedlings may be fruited as soon as possible under good orchard conditions, and not in the closely planted nursery rows as at present. This additional land must soon be granted to permit suitable extension of this work, not only with apples but also plums, cherries, pears, grapes, raspberries, blackberries, strawberries and other fruits needed in the prairie Northwest. WILL YOU HELP GET THIS LAND?

Hopa Red-Flower Crab

Offered for the first time. Hopa is the Sioux Indian word for "beautiful." A promising addition to our list of ornamental trees for the lawn owing to its wealth of beautiful deep rose crimson blossoms. A striking sight when in bloom. The fruit is too small to be of value for eating, being less than one inch in diameter, but its bright red color will light up the tree in autumn, and the small size is an advantage as the tree is less apt to be stripped for fruit when standing on the lawn. Female parent *Pyrus Malus Niedzwetzkyana*, a small red-fleshed apple from Turkestan in the high mountains between Turkestan and China, male parent *Pyrus Baccata*. This was not a hand cross, but I am satisfied that the *Baccata* was the pollen parent. Trees of strong growth in nursery.

Price of trees: One year buds on Red Siberian crab stock, each \$1.00.

Cathay Crab

A round-topped dwarfish tree of considerable promise as an ornamental for the lawn. In bloom the tree is one huge bouquet of very large white flowers. The flowers are two and one-half inches in diameter, showing tendency to doubling. Offered for the first time spring 1919. Cathay is the ancient name for China, referring to its native home. One of our seedlings of *Pyrus ringo* descended from the original importation from Russia by Professor J. L. Budd. The name as now given in Bailey's *Cyclopedia of Horticulture* is *Pyrus prunifolia*, Willd. var. *Rinki*. This seedling is a good representative of this species. Fruit, one and half inches in diameter; clear bright yellow all over with some orange blush. Calyx deciduous. Flesh clear, juicy, acid. Original tree has been very productive. The fruit cooks up as easily as *Duchess* making a light yellow acid sauce of good flavor.

Trees, one year buds on Red Siberian (*Pyrus baccata*) crab stock, each 50 cents.

Red Tip Crab

Offered for the first time spring 1919. Female parent, a wild crab from Elk River, Minnesota. Male parent, *Pyrus Malus Niedzwetzkyana*. This tree has not fruited and the pedigree does not indicate any promise as a table fruit, but the red-tipped young leaves make it an interesting tree from the ornamental standpoint.

Trees, one year buds on Red Siberian stock, each 50 cents.

Anoka Apple

First introduced spring 1918 before fruiting as South Dakota No. 2. Now given the name Anoka, a Sioux Indian word meaning "on both sides." It is a seedling of Mercer (*Fluke*) wild crab top-grafted on *Duchess*. This tree has borne heavily in 1918 and 1919. The fruit is two and one-half inches in diameter, round, *Duchess* type of coloring. Flesh white, good subacid. Season September. I am pleased with the early and heavy bearing of this variety under propagation.

Price of trees, one year buds on Red Siberian crab stock, 50 cents.

Chance Apple

Offered for the first time spring 1919. The original tree bore a good crop again in 1919. One of our chance seedlings from mixed seed of northern grown apples. Original tree productive. Fruit oblate, regular, of full commercial size, red-striped all over with attractive blue bloom. Flesh white, pleasant subacid. Season probably January or later. I hope this will help some on the late-keeping apple problem. The fruit is certainly of attractive appearance.

Trees: One year buds on Red Siberian crab stock, each 50 cents.

Nocalyx Crab

Offered for the first time. A seedling of *Spitzenburg* crab. This is probably the largest apple with a deciduous calyx produced to date. Fruit round, two inches in diameter, yellow with red stripes. Sprightly subacid, with sweet aftertaste. A very productive tree. Season September. This fruit has no calyx segments and no calyx tube open into the core. However, in the *Nocalyx*, *Ivan*, *Amur* and other crabs, the calyx segments are not always wholly deciduous, occasional specimens at times retaining their segments.

Trees: One year buds on Red Siberian crab stock, each 50 cents.

Sapinia Crab

Offered for the first time. This is a seedling of *Winesap* top-grafted on *Virginia* crab. The name is made up from these two names. One of the forerunners of a new race of hybrid apples, in which the cultivated apple instead of the Siberian crab is the female parent. Fruit thinly washed with dull red, almost two inches in diameter. Flavor subacid. Evidently a long winter keeper.

Trees: One year buds on Red Siberian crab stock, each 50 cents.

Seven Other New Crab Apples

Olga, Sugar, Dolgo, Alexis, Ivan, Amur and Izo, described in our former lists, one year buds on Siberian crab stocks, each 50 cents.

To compare with these new varieties, we have some one-year buds on Siberian crab stocks, of the old standard varieties, Yellow Sweet, Anisim and Duchess apples, and Sweet Russet crab, at same price, 50 cents each; \$5.00 per dozen.

Moscow Cherry

A New Hardy Cherry
for the North

The prairie Northwest greatly needs a hardy cherry. In the course of my five tours to Russia I became greatly interested in the cherry grown in the Vladimir region of Russia, just east of Moscow. The fruit comes to the markets of Moscow in immense quantities. Near Moscow, on the Sparrow Hills where Napoleon stood in 1812, there are some interesting orchards of these cherries which I visited in 1894 and 1897. These cherries are grown mostly from root sprouts and seeds. The type, however, is not as constant as was thought at first, but varies considerably. Out of a lot of these imported seedlings one was selected and named Moscow. This was sent out for the first time spring 1917 as budded trees on Mahaleb stock, as it would take too many years to work up a stock of the cherry on its own roots. The following trees are offered as one year buds on Mahaleb roots. This means that at the North they must be mulched carefully to prevent root-killing. As soon as possible, the Northern native Pin cherry should be tested as a budding stock. Out of a large number of cherries tested at this Station, Moscow is the only one that has borne fruit in satisfactory quantities. The tree is productive and perfectly hardy. The fruit is of medium size, bright red with light-colored juice of good quality.

Trees: Each 50 cents.

Sand Cherry Seedlings

Western Sand Cherry, *Prunus Besceyi*. A native of the highest and driest lands west of the Missouri river in this state. A dwarf bush much favored by the Sioux Indians. These plants are seedlings our third and later generations under cultivation at the South Dakota Experiment Station, hence many of the bushes bear fruit of a size and fruit of all the seedlings is good enough for sauce. Price, 10 one-year seedlings for \$1.00; 100 for \$6.00.

SIBERIAN CRAB (*Pyrus baccata*), one-year seedlings, suitable for planting in nursery row in spring and budding in August, \$3.00 per 100.

PLUMS. A few trees of my Waneta, Opata and Hanska, one-year old buds on native plum roots, each \$1.00.

HARDY ROSES. Tetonkaha and Siberian Rosa rugosa. See last year's list. Plants, each 50 cents.

SIBERIAN ALMOND. A beautiful early pink flowered dwarf bush. The earliest shrub to bloom here. Small, one-year plants, 2 for 50 cents.

Special State Work With Alfalfa

June 30, 1919, ended the eight years of special state appropriations under my direction for the propagation and distribution of alfalfas from various parts of Russia and Siberia. It has been a big extra load to carry, but one that has been a great pleasure to me as I felt it was a worthy cause. The hardest alfalfas of the world have been collected and the basis is here now for future work. They will form a very prominent part in the subduing of the great dry upland region of many western states, once called the Great American Desert. If we could solve the problem of the centuries to combine science with political power, we could hasten by a century the solution of our dry land problems, because there would then be state appropriations large enough to insure the adequate and quick distribution of all the plants that have proven their adaptability to the most severe conditions of cold and drouth.

My conclusion from all this alfalfa work is that if each western state could aid and guide the work of getting a million acres of our driest uplands into the right kind of alfalfas and certain other drouth-resistant plants, it would prevent the usual exodus of disappointed settlers when the dry seasons come again.

Proso and Alfalfa

For descriptions, see last year's list.

COSSACK ALFALFA. This has the world's record of increasing from a spoonful of seed in 1906 to a thousand bushels of seed in 1916. Now much more. For spring I have only a few ounces of Cossack from our old plot available for special experiments. Price, per small packet, 50 cents.

SEMIPALATINSK ALFALFA. Brought from the dry steppes of Semipalatinsk, Siberia, in 1913. Seed, four ounces for 50 cents.

ORENBURG ALFALFA. Seed, one-half ounce for 50 cents.

HANSEN'S WHITE-FLOWERED ALFALFA, per packet of about 100 seeds, 50 cents.

HANSEN'S HYBRID ALFALFA NO. 1. Seed, 2 ounces for 50 cents.

HANSEN'S WHITE SIBERIAN PROSO. A large white-seeded grain millet from Semipalatinsk, Siberia. Good for all kinds of live stock, and for table food. Their surest crop in this annual eight-inch rainfall section of Siberia. For table recipes, see Bulletin 158 of this Station. Two pounds seed, grown from seed hand-picked four years in succession, 50 cents.

Special Offer--Double Value for Your Money

LIST OF FREE PREMIUMS

Offered by the South Dakota State Horticultural Society Until
April 1, 1920

The Legislature has made this Society the Department of Horticulture for South Dakota and has fixed the price of annual membership at \$1.00. The reports are published by the state, but aside from the State Official list, 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 Dollar's worth of seeds, plants or trees from the foregoing list. The order must be received before April 1, 1920. As the supply of some of these premiums is very limited mark your second choice. One of the annual reports will be sent you at once. One book and one free premium amounting to One Dollar, will be sent postpaid for each \$1.00 received. Here is a good chance to get a valuable library of books on South Dakota trees, fruit and gardening, as well as some choice new fruits for the garden.

BOOK PREMIUMS

In place of seed and plant premiums, the following are offered. But the offer may be withdrawn at any time without notice, so hurry up your order.

Select ONE of the following list for each annual membership:

No. 1—One back volume of the Annual Report of this Society.

No. 2—Vegetable Gardening, 246 pages, paper cover, by the late Prof. S. B. Green, University of Minnesota.

No. 3—Popular Fruit Growing, 323 pages, paper cover, by the late Prof. S. B. Green, University of Minnesota.

No. 4—Evergreens, "How I Grow Them," 95 pages, paper cover, by C. S. Harrison, and "Windbreaks and Shelter Belts," 69 pages, paper cover, by the late Prof. S. B. Green.

SPECIAL OFFER UNTIL APRIL 1, 1920

The life membership is fixed by the Legislature at Ten Dollars. It is highly desirable that the Society has more life members as they are our permanent source of strength and influence. Residents of South Dakota who become life members may select Ten Dollars' worth of trees, plants, seeds or other premiums from this circular as a tree premium. This includes a set of 16 annual reports now issued, as far as available, and one annual report as issued. All premiums sent by express at customer's expense.

Address, PROF. N. E. HANSEN,
Secretary South Dakota State Horticultural Society,
Brookings, South Dakota.

Terms

Cash with order. Add 25 cents for moss and packing for orders less than \$3.00. This money helps to pay for field labor and enables this Department to carry on the work of Plant Breeding on a larger scale than would otherwise be possible.

PROF. N. E. HANSEN,
State College, Brookings, South Dakota.