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The World's Best Roses

**Pedigreed, Hand-Hybridized
 Dahlia Seed**

(Seed and Pollen Parent Known)

Hybridized Gladiolus Seed

Honor-Roll Dahlias

(Used for Pedigreed Seed Production)



Treatise on Dahlia Hybridization
 The Padre's Own New Rose Productions

A Plea for a National Botanic-Genetic Rose Garden

Do not fail to read it

The Padre's Botanical Gardens

125 South Milpas Street
 SANTA BARBARA, CALIFORNIA

A Word of Introduction

Although the former experimental grounds were greatly reduced last April first, 1930, the Padre managed to grow at least the most prominent Dahlia varieties, so that he can offer again to his many friends his well known pedigreed Dahlia seed, both parents known. But since the planting was so small the supply of seed is very limited, and hence those readers particularly anxious to get some seed should send in their orders at once.

There are also a few Dahlia roots we can offer. As all yet available space is needed for rose breeding, we allow this time the most liberal discount of 50%, but our own selection, and only on orders amounting to \$20.00, cash sent with order.

By this time it ought to be an appreciated fact that the mere collection of Dahlia seed from the best varieties, is not all that is necessary for a sure result, but that it *takes two superior parents*, namely a seed—and pollen parent, or in other words a full pedigree, to insure at least a plausible results for still superior hybrids.

At this time the Padre desires to make a special appeal to the members of the American Rose Society in a vigorous campaign to assist him in the production of breeding new roses, mostly from our own native species, as we want *American Born Roses*. Also in a move of more systematized planting, and above all in the establishment of a National Rose Garden to be the center of all rose activity in this country.

The Padre feels sure that the only safe method to insure better roses for every local need, from ocean to ocean, is by breeding and raising them right here under our own eyes according to specific local and climatic conditions, and, wherever possible, to use our own wild species as a basis for such work.

As far as limited space will permit, the breeding of Dahlias, as heretofore, shall be carried on with the same great care. Do not fail to read the special treatise on the hybridization of Dahlias. While this treatise makes the scientific breeding of Dahlias clear, it may be said that the members of the American Rose Society and any rose lover may read it with great profit as the rudiments of breeding are very much alike, with one exception that we have in the Genus *Rosa* thousands of untried species, over 100 on the American continent alone, but mostly found in their natural state in Asia. And for doing rose breeding in this country with the greatest profit for the vastly different local needs, first of all a National Rose Garden is necessary in which all the rose species for comparison can be collected, and the newly bred varieties tested out.

To make a start with a National Rose Garden the Padre offers the original rose seedlings from over 700 different combinations in nearly 20,000 plants, every one distinctly different and with the exact pedigree, as a nucleus of plant material for such a garden, under the condition that this garden will be established in California, and will remain to be permanently devoted for the purpose of Rose Science.

Do not fail to read in this pamphlet, "Something About the Padre's Own Productions" and "A National Botanical Genetic Rose Garden for America," speaking more at large on this important subject.

On this occasion the Padre wishes to thank his many friends for their encouragement he has received in his work of plant breeding in the last twenty years. Without this encouraging support, very little or nothing could have been possible. He ventures to ask everyone for a generous continuance of their favor towards a noble cause, *A National Rose Garden*.

Address all communications to Rev. Geo. M. A. Schoener, 125 So. Milpas St., Santa Barbara, California.

Yours for better Roses and Dahlias through carefully bred seed.

THE PADRE.



The Best That Is Known Today in Roses

HYBRID TEAS, HYBRID PERPETUALS AND PERNETIANAS

Including their Best Novelties Since the Last Three Years

For many rose lovers it seems overdone to put every year such a large number of new varieties on the market. But looking at it right, we all must admit that it is the only method to push ahead for still better roses, for every section of the country, for every garden in America. And we think we can state with good faith that every year brings new surprises. How could you have ever dreamed of such colors in roses as in the Lyon Rose, in Padre, in Talisman and in many others without the never ceasing breeding trials made by enthusiastic rose breeders? Granted that some new varieties are overly praised by their raisers, a good proportion always remains to present a vast step forward, and hence rose breeding must go on and must be encouraged.

Furthermore, as it can be well judged from the small list here offered, only the very best out of thousands were selected, having felt the duty for the protection of customers to offer only what we can recommend as being of exceptional merit, and in many ways better than older varieties, especially in brilliancy and novelty of color.

We give here only the briefest description, feeling that most of the members of the American Rose Society are familiar with the varieties offered through referendum descriptions and discussions in the Rose Annuals.

Since it has become the particular aim of the Padre to breed systematically new roses for every district of America, it will be appreciated as a great favor to keep him posted about their performance in the distinctly different climatic sections of the country, assisting him thereby to make certain varieties the basis for further development with particular reference to local needs by using them either as seed—or pollen parents with wild rose species found in the respective sections, because only thus it will be possible to provide at last satisfactory roses for the North and South, East and West. It is most strange that is not realized at all that only by breeding our own roses in our own country, according to our local needs, will we ever get forward in rose culture. The Padre sincerely hopes that every member is well aware of the fact that in his venture for better roses there is surely no money making in back of his hard work, doing at least his mite in the good work.

Price of the acknowledged best standard market varieties, such as Kaiserin Augusta, Frau Karl Druski, etc., \$1.00 each, \$9.00 for 10, except where otherwise noted.

Price of Novelties, latest introductions of 1920 to 1930, \$2.50, \$20.00 for 10, except where otherwise noted.

Novelties prior to 1928 correspondingly lower in price.

N. B.—All plants are extra strong two year old field grown either budded or grafted on hardy stock.

N. B.—As a special proposition to encourage rose breeding in this country, kindly read the great discount allowances made to the members of the American Rose Society, not only offering them the finest roses at a greatly reduced price from the regular list, but also affording them an opportunity to help along a noble enterprise, most sorely needed in this country, to make the Rose our national flower.

N. B.—By all means do not delay ordering as the supply is very limited, only 5000 plants on hand.

Kindly realize the bargain you get by making your order at least \$20.00 cash sent with the order, and then in addition to this being entitled for a surely worth while bargain, plus extra plants to cover express charges.

Following are the varieties:

- ANGEL PERNET, Per. 1925. Brownish orange blooms of excellent shape. Well known.
- ANNIE LAURIE, H. T. 1922. A fuller Butterfly, lively pink and yellow.
- ANTOINE RIVOIRE, H. T. 1895. Pale, silvery pink, often shaded lilac. Fine.
- ARIEL, H. T. 1921. Large, Globular flowers of orange-flame and yellow.
- BETTY UPRICHARD, H. T. 1922. Copper-red buds. Strong growing. Good blooming.
- CHARLES K. DOUGLAS, H. T. 1919. Fine, long pointed buds of crimson-scarlet.
- CHATEAU DE CLOE VOUGEOT, H. T. The well known blackish scarlet rose. Fine.
- CRIMSON QUEEN, H. T. 1912 Slender, delicately pointed buds of rich crimson.
- DAME EDITH HELEN, H. T. Shapely, high-centered blooms of clear pink. Excellent.
- DUCHESS OF WELLINGTON, H. T. Enormous tapering buds of golden orange. Vigorous.
- E. G. HILL, H. T. Immense size, new scarlet, well shaped, very free growing, \$1.50.
- EMPIRE QUEEN, H. T. 1925. Large ovoid buds, very lasting of fine cerise, \$1.50.
- ETHEL SOMMERSET, H. T. Coral and shrimp pink blooms of splendid form.
- ETOILE DE HOLLAND, H. T. Brilliant red blooms of magnificent size. Perfect shape.
- FEU JOS. LOOYMANS, Per. Long, pointed buds of orange buff. Growth strong.
- FORT BRAGG, H. T. A very good silvery pink all around garden rose, \$1.50.
- FRAU KARL DRUSKI, HP. Needs no introduction as the best hardy white rose.
- GAIETY, H. T. Would call it an improvement over Golden Emblem. Very fine, \$1.50.
- GEN'L MAC ARTHUR, H. T. Is well known as our best red garden rose. Fragrant.
- GEO. ARENDS, H. P. A pink Druski of the greatest merit. Fine shapely buds.
- GOLDEN EMBLEM, Per. Intensely yellow buds of superb shape and texture.
- HADLEY, H. T. A rich crimson-red flower of good form and perfume.
- HARRY KIRK, T. Lovely buds of elegant shape of deep straw yellow color.
- HOOSIER BEAUTY, H. T. Splendid, dark red blooms of impeccable shape. Fragrant.
- INDEPENDENCE DAY, Per. Flaming yellow buds. Strong, upright growth.
- IRENE HENNESEY, H. T. Brilliant orange-flame. Perfect form and strong growth. Of the newer roses this is one of the best. Free from mildew.
- IRISH FIREFLY, H. T. Probably the best single rose in existence. Orange-pink.
- ISOBEL, H. Y. Exquisitely pointed buds of carmine-orange. Single. Strong growth.
- JEAN C. N. FORESTIER, Per. Globular blooms of carmine-orange. Vigorous plant.
- JOHANNA HILL, H. T. Golden yellow, long tapered buds. Excellent cut rose. \$1.50.
- JONKHEER J. L. MOCK, H. T. Carmine buds of gigantic size and good form. Pink.
- KAISERIN AUGUSTA VICTORIA, H. T. Still considered the best white rose.
- LA FRANCE, H. T. Bright pink flowers of excellent shape and sweet fragrance.
- LADY HILLINGTON, T. Still unrivalled in its orange yellow and fine buds.
- LADY MARGARET STEWART, Per. Large exhibition blooms of golden yellow, \$1.50.
- LADY PLYMOUTH, T. This exquisite yellow Tea Rose should be better known. It is considerably hardy, never out of bloom, and totally mildew immune.
- LOS ANGELES, Per. Very lovely buds of exquisite salmon pink. Strong growth.
- LOUISE CATH. BRESLAU, Per. Remarkably bright buds and blooms of reddish orange.
- MABEL MORSE, H. T. Unstained yellow buds of perfect shape and fine fragrance.
- MARIETTA S. JORONICA, H. T. A most excellent, delicately shaped new pink. \$1.50.
- MAUD CUMING, Per. Long, tapering buds of enormous size of rich coral pink, \$1.50
- MISS LOLITA ARMOUR, Per. Burnished buds and creamy copper flowers. Grand.
- MME. LEON CONSTANTIN, G. H. Extremely large flowers of fine form, delicate creamy yellow with pink reflexes. Very healthy, strong grower, free from mildew and fairly hardy. Continuous in bloom.
- MME. ALEX. DREUX, Per. Intensely yellow buds and high centered flowers. Fine.
- MME. EDOUARD HERRIOT, Per. Sparkling buds of coral-red and orange. Good growth.
- MME. MELAINE SOUPERT, H. T. Extremely large buds of most refined form. Yellow.

- MRS. A. RICARDO, H. T. Very large, full blooms of pale pink and yellow.
- MRS. HENRY BOWLES, H. T. Ovoid buds of clear, piercing pink. Fine form. \$1.50.
- MRS. HENRY MORSE, H. T. A bright flower of contrasting tones of pink and yellow.
- MRS. HERBERT STEVENS, T. Double white flowers tinted with pale lemon yellow. Blooms well, and is hardy for a Tea. The shape of flowers is perfection.
- MRS. REDFORD, H. T. Perfectly shaped buds of bright orange and apricot.
- MRS. S. K. RINDGE, Per. Long, yellow buds, striped with red. Good bloomer.
- OPHELIA, H. T. The rose after which the most new introductions were patterned. Primrose-yellow, shaded rose color in center. A very beautiful variety.
- PADRE, Per. Coppery-scarlet, with bright yellow at base. Constant bloomer.
- PILGRIM, H. T. Well known as a fine pink cut rose of good growth and fragrance.
- RADIANCE, H. T. Brilliant rose-pink buds. Its splendid growth is well known.
- REV. F. PAGE ROBERTS, Per. Copper-red buds of great length. Strong growing.
- ROSELANDIA, H. T. Typical Ophelia buds and blooms of rich golden yellow.
- SHOT SILK, Per. Fine buds of coppery rose with apricot and yellow. Fragrant.
- SOUV. DE CL. PERNET, Per. Fine buds of fadeless yellow. Plant erect and strong.
- SOUV. DE GEORGES PERNET, Per. Brick-red buds of immense size. Rich fragrance.
- SOUV. DE MME. BOULLET, H. T. Flower large, full, dark yellow. Fine shape.
- SOUVENIR DE MME. H. THURET, H. T. Perfectly formed buds, opening to salmon-pink, center shrimp-red. Strong growth, and persistent foliage.
- SUNSTAR, H. T. Deep orange and yellow flowers, edged vermilion. Good bloomer.
- TALISMAN, H. T. Like a choice, rare cameo of rich red on yellow ground, \$1.50.
- THE QUEEN ALEXANDRA, Per. Scarlet on inside, and yellow on outside of petals.
- TIM PAGE, Per. Daffodil-yellow flowers. Erect growth, glossy foliage, \$1.50.
- VESUVIUS, H. T. Single flower of the most sparkling scarlet. Fine, upright growth.
- VILLE DE PARIS, Per. Round buds of clear yellow. Plant notably tall and clean.
- ULRICH BRUNNER, H. P. The best counterpart of American Beauty for outdoors.
- WM. KORDER, Per. High-centered flowers of deep golden salmon. Vigorous. \$1.25.

Besides these here listed we have also yet in small quantities such well known and always reliable roses as Sunburst, Wm. R. Smith, Mme. Jules Bouche, M. Antoine Marie, Duchess of Sutherland, etc. etc. Just let us know what varieties you are particularly interested in, and we feel sure we can help you, allowing a most substantial discount, amounting to you as low as only wholesale price. There are over 800, odds and ends on hand. As there is no more ground for them they are sold practically at any price.

POLYANTHA ROSES

- CHATILLON, 1923. Bright pink with an illuminating touch of orange. Very pretty.
- ECHO, 1914. Flowers soft pink. Virtually an everblooming dwarf Thousandschoen.
- ORANGE KING, 1923. Decidedly a most unusual color-break in the Polyantas.
- SALMON SPRAY, 1928. Rich salmon-pink flowers. Constant-blooming. Healthy.
- ELLEN POULSEN, 1912. Fairly full flowers of bright rose-pink. One of the best.

CLIMBING ROSES

With the exception of Belle of Portugal, Fortune's Yellow and Marechal Niel, being tender, all of them are hardy. But for California and other Southern states there is simply nothing better than such a gorgeous rose as Belle of Portugal, and similar Gigantea Hybrids.

- ALLEN CHANTLER, 1924. Most effective vivid scarlet pillar rose. Excellent.
- BELLE OF PORTUGAL, Gigantea Hybrid. Most spectacular salmon pink of gigantic growth with almost evergreen foliage. The flowers are of immense size and of the most perfect shape. Unlike any other rose. Do not miss it.
- BREEZE HILL, 1927. Different from other hardy climbers. Yellow and apricot shaded flowers of large size for this type. Fine glossy foliage.

- CLB. CECIL BRUNNER. The most exquisite small buds in large clusters of rosy pink and yellow. Of healthy growth and never out of bloom.
- CHERUB, 1928. Almost thornless. A most abundant bloomer of exquisite salmon pink flowers coming in immense clusters.
- CLB. GEO. SAWYER, H. T. Long buds, finely formed, and of brilliant rose. Plant is very vigorous and free blooming. Highly recommended and fairly hardy.
- EVANGELINE, 1906. Single flowers with dainty reflexed petals of rosy white. Clusters very large and abundantly produced by a strong plant.
- EMILY GRAY, 1918. Large, semi-double, deep golden buff flowers, practically unfading. Wonderfully pointed and polished foliage like holly. Most excellent.
- FORTUNE'S DOUBLE YELLOW, 1845. One of the most gorgeously colored roses of reddish-yellow, pink and brown. An enormous grower. Fully free from mildew.
- MME. GREGOIRE STAECHELIN, 1930. The first really fragrant, very large, hardy Hybrid Tea Climber of a delicate pink color, trained crimson outside. \$2.00
- MARECHAL NIEL, 1864. Lovely buds of deep golden yellow; double and extremely fragrant. Very strong grower. A rose that should be grown everywhere in the milder sections of the country.
- PAUL'S SCARLET, 1916. Intense scarlet flowers of excellent shape, borne in small trusses. Plant of moderate growth. Very liberal bloomer.
- STAR OF PERSIA, Hybrid Austrian Briar. Semi-double, bright yellow flowers, almost none fading. A very splendid novelty.
- TAUSENSCHOEN, H.M. Charmingly ruffled flowers of many shades of yellow, creamy white and bright rose-pink. Will sell at only \$6.00 per dozen, largest size plants, adding yet two more to pay express charges.
- THELMA, 1927. Clusters of 3 to 18 flowers of delicate coral-pink lasting for ten days in cut state. Healthy growth. \$2.00
- MADAM PLANTIER. The old reliable memorial rose.
- SOUVENIR DE CLAUDIUS DENOYEL, 1920. Flowers glistening crimson-red, tinted vermilion, of enormous size and sweetly perfumed. Growth very vigorous.
- MME. JULES GRAVEREAUX, 1901. Flesh-pink flowers with cream and yellow suffusion. Well formed and fragrant. Vigorous climbing plant. Foliage extra fine.

SPECIES ROSES

No Rose Garden is complete without at least a few of the wild species roses as they came from the hand of Mother Nature. It is indeed remarkable how little is known about them, and yet, at least seventeen of them, they are the very ancestors of our modern garden roses, no matter of what type they are. And some of them are very beautiful in their natural state, ornamental in a high degree.

Most of the wild roses make an excellent showing in a broad garden treatment, in the shrubbery and for landscape effects. They need very little care and pruning, except to keep them in a shapely form and within bounds.

We have selected those which are known of making a splendid display. Some of them have the added charm of richly colored seed hips in great abundance all winter.

All varieties are budded plants, their price being \$1.00 each, \$9.00 per dozen, unless otherwise noted. But we want to emphasize it most distinctly, on a large enough order, amounting to \$20.00 cash sent, we will allow 35% discount, and on a cash \$50.00 order, 50%, meaning that the purchaser can select either 35% or 50% more plants from the list.

In addition to this unusual discount we will add three plants extra to cover fully the express charges to any place in the country.

N. B. Kindly send in your order without any delay as the supply is very small.

- ROSA ACICULARIS, Lindley. Dark rose-pink. Blooms in May and June. Very hardy.
- R. ARVENSIS, Hudson, Europe. A trailing shrub with rather large foliage. White.
- R. ALBERTI, Regel (Turkestan). Single white flowers. Finely divided foliage.
- R. FOEDIDA, Austrian Copper. Inside copper red, reverse golden yellow.

- R. BELLA, Rehder-Wilson. Bright pink, solitary flowers. Beautiful foliage.
- R. BLANDA, Aiton, (Northwestern North America). Soft pink flowers. Hardy. 60c.
- R. CANINA, Linnaeus, (Europe). This is the ancient Dog Rose. 60c.
- R. CAROLINA, Linnaeus, (Eastern North America). A very vigorous shrub. 60c.
- R. CORIFOLIA, Fries, (Europe and Western Asia). Light pink flowers. Tall.
- R. DAMASCENA, Miller, (Asia). Double, rose pink blooms of great fragrance.
- R. DAVIDII, Crepin, (Western China). Flowers pink, borne in clusters. Tall.
- R. ECAE, Aitchison, (Turkestan). Pale, yellow flowers. Dark green foliage.
- R. CAUDATA, Baker, (Western China). A prickly shrub with red flowers.
- R. FOLIOLOSA, (Eastern North America). A shrub with excellent foliage
- R. GALLICA, Linnaeus, (Europe). The parent of many of the older French roses.
- R. GALLICA CONDITORIUM, Diek. (Western Asia). The rose of utmost fragrance.
- R. GALLICA SPLENDENS. Somewhat taller than the type, and large flowers.
- R. GENTILLIANA, Leveille, (Central China). A semi-climbing shrub. White.
- R. GIGANTEA, Collett, (Burma, India). The largest growing rose. Giant in growth and flowers, but tender. Foliage is mildew immune, glossy. \$1.50.
- R. GYMNOCARPA, Nuttall, (North Pacific Coast). Growth slender but tall.
- R. HELENAE, Rehder & Wilson, (Central China). Almost climbing habit to 15 feet.
- R. HIBERNICA, Gravesi. This is one of the most desirable forms. Very hardy.
- R. HUMILIS, Marsh, (Eastern United States). Clear pink. Very showy. 60c.
- R. HUGONIS, Hemsley, (Western China). Light yellow flowers in grand abundance.
- R. L'HERITIERANA, Thory, (Asia). A vigorous, almost thornless, purple.
- R. LUCIDA, Ehrhrt, (Northeastern North America). Bright pink flowers. Attractive in winter because of its reddish stems and scarlet fruit. 60c.
- R. MACRANTHA, Deportes, (Southern France). Light pink flowers three inches across.
- R. MICROPHYLLA, Ruxburg, (Western China). The smallest leaved rose, with large hispid seed hips. Flower is very large and flesh-pink.
- R. MOSCHATA ALBA, Graebner, (Himalaya). A semi-climbing shrub of great beauty.
- R. MOYESII, Hemsley and Wilson, (Western China). Deep blood red flowers. No other wild rose has stirred the imagination of rose-breeders so much as this. Beautiful foliage and strong growth. Extremely showy.
- R. MULTIFLORA, Thunberg, (Japan and Korea). Small white flowers in abundance.
- R. MULTIFLORA CATHAYENSIS, Rehder and Wilson. Growth more slender.
- R. MULTIFLORA PLATYPHYLLA, Thory, Seven Sisters Rose. Ancestor of Crimson Rambler. Flowers are fairly large and double, and borne in large clusters.
- R. MORICA. A hybrid of R. Canina, possibly with R. Spinosissima. Very hardy.
- R. MULTIBRACTEATA, Hemsley & Wilson, (Western China). Growth strong, but slender. Attractive, almost fern-like foliage, and very graceful habit.
- R. OMEIENSIS ptr., Rehder and Wilson, (Western China). With immense ornamental thorns whose broad, winglike bases almost join along the branches, making a striking and unique effect. Having only four white flower petals.
- R. PALUSTRIS, March, (Eastern and Southern United States). Attaining 8 feet. A native of swampy and wet ground. Bright pink flowers in corymbs.
- R. PISOCARPI, Gray, (British Columbia to Oregon). Blooming for several months in corymbs of bright pink. Almost free of prickles.
- R. PENDULINA PUBESCENS, (Central and Southern Europe). An Alpine species with usually thornless canes. One of the best. Bright red flowers.
- R. RUBRIFOLIA, Villars, (Central and Southern Europe). A 6-foot high shrub with bluish foliage darkly tinged with crimson. Intensely pink, starry flowers.
- R. SATURATA, Baker, (Central China). Dark red flowers. 8 feet high shrub.
- R. SETIPODA, Hemsley & Wilson, (Central China). Clusters of large pink flowers borne by a 10 feet high shrub, followed by drooping clusters of large fruits.

- R. SOULIEANA, Crepin, (Western China). White flowers borne in clusters by a 12 feet high climbing shrub. A most beautiful and profuse bloomer.
- R. SPINOSISSIMA ALTAICA, Rehder, (Siberia). Very attractive in the shrubby border. The flowers are large and white. Foliage is very fine.
- R. SPINOSISSIMA FULGENS. A horticultural variety with semi-double flowers of lilac-pink. The plant is dwarf with fine, fern-like foliage.
- R. SWEGINZOWI, Koehne, (Western China). Pink flowers in small clusters followed by attractive fruits. Slender, small leaved shrub.
- R. POMIFERA, Hermann, (Europe and Western Asia). Small clusters of pink flowers on a densely branched shrub 6 feet high, followed by large fruits like small apples, very good for preserves.
- R. WEBBIANA, Wallich, (Himalaya to Afghanistan and Turkestan). Large pink flowers and ovoid fruits. Foliage distinct, round or oblong leaflets.
- R. WICHURIANA, Crepin, (Japan). Pure white flowers in large clusters. Plant is trailing and forms a dense mat of shining, almost evergreen foliage.
- R. WILLMOTTIAE, Hemsley, (Western China). Purple-rose flowers, followed by bright red fruits. Foliage finely divided and very handsome. Very distinct.
- R. XANTHINA, Lindley, (North China and Korea). Bright yellow double flowers. More vigorous than Hugonis, and with better foliage and longer lasting flowers.
- R. XANTHINA NORMALIS, Rehder & Wilson. The true wild form of *Rosa Xanthina*.
- R. XANTHINA, Allard. Similar to *R. Xanthina*, but growth medium with fern-like foliage. It is one of the finest yellow shrub roses. Very decorative.

RUGOSA ROSES

Rugosea Roses are particularly valuable for their hardiness, healthiness and ability to thrive under most adverse conditions of climate and soil. It is to be greatly deplored that the rose loving public does not avail itself to these robust representatives of the Genus *Rosa*.

The price for them is the same as the preceding, allowing on them also the same liberal discounts.

ROSE A PERFUM DE L'HAY, (Gravereaux, 1903). Double, dark crimson flowers, intensely fragrant. Hardy in severest climates.

TUERKE'S RUGOSA SAEMLING, (Tuerke, 1923). Orange-yellow in bud, opening to salmon pink color with appealing fragrance. A fine novelty. \$1.50.

MOSS ROSES

Moss Roses should still find an honor place in our rose gardens. Bearing a crown of lacy moss upon the stems and sepals they are indeed exquisitely lovely in bud. Absolutely hardy anywhere.

Price and sales condition the same as for the rest, \$1.00 each, \$9.00 per dozen, but allowing the large discounts.

CRISTATA, or CRESTED MOSS, (Chapeau de Napoleon). Triangular buds, enclosed by smooth sepals, crested with a deep frill or fringe which sometimes extends to the leaves. The flowers are large and full, bright rose-pink. Unique.

MUSCOSA JAPONICA. Dark pink, semi-double, heavily mossed. Will stand any climate unprotected. Makes an excellent shrub.

PROVINS—OR GALIC ROSES

These were the greatly favored Roses at the beginning of the 19th century, especially most beloved by the unfortunate Empress Josephine, and cultivated by her at her beautiful gardens of La Malmaison. There were hundreds of varieties. On account of their fragrance and extreme hardiness the Padre uses them in his hybridization work with *Rosa Gigantea*, both as seed and pollen parent, in order to get an entirely new type of roses, not only hardy, but also of exquisite foliage, fully mildew immune, and fine fragrance of flowers.

Price the same as the rest, with discount.

On account of limited space we list here only two, although we have a good collection of them. If interested, let us know.

BELLE DORIA. Beautifully built flower of curious violet slate color. Very hardy.

FORNARINA, (Vetillard, 1826). Pretty rose-red. Very large foliage. Spicy fragrance. An upright grower.

SOMETHING ABOUT THE PADRE'S OWN PRODUCTIONS

Why still more new roses, and make the selection of varieties a still more complicated job? This is the verdict of many puzzled rose amateurs, and also of professional rose growers. Alas, the breeding of new roses is of absolute necessity and the most essential work for the further development of roses. Without the skillful and ingenious labor of many rose experts, especially in France, England and Germany, not to speak at all of several successful men in this country, we surely would not have today those marvelous new Pernetiana Roses, so gorgeously colored as never dreamed of before to be possible with roses. And the color chart is not exhausted yet.

But how does it come that some of the most beautiful new roses imported from Europe, and such a great success over there, fail so utterly here? There is certainly no other explanation possible than that our climatic conditions are so vastly different over a vast complex of land, North and South, East and West. Why then should we rely almost exclusively on European bred roses, the more so if God gave us the same opportunities and brains to do what can be done in Europe, but with full consideration of our local and provincial needs? It is this desire that animated the Padre to do his share, if possible, to contribute to the American Rose growing in Southern California so favorable with the most balmy climate to carry on such experiments. It is his earnest endeavor: "A rose for every home. A bush for every garden." This naturally means first of all a rose for the amateur to do well under ordinary care, that is without the skill of the professional gardener, or in the hot house. The foliage of such roses must be more disease resistant, more free from mildew, the whole plant more hardy, with ideal long stems, and the flowers must be of perfect shape, and must be fragrant.

To obtain this ideal, it seems that the crossing and re-crossing only of already existent pedigreed varieties, no matter how grand and perfect in shape, is not alone sufficient for real development and local needs. To get, in the first place, more vigor, more healthy constitution, more hardness into our coming roses for one and all states of the whole Union, the many grand untried species, found from Alaska to India and Siberia, seem to be the surest and only basis for a judicious plant development, especially to come, once and for all, away from the everlasting and unavoidable inbreeding, if only the present pedigreed varieties are crossed and re-crossed. The natural habitat of some of these species, as for instance, *Rosa Acicularis* of Alaska and *Rosa Acicularis Baicalensis* of Siberia, are alone sufficient proof that roses for even the coldest states are well within reach as soon as developed into suitable garden varieties. If *Rosa Gigantea* seedlings or hybrids, their ancestor coming from tropical India, will not do for the state of Dakota, the off-springs of *Rosa Acicularis*, coming from Alaska and Siberia, as we see, will surely stand the severest cold below zero. In fact the Padre has already the superb new rose, Dakota, a seedling of *Rosa Acicularis* X Conrad F. Meyer X The Lyon Rose, and hence the blood of three distinct very hardy races in its veins, namely, *Acicularis*, *Rugosa* and *Pernetiana*. To indicate its hardness it was named Dakota.

These species so suitable for further development of the Rose in this country, of which we will name a few below, are yet in the healthy state as they have come from the hands of nature. With them the hybridist has the pliable material in his hands to work towards a new progress in rose culture. With them there is the probability that some of the most beautiful varieties of the Genus *Rosa* are yet in store for us with some patience in guiding them by the hand of man, under new environments, into all the useful and beautiful forms which are possible through careful cultivation and hybridizing them with the best existent pedigreed varieties, selecting out according a rigid standard of perfection, only the very best. Great as the progress of the rose has been in the last fifty years, we are justified to assume that it will be still greater by aiming at such high ideals through the use of the most promising untried species. Their main superiority in their natural state is unusual freedom from disease, more abundant blooming, and more healthy constitution of growth. And this is exactly the principal superiority of their first generation hybrids. In some, never a sign of mildew, or black spot, or rust ever appeared. The foliage is clean in all stages of its development, and some are evergreen here in Santa Barbara the whole year around. They are beautiful even when out of bloom in their luxurious garb of foliage.

That the Padre is in full earnest the happy statement can be made here that through the great kindness of Dr. William Croker, Director of the Boyce Thompson Institute, Yonkers, N. Y., around 20,000 new seedlings were raised from 356 distinct combinations of seed raised here in Santa Barbara in 1929. Public thanks are due to Dr. Crocker for having made the germination of this valuable seed possible. It ought to be self apparent that a good percentage of the seedlings will be record breakers of the highest grade. In fact Dr. Crocker went to the special trouble of having secured color photos from the most promising ones, all of them entirely new colors in roses. The outstanding fact of the result of this great experiment was that the dazzling colors of the Pernetianas were transferred over on these new Gigantea Hybrids. So it is not idle boast to promise the members of the American Rose Society American born roses according their local needs. Of particular interest for the colder sections of the country will be the new Nutkana Hybrids.

To acquaint the readers somewhat with the breeding material used only a few of these useful species are mentioned here to give at least an idea of the vast territory from all over the world, surely in itself a guarantee that every conceivable climate prevails in these districts where they come from, but also to give a fair idea with discretion the work of rose development is carried on by the Padre at his small few lots, as his former fine establishment, the former Padre's Botanical Garden is no more five acres.

The following are the species mostly used, although every year new ones are added to the list: *Rosa Gigantea* and *Macrocarpa* from the Burma frontiers, India. These are indeed giants of growth and flowers, with most beautiful, healthy foliage, and not a trace of mildew, or any disease. *Rosa Xanthana*, Persia; *Rosa Baicalensis*, Siberia; *Rosa Acicularis*, Alaska; *Rosa Nutkana*, Oregon; *Rosa Abesynica*, Abesynia; *Rosa Bracteata*, Macarthea and *Clinophylla*, India; *Rosa Pratti* and *Moyesii*, China; *Rugosa*, Japan and Korea; *Rosa Lutea*, Persia; *Rosa Laevigata* and *Macrophylla*, China, and many others.

With these species the most careful work is carried on in crossing them with the best pedigreed varieties we have so far, that is relatively best at least in regard of colors as the constant aim is a good growing rose for every garden, and not only being satisfied with the unusual color so much admired now in the Pernetianas, but too often overlooking the unhealthy constitution just of this popular type of roses. And the results so far obtained, not to speak of the thousands of seedlings yet in the hands of Dr. Crocker of the Boyce Thompson Institute, are indeed most promising, especially with the *Gigantea*, *Lutea*, *Rugosa*, *Acicularis*, *Nutkana* and *Abesynica* seedlings. *Rosa Wichuriana*, crossed with *Gigantea*, produced a plant without thorns whatever, and the most beautiful large, glossy foliage. At least there is the proof that a step forward is yet possible.

Every year from thousands of seedlings a few are selected as meeting the requirements of the ideals of a perfect rose. But for five generations no seedling is thrown away, but kept and watched in order to study in every minute detail the heredity of characters, dominant and recessive, and thereby valuable knowledge for future experiments is gained. As a sample we mention again the well known Pernetianas so gay and beautifully colored, but their greatest drawback is the dying back of the wood, black spot and early fall of the foliage, and in general weak constitution of growth. But who cannot see and understand that crossed with *Rosa Gigantea* and *Dakota*, the fine *Acicularis* and *Rugosa* Hybrid, an entirely new and healthy type of roses will be developed? Supposed the first generation still shows some undesirable characteristics, we can at least console ourselves that we are on the right track, truly now able to remedy the faults and getting in the second generation hybrids much nearer already to our goal. And there are yet hundreds of Hybrid Teas, Hybrid Perpetuals, Noisettes, Wichurianas, Bourbons, etc. of special merit we can fall back on as suitable breeding material until we just get what we want.

Within the next few years the best will be named, in fact a few of them were already introduced through the leading commercial rose growers, such as The Conrad & Jones Co., West Grove, Pa., and Bobbink & Atkins, Rutherford, N. J. The Padre emphatically repeats again that what he offers here is for no other purpose than to find some financial means to carry on his work. And if the members of the Rose Society will look at it in this sense, he feels that hardly anybody will stand back, but will place a small order to help along a great work of horticulture for our country.

Of special merit will be the fine Santa Barbara Queen, seedling of Lady Greenall X *Rosa Gigantea*, of the most exquisite salmon yellow, extra large, long pointed bud, rich delicious fragrance, but above all of the finest clean foliage, glossy green and free from mildew. And there are other very good ones coming on: Alessandro, Senora, Majella, Cabrillo, Hermosois-

sima, Rosa Mystica, Rev. Thomas Stecher, Rev. J. B. Wand, Mrs. George R. Fearing, Golden West, Milpas, Charmer, Chemeketa, Chemawa, Brilliance, Anna, The Padre's Triumph, Juliet Seedling, Grandeza, Senora Moreno, Temecula, Valerio, etc. It may be noticed that a trial is made with names of local history to acquaint people with the lure of Santa Barbara and Southern California.

With such seedlings on hand for the next few years, the best results are yet to come, judging from the exceptionally fine growth and healthy foliage of some of these species hybrids of practically all the seedlings of 1929 and 30. Such colors as Mari Dot, Charles P. Kilham, Doris Dickson, Shot Silk and Angel Pernet are exactly duplicated in dozens of new comers. This fact is mentioned to inspire everybody with interest and enthusiasm in rose culture from ocean to ocean.

The Padre feels tempted to give the readers a full explanation of rose hybridization, but alas, the limited space does not permit. But if anybody reads carefully the thesis on the breeding of "DAHLIA SEED" may be assured that practically the same principles govern the breeding of new roses according to the Principles of Heredity of the late Abbot Mendel. Very much could be said about the bugaboo of bees interfering with the work. Never mind bees, as these busy workers will no longer visit a dismantled rose. But, perhaps, some day we will have time to initiate all members of the American Rose Society with this most fascinating part in rose enthusiasm and rose culture, the breeding of new roses, and the study of the wild species, learning the rose as the great cosmopolitan, being found on the northern hemisphere wherever there is a human habitation.

Let us understand once this: if we encourage rose culture in our country, we are encouraging at the same time the highest aims of civilization, home loving and an appreciation of beauty. Therefore, dear fellow members, let us help together, each one in his ability towards a noble end.

As it would be unfair to list certain varieties which will be introduced by some leading commercial growers, we will list here only those already on the market. While the usual introduction price is \$2.50, the Padre wants to give a special proof of his earnestness to help a good thing along, making it possible for everybody by making a special allowance of only \$2.00, and besides this on a \$20.00 cash order to grant yet a fifty percent discount, provided order is sent in at once.

THE PADRE'S OWN VARIETIES

ARRELLAGA, HP. Large glowing pink buds and gigantic flowers of vivid pink with a light golden glow. Very fragrant and lasting. Long stems, and the plant blooms with great abundance. Foliage very handsome and healthy. Partly of Rosa Gigantea. \$2.00.

PITTSBURGH, HP. Very large buds and blooms of light flesh-pink, with a yellow base, globular form, and slightly fragrant. Strong growth. Large, healthy foliage. Partly of Rosa Gigantea, Frau Karl Druski and Mrs. John Laing. \$2.00.

SCHOENER'S NUTKANA, NH. Although only a single flower, but very large. This is the first of an entirely new race of roses of American origin from an American species, Rosa Nutkana of Oregon. No other Rose produces such a glorious abundance of clear rose-pink flowers. Foliage is abundant and has the leathery texture of Paul Neyron. No rose garden should be without it. \$2.00.

CHARMER, HT. This rose is perfection of shape. Translucent flesh colored, very large double flowers borne on extremely long stems. Never out of bloom from early spring until late in October. A great acquisition. \$2.00.

GOLDEN WEST, GH. This is a seedling between Frau Karl Druski and Rosa Gigantea. In its growth and wood it resembles very strongly Frau Karl Druski, but the foliage has the outlines of Rosa Gigantea. The flower is extremely large, and of an entirely new color very hard to describe, looking like mother of pearl with pink and yellow shining through the petals at the same time. An incessant bloomer and very strong, healthy grower, but not free from mildew. \$2.00.

DELICATA, AH. Hybrid between Rosa Abesynica X Clb. Cecil Brunner. Coming in gigantic clusters of lovely shaped small flowers very similar to Cecile Brunner. This also is an entirely new type of roses, very healthy and most showy, but needs lots of room. Fully mildew and black spot immune. \$2.00.

CALPURNEA, G.H. Another Gigantea Hybrid of great merit. It is a semi-climber of fine habit, although not entirely free from mildew. The flowers are large, very double of a pleasing carmine-flesh color with a strong fragrance. \$2.00.

MME. HERRIOT X GIGANTEA, GH. This is a most interesting hybrid of extremely climbing habit with flowers very similar to Mme. Herriot. \$2.00.

JULIET HYBRID, AH. A most outstanding novelty of extremely large flowers. The plant reminds one of Juliet, but the flowers are first of a coppery yellow in bud, and when open having a beautiful lavender overcast. Mildews. It is a very strong grower, and in bloom most spectacular. \$2.00.

SANTA BARBARA QUEEN, G. H. A dwarf Gigantea Hybrid. It is of the most delicious fragrance, similar in color to its seed parent, Ophelia. Very strong growth, and a persistent bloomer.

THE PADRE'S TRIUMPH, GH. A most unique combination between Beauty of Lyons and Rosa Gigantea. The foliage has the spicy scent like ripe apples. The flower is of the most perfect shape and in color similar to William Allen Richardson. Unhappily it carries with it somewhat the troubles of the Pernetianas, subject to black spot. But its growth is most healthy and the foliage in its first stages very luxurious and beautiful. It is indeed a new type. \$2.00.

GIGANTEA HYBRID. This is a seedling from self fertilization of Rosa Gigantea. But the foliage is somewhat different, more pointy and more glossy. The flowers are very large, and with the fine foliage this is by far a better rose than the well known Cherieke Rose. It is an exceedingly strong growing plant. \$2.00.

N.B. Kindly consider the extra discounts allowed, and the great purpose of the sale of these roses, namely to get the further financial means to carry on the great work of Rose Breeding in this country. Somebody must do it. To make the extra offer worth while, it stands to reason that the order must be at least somewhat larger. The purchaser is privileged to select from 35 to 50% more roses according the cash order.

N. B.—Kindly do not fail to read the thesis on "Dahlia Breeding," "Something About the Padre's Own Productions," and the "Appeal for a National Rose Garden."

A NATIONAL BOTANIC-GENETIC ROSE GARDEN FOR AMERICA

The Padre feels that his task in the encouragement of planting more roses would only be half done, if he would fail to point out to the great good that can be accomplished in a community through public or Municipal Rose Gardens, and in addition to them through a comprehensive National Rose Garden, where a judicious rose-breeding and rose selection for every state in the Union is carried on. What the Padre then means in a coordination, a well planned system of rose culture in this country, Municipal Rose Gardens in every city and town working in harmony with the great clearing house of Roses, the National Rose Garden.

In order to stimulate a wholesome influence towards good citizenship in modern society, and to stem the tide towards evil influences, to interest especially our younger generation in the best that a healthy and stainless civilization calls for, to foster a love for house and home, Municipal Rose Gardens are no longer merely experimental problems. Therefore, the Padre's well meant message to every member of the American Rose Society is: encourage a Municipal Rose Garden in your community, solicit new members, speak for an annual "Rose Show." Bear well in mind that there is nothing else with such a strong advertising pull for a progressive community than a real rose fever. It was the message which the Los Angeles Rose carried all over the world about all the great advantages the city of Los Angeles holds out to the home seeker. And today Los Angeles is a city of nearly 1,500,000 inhabitants with its large suburbs. It is an acknowledged fact by the serious minded boosters of Los Angeles that the most favorable publicity the city got in its growth was through the lovely Rose named in its honor. Go do likewise. What community is not anxious to enlarge its population? Say your story with Roses, and see for yourself that it pays to pay homage to the Queen of Flowers, the Rose.

And what about Portland, Oregon? Known the world over as the "Rose City." It got its publicity and growth solely through the Rose, the word Rose being there no idle word. The municipal rose garden of this city of wonderful promise is the main point of attraction, and the main important means of advertising that great section of the country. It is true of Portland

as of no other city that the leading businessmen there, including the Chamber of Commerce, have long realized the value of the Rose and its exploitation as a direct, very definite means to carry world wide the fame of that rose-favored garden spot of the earth, the Willamette Valley, wishing to say, where roses grow to easily in such profusion and to such perfection, it must be good to live, as everything else as well will grow there in abundance. This is the reason why there is such enthusiasm for the Rose in Portland to stage every year a great Rose Festival for a whole week. The Padre still prizes the honor above any honor that came to him in his life of having been one of the judges there during the Rose Festivals of 1914 and 1915.

My dear rose friends, what Portland and Los Angeles and Hartford and many other cities did and could do, every community is able to do with very little expense. But first of all get the habit of planting more roses, encourage your friends to join you in a move that is for the public good, for the beautification of your city, no matter big or small. Make a beginning and find out for yourself, how much for your greater enjoyment and for a great advancement in your surroundings you can accomplish through a systematic rose culture.

And as to a great National Rose Garden that can become of the best practical service for the whole country as a breeding station for new roses and an acknowledged test garden, the Padre ventures hereby to offer to the American Rose Society *all his original pedigreed seedlings, the results of over seven hundred different combinations in about twenty thousand plants, not one alike to another, and each having its own pedigree, as the first nucleus of plant material towards such a garden.* All the Padre asks is that he will be supported at least so much to carry on his work as long as his advanced age and health permits. And for this very particular purpose this small pamphlet and rose list with prices and unusual discount offers is sent out in order to get again some financial means to go with the work to a glorious finish for the benefit of the whole country. Do you want more of an old poor man? *Do likewise, and soon we will get better roses for America.*

Are there no philanthropically spirited members of the American Rose Society with a little more of earthly goods as we average mortals possess, to perpetuate their names in a "Rose Monument," or better said in an endowment for a worth while National Rose Garden? The late Professor Charles Sprague Sargent, director for more than 50 years of Arnold Arboretum of Harvard University, Boston, Mass., wrote in the Rose Annual of 1917, page 27, shortly before his death: "If some rich man wants to perpetuate his name in the world at least for a thousand years, his chance is to provide the Arnold Arboretum with the means to establish a real rose garden in which all species, varieties and hybrids, old and new, could be cultivated. There is only one such collection in the world, and that is Gravereaux's near Paris. The cost of the land and construction would be considerable, and maintenance would mean the employment of a first class man of woman, but this rose establishment is one of my dreams which I should like to see realized."

Alas, the dream did not come true. What a pity for America? In response to this splendid appeal for a great National Rose Garden, Dr. J. Horace McFarland, Editor of the Rose Annual and now President of the American Rose Society, wrote to Professor Sargent thus: "What could be finer than the perpetuation through all times of one's name in a living monument that would be of continuous beneficence to mankind?"

To this the Padre would add that it was his life ambition to see such a Garden somewhere in America established, preferably, however, in the state of California, for the simple reason because rose research outdoors, the whole year around, is nowhere so easily possible as in the Golden State, bathed in sunshine for 12 months. Otherwise any place would be satisfactory to the Padre.

It is indeed beyond my comprehension that in all these years so far yet no public spirited philanthropist came forward with the necessary funds for such an eminently good purpose, an encouragement for horticulture in general. Many Americans know of the gorgeous gardens of Rosaie de L'Hay and Bagatelle at Paris, France; at Sangerhuasen, Germany, and Hayward Heath, England. Is America less able to accomplish what England, not as large as the state of New York, and only one third of Texas, and nine American states larger, accomplished? There are three times more members of the National Rose Society of England, over 15,000, compared to about 5000 membership of the American Rose Society. And why? Because we are not self conscious and nationally proud enough to rouse ourselves with some ambition to accomplish even yet better things that stand out as the highest marks of civilization than any other country of Europe is proud of. It is to the wealthy members of the American Rose Society to make once a start in this direction. All kinds of endowments were already made in the past for noble enterprises, why not now at last for a National Rose Garden? Professor Hansen of the

South Dakota Agricultural College, Brookings, So. Dakota, one of our ablest rose hybridizers, said recently: "A rose genius is wanted in America to inspire the creation of Public Rose Gardens in our country as has been done in France and Germany, principally by M. Jules Gavereaux of Paris" "If one man in America will show what can be done, he will awaken a love for beauty as universal as the hunger for bread. By virtue of its intrinsic appeal —of the rose, he will find his work taken up and carried on in countless communities that are now barren. He will win the gratitude of a great people."

Yes, there is no single flower which carries with it more attraction, more friendship and more consolation in the sick room than the rose. No flower as a gift is more significant of human feelings and expression of sympathy as the rose. And why then should it not be considered as something of utmost value in this country to make rose growing still more popular through the guiding hand of a National Rose Garden?

Having now shown the great good that can be accomplished the Padre hopes that his ideal is understood, and why it is his life ambition to see his dream come true somewhere in the state of California, where the natural climatic conditions are so favorable, especially for rose breeding outdoors and the care of all species, no matter how tender. From experience he knows that no comprehensive rose collection from the tropic south of India and arctic north of Siberia will equally do well, without cultural troubles, is so well possible anywhere else as in Southern California, principally Southern California, where north and south meet. No matter how well especially Hybrid Teas did up in Oregon, coming to the greatest perfection there, it remained to be impossible to get fully ripe seed hips from Tea roses, and such great species as Gigantea always froze back, although they were never killed entirely except the youngest wood. The Padre is equally well satisfied if such a garden will be established either in Santa Barbara, or anywhere near to San Francisco or San Jose, or wherever the proper means are offered for it.

In conclusion the Padre ventures to express his sincere wish that the officers of the American Rose Society will have the courage to approach parties known to them as enthusiastic rose lovers with means to encourage the move towards a National Rose Garden, making somewhere a start, impress the right party with the right spirit on our part, and I feel we are near a working plan.

Let us then all see to it that this appeal is not made altogether in vain. And meanwhile let every member do his share at least through a cash order for the roses offered in this pamphlet so that the Padre's work needs not be given up, but carried on towards a full fruition until the necessary means to go ahead with the National Rose Garden are forthcoming.

Yours for a National Rose Garden in America.

THE PADRE.

Rev. Geo. M. A. Schoener.



DAHLIA SEED

Special thesis written by the Rev. Geo. Schoener, for the purpose of encouraging Dahlia Raising on a surer basis of breeding than it has been done heretofore, hit or miss. Wide awake Dahlia enthusiasts ought to encourage such work, at least by a trial order for seed. READ IT.

It can be fairly well assumed that every Dahlia enthusiast knows that new Dahlias originate from the seed. And there is hardly a more fascinating occupation for the true plant lover than to try his luck with seed to raise new and probably better varieties, because every Dahlia plant from seed is an entirely new variety which may be better than any variety now on the market and the flower it was taken from. But it may also be entirely worthless to propagate it further, to name it and put it on the market. And sure it is, in nine cases out of ten the raising of Dahlias from seed, promiscuously collected and no such a thing done as to hybridize outstanding varieties with pollen from other outstanding varieties, there are more disappointments and total failures than occasional success, simply because the trend of nature is that seedlings from such seed revert back nearly fifty percent to the original single wild species of the Dahlia, especially when the seed happens to be knowingly from already half single Peony Dahlias. The cases where the bees just hit it to effect with their pollen carrying from a nearby fine variety the right kind of a combination of two great varieties together to produce a desired improvement towards further perfection of the Dahlia are indeed very rare as the history of the Dahlia most clearly shows. An outstanding great new Dahlia can hardly be expected with certainty from such seed promiscuously collected from varieties that go the easiest to seed. At any rate, an outstanding great new Dahlia is not born every year, even with the best precaution, as we never have nature under such control to produce for us always exactly what we want her to do. At its best we can reasonably help along according to certain principles of heredity, and according to acquired knowledge through a series of many failures.

With due consideration of these fundamental facts it must stand to reason, even to the most sceptic advocate of the theory that the bees are the most efficient hybridizers of Dahlias, or that artificial cross pollination by hand is impossible in Dahlias, must admit that there is a great difference in seed,—success or failure all depend on the right kind of seed. We readily grant that all thoughtful Dahlia raisers take at least the precaution to collect seed only from the very best varieties, of course hoping to get still better ones from the seed of them, new colors and better stems, always supposing that the bees were at work to do efficient hybridization. It is however, the well founded opinion of the Padre that what the bees can do, we can also do with a little extra exertion and with some forethought why we do it. A mathematical formula says: If we know two points, we can find through them the location of the third point in a straight line or a circle. And in careful line-breeding of Roses and Dahlias, this formula works out equally well. If we know the outstanding merits of a certain Dahlia, and select it on this account as the seed parent, and then go and select another fine Dahlia of which we are sure beforehand it will make a good combination with the other, to take the pollen from it for cross-pollinating the seed-parent, who will deny that seed raised with such precaution and premeditation of the resultant seedlings is not infinitely better than seed merely collected because it is Dahlia seed, even from the best varieties. We are at once sure of a careful line-breeding, and know the pedigree, and exactly know by looking at the resultant seedlings what characteristics were transmitted to them, or what characteristics acted dominant and which ones recessive, surely a most valuable knowledge for further breeding experiments, being on the right track to guide intelligently all future work towards further development, without just making a shot in the dark.

To be of real help in the successful raising of Dahlia seedlings, it would rather be necessary to furnish our customers with the right kind of information about the complicated questions of plant genetics with special reference to Dahlias, how the act of artificial hybridization, or how the right kind of seed is raised, and where it is possible to raise it. The best that can be done for the present is to refer all interested parties to a comprehensive article on Dahlia hybridization, written by the writer of this catalogue, the Padre, and which appeared in the Bulletin of the American Dahlia Society, October 1927, January and April, 1928.

While it is impossible in the narrow space of this brief price list to present an exhaustive discussion, scientific and practical, of the botanic and genetic facts of Dahlia hybridization, or how to go about to raise more reliable Dahlia seed, no matter how important this knowledge is, we will at least hint at some salient points in order to put our customers on the right road for further investigation on their own accord, to make them sufficiently interested to solve their problems with reference to local conditions. At the same time such far reaching explanations of such a vital question in Dahlia raising will serve as the most reliable assurance our customers can depend on the seed offered in this price list that every possible care was taken and hybridization

skill was exercised to produce on purpose pedigreed seed, and not merely collect the ripe seed which is casually found after the plants had died down.

The best way to accomplish our aim of initiating our customers in the workings of Dahlia hybridization and its irrevocable necessity to practice it, if more reliable seed is wanted to eliminate gradually by the increasing of inferior varieties, it seems we could not do better than to present a fair illustration of two unquestionably great varieties bred together. For a concrete example let us pick out Jane Cowl as seed parent, and for its hybridization pollen to be taken from Mariposa. Of the many Honor Roll Dahlia varieties of 1927, mentioned in the Garden and Home Builder by Darrill W. Hart, Jane Cowl is by far the best of all. It combines every characteristic of a perfect Dahlia,—perfectly stiff and stout stem, flower facing upward, perfect shape, large size, good substance of petals indicating good keeping quality in the cut state, and most attractive color. Who would dare to deny that well ripe seed from such a Dahlia would not be about the most desirable, not only for the professional Dahlia grower, but for the amateur as well? But anybody knowing something more definite about plant breeding and reliable flower seed capable to produce still better things as the seed parent is itself, knows well enough that it is not Jane Cowl alone, and cannot be Jane Cowl alone to produce something still better than she herself is without pollen from an equally good Dahlia. While it is an acknowledged fact that in genetic research work of plant breeding that it is usually the good physical constitution of the seed parent, or mother plant, from which the resultant seedling takes directly its new physical constitution of healthy growth and characteristics of size and shape of flower, stiffness of stem and kind of foliage, it is equally certain that all further improvements in color, variation of shape, especially between decorative and cactus varieties, fullness and perfection of shape, comes to the greatest extent from the influence of the pollen parent, or father plant, that is to say the influence of the pollen on the germ of the seed bearing variety or mother plant.

To translate these genetic facts over into our example of Jane Cowl being the seed bearing parent, that is to be hybridized, and the pollen to hybridize with to be taken from Mariposa, a hybrid cactus variety, we may assume that at least a good percentage of one third of the resultant seedlings will show the outstanding characteristics of their mother, Jane Cowl, that is, the flower again facing upward, stiff stems, upright symmetrical growth, large size of flower and good foliage. Mariposa, being justly considered as one of the most perfect hybrid cactus Dahlias in existence, with pleasing color of orchid pink, with excellent shape of flower and erect, stout stems, will show its influence on the resultant seedlings in a different color scheme from that of Jane Cowl, that is in a mixture, probably with a delicate overcast of orchid pink over the bronzy buff and gold of Jane Cowl, enriching yet the beauty of the original color in a marked degree, and by no means undoing it, as what is in the color of Jane Cowl will and must show up again in its profusion with the colors of the pollen parent either as ground color, or defused.

So much ought to stand to reason to a clear thinking Dahlia enthusiast, anxious to raise Dahlias from seed, that nothing of the good characteristics of Jane Cowl will be lost, or fall into the ocean, if hybridized with pollen from Mariposa. And vice versa, nothing of the good qualities of Mariposa will be lost either. But, on the contrary, there is a very reasonable expectation that a happy blending of the good characteristics of Jane Cowl and Mariposa will take place, at least in about 25 percent, in the resultant seedlings, some of them leaning more to Jane Cowl, while some show very plainly the hybrid cactus influence of Mariposa, including in subdued shade the orchid pink in an interesting suffusion with the beautiful color of Jane Cowl as already indicated.

Before going further we must here admit that our task of hybridization would be a comparatively easy one, if we would have only to reckon with Jane Cowl and Mariposa, assuming that they are pure bred. Alas, our present day Dahlia is no longer a pure bred wild species, coming true from seed. It cannot be denied that atavism, or the reverting back to many past inferior generations of grand and great grand parents, will show itself in about 50 percent of the resultant seedlings. But having to reckon with atavism in practically every hybridization experiment until we have come to a pure bred type, it must be well remembered in Dahlia breeding, collecting seed from plants which were not hybridized, that atavism will show up still worse, as hybridization has at least the direct effect that the pollen from a good variety will exert its influence on the resultant seedlings, preventing the full play of atavism. It is therefore a very wrong conception of affairs to think that all that is needed is to collect seed from an acknowledged fine variety. Here is where we find the cause that not more seed is producing new record breaking Dahlias, and why always more inferior Dahlias are spoiling the fun for the eager Dahlia enthusiast, thinking he can break it over his knee to get what expected to get.

Still, for the argument's sake, figuring according to Mendel's Principles of Heredity, let us suppose that just those admirable characteristics of Jane Cowl acted recessive, that is they did

not show up at all, and on the contrary some characteristics of Mariposa acted dominant, that is they are reproduced in the resultant seedlings, our experiment to get still further improvement of Jane Cowl is not lost, because just this phenomenon is the best proof that these characteristics of Jane Cowl, seemingly to have disappeared in the first generation of our hybridization experiment will reappear absolutely for sure through careful self-fertilization of one of the best seedlings, preferably the one showing the least influence of Jane Cowl and desirable characteristics of Mariposa, in the second generation, that is in seedlings resulting from seed of self-fertilization of the best seedling of the first generation selected for this purpose. In other words we are sure that we have laid the foundation of a certain further development towards perfection. With some patience and a sharp eye it becomes within the reach of every Dahlia enthusiast to raise new Dahlia varieties from seed much better than those he has at present, always provided that he lives in a locality where his plants are not cut down by a killing frost too soon, probably already by the end of September, before the most double record breaking varieties come with an open enough center to show life pistils to make hybridization possible for him.

For still further practical information in regard to our own work of hybridization of the best known Dahlia varieties, especially the latest *Honor Roll Dahlias*, with pollen from the most suitable varieties to produce decisively a further development towards ultimate perfection, it is well to point out that the seed here offered by ourselves is grown under the most ideal conditions in a section of the country where the raising of the best Dahlia seed is possible as nowhere else in all America, and that is in Southern California, unanimously admitted by the foremost Dahlia experts that the climatic conditions for such work are in no other Dahlia section, from ocean to ocean, so ideal as just in Southern California, principally in Santa Barbara, Ventura, and Los Angeles counties.

We have just said before that it is within the reach of everybody to raise record-breaking new Dahlia varieties through the aid of careful hybridization if one happens to live where killing frosts are not making an abrupt end of his Dahlia glory before the best and most densely closed double ones go to seed. This is about the only serious drawback east of the Rocky Mountains to interfere seriously with successful Dahlia hybridization.

Let us here mention another very important genetic fact which must be understood in Dahlia hybridization. Parties familiar with the behavior of very double varieties know from their own experience of many repeated trials that it is only possible for them to succeed if it accidentally happens that they have a long blooming season, uninterrupted by storms and killing frosts, until the middle of October. In Southern California the Dahlias keep on blooming way into December, even the most double varieties losing their original doubleness, coming then with an open center and well developed pistils and pollen, the generative organs of the plant, allowing a free operation to apply previously collected pollen from a suitable variety on to the pistils of the variety selected to be the seed-parent. Without an open center in which clearly the pistils to be hybridized, or touched with pollen, it would remain impossible to hand-cross pollinate. A perfectly double Dahlia, at its best in the latter part of August and September, simply cannot be hybridized at all. Here then you have the concise reason why Dahlia hybridization fails in the colder sections of the country, and is limited almost exclusively to such climatic conditions as are enjoyed in Southern California and the Southern Atlantic states.

As it can be learned from the Padre's article in the Dahlia Bulletin of January, 1928, the flowers from which the pollen is to be used are previously cut, the petals pulled out, in other words the flower dismantled, and then put in a glass jar filled with water, and set away in a place where no wind will blow off the pollen as fast as it will collect on the dismantled flower, usually coming to the surface in large quantity according to the age of the pollen-sacks, already the next day after cut, and then ready to be used. The more pollen used the better, so to say to choke any pollen on the flower to be hybridized before it comes to the surface and near enough to the stigma of a pistil. Any pistil then, ripe enough to unfold its two horns, will push right into the applied pollen, making right there all further action of pollen carried by the bees, or its own pollen gradually omitting, null and void as the ripe pistil is already impregnated with the pollen that was applied by hand of the hybridizer. If the experimenter becomes fully familiar with the genetic fact that the pistils ripen about good one full day and more before the pollen will be ripe enough, or in other words the pistils are in a mood of conception before the pollen on the same flower is ripe, he will understand and feel sure that he can touch every pistil which he sees with his naked eye and with the aid of a microscope with no fear whatever that its own pollen became effective before he applied the pollen he had ready for the operation.

All those expert Dahlia raisers and advocates of unhybridized seed, insisting that artificial hybridization is impossible, and that the bees are spoiling the operation and also that bees' hybridization is just as good, ought to come at least to this very sound conclusion that also the

pollen carried by the bees usually takes effect before its own pollen is ripe enough to spread itself over the pistils. They ought to see now for themselves that it is up to them to get ahead of the bees with pollen which they keep ready for application at the right moment. At the same time the undeniable proof is brought by their own assertion, that so far, by no one else in this country such all sided pains were taken in artificial application of pollen from another Dahlia possible and successful. In connection with these facts it must be remembered that it is an absolutely established genetic fact that in many plants nature shuns self-fertilization, avoiding thereby on its own accord unnecessary inbreeding which often causes weakening of the naturally healthy constitution of the plant, relies to a great extent on the pollenating of the flowers by bees and the wind as pollen carriers. If self-fertilization becomes in certain experiments sometimes necessary in order to bring out recessive characteristics in the second generation, it is a good plan to help along artificially, that is by cutting a flower on the same stock for the purpose of letting the pollen collect on it after it is dismantled and put in a jar until ready, then use it on another flower to be hybridized on the same stock.

To avoid the danger of bees and other insects carrying pollen, it is an easy matter to cover carefully the flowers to be hybridized with cheesecloth, or any suitable fabric. In his own work of hybridization to exclude still further all possibilities that the bees and other insects will spoil the effect of the pollen he applies with his own hands on the flower he selected for operation, the Padre prefers the early morning hours before the bees are busy and hard at work to carry pollen, where they find it plentiful, onto flowers so far only with fully developed pistils to receive it promptly for taking effect at once. The Padre's opinion is that such tedious efforts to raise reliable Dahlia seed to produce record breaking new Dahlias, are worth the extra precautions to get ahead of the bees before sunrise. It may be well assumed, without fear of contradiction, that so far, nothing better in this country or elsewhere was advanced to raise the standard of Dahlia seed, and lay the genuine foundation for a real further development on a sound scientific basis. And it is, therefore, equally sure that nobody else has such seed to offer, but at its best only seed promiscuously collected from such good varieties known to go easily to seed, and with no special effort whatever to improve it, or to make also the most double varieties, decorative and cactus, go to seed. If there is occasionally an exceptionally good Dahlia the result of such seed, it is at least sure that nobody can tell its pedigree and carry on further breeding work with it on the strength of such a pedigree.

The best assurance for our seed offered, that it is reliable in the highest sense of the word *best* implies it, therefore, that the Padre himself through the most scientific methods of plant genetics sees to it in proper time that the best suitable varieties for seed parents are selected after careful trials for the previous year. And equally well he sees to it that pollen is selected from such varieties of which it can be reasonably expected to produce a combination between the two varieties with best prospects that record breaking seedlings will be the result of these extraordinary efforts.

It is with the best intention on our part and with the hope to point to the road for better success to everybody if we say that amongst the foremost Dahlia specialists of the country is still prevalent and in practice that it is sufficient to collect seed from the best varieties to get the best results from seedlings. Even the claim is kept up most tenaciously that hand-pollination is out of the question, unless it is done with such painstaking care that the price of the seed so obtained would be too prohibitive for the ordinary Dahlia amateur, and for this reason they depend entirely on natural agencies to distribute the pollen from one flower to the other. Simply bound to sell seed, the claim is made by such people that the seed which they offer is fully equal to any strictly pedigreed seed of which the two parents are known, although they are bound to admit that in everything in this world, where breeding of animals and plants is concerned, the deep thinking, progressive man knows that he must always look in two directions in the selection of his breeding agencies, one to produce the kind and one to improve the kind—mother and father. To say that such hybridization work is only good enough for experimental purposes in agricultural schools, or in universities, would imply the meaning that there would never be any practical use of genetic and botanic sciences. The very fact is that every science is based and must be based on concrete findings in nature.

We have learned already that by the people who sell unhybridized seed it is assumed that the bees are doing the pollination to get variation and probably further development. But we repeat, the experience of most parties who have relied on such seed is, that the results of getting record breaking new Dahlias are few and far apart, no matter how long the claim is maintained for extraordinary results. To know definitely only the half of the pedigree, that is the seed bearing parent, does not help us over the whole difficulty. Definite knowledge about the

variety which furnished the pollen, that is the father plant, is just as important if we have in mind careful breeding on a scientific basis to know and to learn how much of the best characteristics of the parent plants was inherited by the seedlings. This acquired knowledge alone will help us to make any further reliable diagnosis in future hybridizations, to get a precise idea which varieties we must eliminate and which one we must keep to succeed still further in our interesting breeding work.

We have also pointed out that any seed raiser ought to have the fundamental knowledge that in the most instances the seed bearing parent, or mother plant, is transmitting to a large degree the growing characteristics, such as size of plant,—tall or low growing,—length and rigidity of stem and foliage. But to rely thus on the seed parent alone does not give us yet any improvement, or something still better. It is the general idea of the best authorities on plant breeding that the pollen parent, or father plant, is supposed to supply the characteristics of perfection in the resultant seedlings, such as large size and better form of flower, and above all a new shade of color never seen before in a Dahlia. Relying, therefore, on the bees alone can hardly guarantee us always seed to produce superior results, or better Dahlias than we have admired so far as the acme of perfection. It is simply fishing in the dark without any specific ideal to accomplish by careful line breeding, and leaving everything to chances. Only one parent is known. No account can be given why it happened that the seedling turned out just so, in most instances by far inferior to the mother plant, but of course, good luck may also happen that in rare cases the seedling is actually better than the parent plant. Practically every recordbreaking Dahlia came into existence without any knowledge about its genetic ancestry. Hence it is self evident that seed obtained through careful pollination is better, and the only kind of seed that should be used. In spite of the keenest research, the observations of the best plant breeders have proved most conclusively that the laws of nature in plant heredity are at times very hard to read, and therefore hardly yet sufficiently understood so that we are in absolute control of the perplexed problems confronting us. But what then, if we dare to throw aside every precaution to do what seems possible for us? Even with the very best seed, obtained through careful methods of selecting in our mind the right parents, hardly ever more than one-third of the seedlings will show results of having broken away from the parents by showing decided superiority as the inherent atavism shows up in too many directions. Only by carefully noting the results from year to year in every successive generation is it gradually possible to guide and govern plant breeding experiments.

It is, therefore, purposely misleading people to claim for personal gain that special hand-hybridization is unnecessary, bringing forth any kind of argument that just their seed, without pedigree, will produce unheard of grand results. To claim such things is a contradiction of natural facts.

With fair consideration of what we have shown in our treatise, nobody can deny that such endeavors to make at least the hardest trials for something more reliable is for the best interest of the unaware Dahlia grower. We feel well justified to give the good advice to think it over twice before buying any longer Dahlia seed out of joint with the right methods of pedigreed seed raising—contrary to any gained knowledge of science of plant breeding of today. And hardly with the best intentions such claims, as are made by these seed collectors, can be maintained for the benefit of the Dahlia loving public. Therefore, beware.

Merely to give a hint of caution we call special attention to this most important fact that a great many of the best very double Dahlias are even not making seed in sunny California, as for instance Kittie Dunlap, Shudow's Lavender, Ballet Girl, Pierrot, Bueno, Silverado, etc., and still seed from these varieties is offered by more than one party in Bulletins and Magazines in full ounce quantities. Dear Dahlia friends, find it out yourself in your own garden that such varieties truly never make seed. Some raisers, however, are honest enough, or forget themselves to make no secret of it, that these varieties actually fail them to go to seed, evidently not knowing the secret how to treat the plants in the late season to produce enough flowers with open centers to develop perfect pistils and pollen to accomplish cross pollination easily. But even with such extra efforts just before the plants quit blooming entirely it is never possible to get a sufficient amount of seed to offer for sale.

For an all around comprehension of the present day Dahlia situation it is well to bear in mind that just because some careful raisers have succeeded by rigid elimination of inferior things to give us undreamed fine varieties, such as Jane Cowl and other Honor Roll Dahlias, accidentally the offsprings from seed collected from their best previous varieties, and evidently fertilized by bees, the competition and search for still better things becomes from year to year keener and keener that the time has come where we can no longer rely on the mere fact that pollen from one flower is naturally distributed over many others by bees and wind, resulting in natural crossing of varieties for a betterment of type. We must at least cling to something more definite if it is

within the reach of our hands and mind. And it is as we have clearly seen in our discussion. It is readily admitted by the foremost Dahlia experts that the final perfection of the Dahlia has by no means been obtained so far, and consequently will take brain and work to get first on a more solid basis to produce the right kind of seed by artificial means through well calculated and well effected cross pollination.

These then are the facts we wish our customers to consider and to know that they can well rely on it that we first considered them ourselves to get a step further for our own benefit and for the rest of every true Dahlia friend. As it is a matter of getting better Dahlias, the public, we thought, is entitled to be fairly acquainted with the all important problem of seed raising. Read every line carefully over and over.

It seemed not more than fair for the protection of the genuine Dahlia enthusiast to show at length the difference in seed, as our competitors try through costly advertising and in their catalogues to keep the public under the spell and illusion with their many impossible claims of bees' activity and unnecessary hand pollination. But since it seems that such extra work of hybridization is the cause of prohibitive price of seed, we will show that such arguments are groundless, as our price for the best grade of seed of which we can give the names of the two parents, seed and pollen parent, is very little above their price for the best seed they offer, and able only to give the name of one parent. In more than one instance our seed is cheaper, notwithstanding that we give the right pedigree. In fact one of the most known seed raisers of an Eastern state offers a 100-seed package for \$25.00, collected from varieties he thinks best, and seed of U. S. A. at \$10.00, and of course not cross pollinated with pollen from any other good variety.

PRICE OF PEDIGREED DAHLIA SEED

The price of our seed of which both parents are known, hybridized carefully with the aid of a microscope, is only \$10.00 per 100; \$6.00 for 50 seeds, and hence even cheaper than their seed for \$25.00.

If some customers are satisfied with cheaper seed and insist on it, we have collected, just as other raisers do, seed from the best double decorative varieties, such as Amun Ra, Jersey's Beauty, Mrs. I. de Ver Warner, Eldorado, Meadow Lark, Campagne, Ellinor Venderveer, Treasure, King Tut, Black Jack and others; and from such Cactus and Hybrid Cactus varieties as McGregor, Mrs. Edna Spences, El Granada, George Walters, Esperanza, Amethyst, Daddy Butler, Mrs. Warnaar and many others. Price \$3.00 per 50 seeds; \$5.00 per 100 seeds.

Here is a list of varieties on which pollen from *Jane Cowl* was used, and from which seed may be had, their pedigree then as follows: Barbara Redfern, Eldorado, The McGregor, City of Trenton, Berengaria, Beau Ideal, Garden Joy, Amun Ra, Sagamore, Mrs. Ida de Ver Warner, Elite Glory, Jersey's Beauty, Mrs. James M. Abbott, Copper, Robert Treat, Wizzard of Oz, and many others.

HONOR ROLL DAHLIAS USED AS SEED PARENT

Here is the list of Honor Roll Dahlias which we used as seed parents, and hence from which seed can be had: Andreas Hofer, Ambassador, Barbara Wear, Barbara Redfern, Betty Ivins, City of Trenton, Galli Curci, Alice Whittier, Dorothy Dix, Golden Dream, Berengaria, Edna Ferber, Elite Glory, Beau Ideal, Eagle Rock Beauty, Eagle Rock Jewel, Jersey's Jewel, Jersey's Ideals, Jane Cowl, Jane Hare, Mariposa, My Maryland, Joy, Paul Revere, Alverne, Phylis Tucker, Trentonian, Robert Treat, Sagamore, Marmion, Kalif, Regal, Charlotte, Laurenze, Amulet and many others.

The best seed parent was Barbara Redfern, undoubtedly one of the finest Dahlias in all existence. Pollen from several of the best Honor Roll Dahlias was used on it for its hybridization as we will presently see: Mariposa, Trentonian and Alice Whittier.

HONOR ROLL DAHLIAS USED AS POLLEN PARENTS

Practically from all varieties used as seed parents flowers were cut to use the pollen of them for good combinations vice versa on them, just according as it seemed most certain to bring out new and novel effects and variations to further perfection.

For a good illustration sake a few examples are mentioned: Pollen was taken from Amun Ra to be used on Mariposa, Elite Glory, Dorothy Dix, My Maryland and Phylis Tucker. From Mariposa pollen was used on Jane Cowl, Elite Glory, Trentonian, Barbara Redfern, City of

Trenton, Berengaria, Golden Dream, Spottswood Beauty. Wherever it seemed of advantage pollen from Elite Glory was used, as for instance on Dorothy Dix, Jane Hare, Edna Ferber, Alice Whittier, Silverado, Berengaria, Golden Dream, Rose Fallon, etc. Pollen from Golden Dream was used on Paul Revere, My Maryland, Edna Ferber, Mariposa, Ambassador. On My Maryland pollen was used from City of Trenton, Barbara Redfern, Andreas Hofer, Trentonian and Amulet. On most of them pollen was used from Mariposa.

N. B.—*No seed whatever* was collected from Peony, Show and Pompon varieties. The customers can fully rely on it that only seed from the best decorative and cactus varieties is offered. In fact we practically grow no Peony, Show and Pompon varieties with very few exceptions as you can learn from the list of varieties. Therefore, rest all assured, you get *only the best*.

SPECIAL PRECAUTION FOR CHEAPER SEED

As it may be well assumed that the hybridization with a microscope over the eye to hunt out every pistil, takes too much time and hence making it impossible to accumulate a reasonable amount of reliable seed for the market, the Padre took refuge to go quickly from plant to plant, dusting the pollen into the flowers to be hybridized, and by so doing still be in a position to give the exact pedigree, namely seed and pollen parent. The only great difference is that it was impossible this way to cover all flowers with cheese cloth. Price of this seed is \$4.00 per 50, and \$6.00 per 100.

Besides the two superior grades of seed we have also a limited quantity from the best cactus and decorative varieties, but not hybridized, exactly as our competitive seed raisers, \$2.50 per 50, and \$4.00 per 100.

Trying to meet the wish of everybody, especially those customers who want to make a trial with cheaper seed before they go into Dahlia growing in a more systematic way, we have a limited quantity of *mixed seed* collected of the best varieties after the hybridized was gathered. But in every instance we can give the name of the variety from which it was collected. Price of this seed is \$3.00 per 100 seed package.

CONDENSED LIST OF CHEAPER SEED

Price of first grade *Pedigreed Seed*, the two parents known, but the hybridization only done by dusting the pollen, \$6.00 per 100 seeds; \$4.00 per 50. Price of seed collected from the best decorative cactus and decorative varieties, but not hybridized, and hence only the seed parent known, \$4.00 per 100.

N. B.—This is the grade our competitors sell at much higher price.

Price of BEST MIXED SEED, but only seed parent known, \$3.00 per 100 seeds. Second grade \$1.00 per 100 Seeds.

SPECIAL BARGAIN

In order to sell out completely all Dahlia roots on hand we are making hereby the extraordinary offer of 100 roots at only \$25.00, but our selection, however, we emphatically assure the buyers of getting exclusively the very best that is grown today. And in addition to this bargain we will add a package of seed collected from the best decorative and cactus varieties of Dahlias.

GLADIOLUS SEED

Just what was done to get superior Dahlia Seed, the same was done with Gladioli, collecting pollen from the very best known varieties, and then using it on other grand varieties, having in mind a particular improvement, either in color or in shape of flower. To a great extent also new Gladiolus species from South Africa were used in order to get entirely new breaks and types.

Price per trade package, about 500 seeds, \$3.00.

GLADIOLUS BULBS

In order to sell out completely, as we have no longer space to continue Gladiolus planting, we are ready to sell at only \$20.00 per 1000, MIXED. Send in your order at once.



