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The Munson Nurseries

T.V. Munson and Son
Proprietors.



Captivator Grape

Denison Texas

AMERICAN

INTRODUCTORY

To our Numerous, Intelligent, Discriminating Customers:

THE FOLLOWING CAREFUL, TRUTHFUL DESCRIPTIONS are of far more value in making successful selections than would be the grandest set of pictures that could be executed. Therefore, study the descriptions, and preserve this Catalog, for it will be found a most valuable horticultural work of reference. Our methods of propagation are those pursued by the largest, most intelligent, and most successful planters of commercial orchards.

IN SOME CASES varieties heretofore included in our Catalog are omitted. Some of these are dropped, as others included are better for the same season, and of some we have no stock to offer this year; such may be inserted when we again have stock of them. Please do not order varieties not named in this Catalog.

WHILE WE HAVE A REPUTATION FOR MAKING A SPECIALTY OF GRAPES we have by no means neglected other departments or classes of fruits in our line of business. All have had the same vigilant care in testing, selecting, and propagation, so that we will be found up with the times in all things.

IN OUR EXPERIMENTAL DEPARTMENT we systematically test all new, very promising varieties as they come out, and ourselves originate numerous varieties of grapes, plums, persimmons, etc. By carefully combining the best strains, and testing for a series of years in various localities, we from time to time introduce those proving superior to others in cultivation of the same season.

CAUTION. We employ no traveling agents. Those claiming to be our traveling agents are frauds, and should be shunned. We have learned of a number of such operators, and have advertised them for the protection of planters. We never could see any benefit to the planter to be importuned by oily-tongued "agents," out of planting season, with highly exaggerated pictures, samples, and deceptive speech, into giving orders at two to four times the prices that the same or better varieties can be ordered direct from reliable, reputable, and responsible nurseries, and whose carefully prepared Catalogs enable one to order far more intelligently and profitably; hence we prefer DIRECT dealing.

Care of Trees on Arrival

Be careful in unpacking to note everything, and immediately "heel in" in moist soil till planted, or plant at once. Never allow the roots to dry, or failure will most likely result. If the stock is received in a frozen condition, place the bales or boxes in a dark cellar or bury in earth till thawed out.

Before planting remove all broken and extra long roots with a sharp knife, cutting from below outward, not from above downward. One-year-old peach or apple trees should be cut back to a naked stem $1\frac{1}{2}$ to 2 feet high; leave no side branches. Two-year-old trees should have their branches cut back to their half length or more, the lower less than those above; cutting in shorter as you go upward, and leaving the leader the longest. Plant as deep as the trees stood in the nursery row, excepting dwarf pear and cherries, which should be planted sufficiently deep to cover the stock from two to three inches.

The ground should be thoroly plowed and subsoiled at least fifteen inches deep. If to be set in land which cannot be plowed, dig holes not less than eighteen inches deep and three feet across. It will be of great benefit to explode a charge of dynamite in hole drilled two feet in bottom of hole. Special bulletins along this line can be had from dealers in dynamite. Then fill up with rich, mellow earth, but no fresh manure, to such a point that the tree set thereon will stand the same depth in soil, when the hole is filled, as it stood in the nursery row. Lean the tree to the south considerably and fill in among the roots carefully with mellow soil, and when completely covered an inch or two, press the soil firmly down with the foot, after which level up the hole with loose soil, which should not be tramped. If the soil is dry, pour in a bucketful or two of water before filling the hole, and when settled away, level up with loose soil. Keep the soil thoroly pulverized about the tree, and free from weeds during the growing season. Do not water thru the summertime by pouring water ON TOP of the ground, but dig trenches around the tree and fill with water every evening until ground is thoroly saturated below the roots; then no more watering will be needed for two weeks. Partial surface watering kills more trees than it saves. Water only in drouth, when trees show need of it.

For more detailed information on this subject and on future care of the trees, we respectfully refer you to American Fruit Culturist, or Bailey's Principles of Fruit Culture, found in the list of books.

FOR INFORMATION ON SPRAYING, Diseases of Trees and Plants, and all kindred subjects, write your State Agricultural Department, or Experiment Station, or Department of Agriculture, Washington, D. C., for bulletins on these subjects. They will be furnished to you free of charge and will give you the latest and best information. The National Government and most all the States maintain a department devoted to horticultural interests, and their information on spraying, diseases of trees and plants, etc., is the best to be had.

Certificate of Inspection

Our nurseries have been inspected by the State Inspector for San Jose scale and other dangerous insects and diseases, in compliance with the laws of Texas, and have been found free of such troubles. A certificate of the inspector will accompany every sale and shipment as required by the law. TELEPHONE connection, local and long distance. Address:

T. V. MUNSON & SON,
Denison, Texas.

1912-1913

Horticultural Information

So many of our customers write us for horticultural information (which we have ever most gladly given by letter, until the questions have become too numerous for us to longer thus answer), that we have, after careful examination, selected the following list of works of most approved authorship, and arranged to mail direct to those ordering, at publisher's prices given below. Cash must come with order.

These books answer your questions in the best manner. This Catalog also contains a vast amount of information, and, if carefully studied, will answer a large number of questions; if, however, neither the Catalog nor books cover your questions, we will gladly answer them, provided \$1 is sent to cover time gathering information, etc. To customers sending cash orders, we will make no charge to answer their questions. In writing questions, put them on separate paper and distinct from the order.

Nearly every one of these books is profusely illustrated.

American Apple Orchard. Waugh. 226 pages.....	\$1.00
American Grape Growing and Wine Making. Prof. Geo. Husmann. 310 pages.....	1.50
American Fruit Culturist. J. J. Thomas. The standard work. 920 pages.....	2.50
Bush Fruits. Fred W. Card. Treating of Berries and Shrub-like Fruits. 537 pages...	1.50
California Fruits and How to Grow Them. Illustrated. 477 pages. Wickson.....	3.00
Citrus Fruits and Their Culture. H. H. Hume.....	2.50
Elementary Principles of Agriculture. Ferguson & Lewis. A superb book, both for the student and the practical farmer.....	1.00
Evolution of Our Native Fruits. L. H. Bailey. 472 pages.....	2.00
Field Notes on Apple Culture. L. H. Bailey. 90 pages.....	.75
Fungi and Fungicides. C. M. Weed. All about the treatment of plant diseases. 228 pages.....	1.00
Fertilizers. E. B. Voorhees. 335 pages.....	1.00
Foundations of American Grape Culture. T. V. Munson. The most complete of any work on grapes. Superbly illustrated.....	2.00
Fruit Grower's Guide Book. An excellent work by E. E. Favor.....	1.00
Garden Making. L. H. Bailey. Practical. Starts the beginner right on how to raise fruits and flowers about one's home. 417 pages.....	.75
How to Make a Fruit Garden. S. W. Fletcher. Invaluable for amateurs. 283 pages. Nearly 200 photographs.....	2.00
How to Make a Flower Garden. 370 pages. Over 200 photographs.....	1.60
How to Make a Vegetable Garden. Edith L. Fullerton. 250 pages.....	2.00
Irrigation Farming. Lute Wilcox. 312 pages.....	1.50
Irrigation and Drainage. F. H. King. 502 pages.....	1.50
Lawns and How to Make Them. Leonard Barron. Finely illustrated.....	1.20
Market Gardening and Farm Notes. Landreth.....	1.00
Orchard and Fruit Garden. E. P. Powell. A valuable work for the beginner and practical horticulturist. 322 pages.....	1.00
Oemler's Gardening for the South. Treating of vegetables and fruits.....	1.50
Principles of Fruit Growing. Bailey. The best work of the kind. 516 pages.....	1.50
Practical Floriculture. Peter Henderson.....	1.50
Plums and Plum Culture. F. A. Waugh. 371 pages.....	1.50
Principles of Plant Culture. E. S. Goff. 285 pages.....	1.00
Plant Breeding. L. H. Bailey. 293 pages.....	1.00
Pruning Book. L. H. Bailey. A monograph of the pruning and training of plants as applied to American conditions. 545 pages.....	1.50
Roses and How to Grow Them. By many experts. Practical and illustrated.....	1.20
Southern Gardeners' Practical Manual. J. S. Newman. Written especially for the South. 250 pages.....	1.00
Spraying of Plants. E. G. Lodeman. Complete discussion of this most important subject. 399 pages.....	1.00
Small Fruit Culturist. A. S. Fuller. All classes of small fruits.....	1.50
Soils. Their properties, improvement and management. C. W. Burkett. 303 pages...	1.25
Strawberry Culturist. A. S. Fuller. Excellent little work.....	.25

Pot Plants, Cut Flowers, Floral Designs

We do not have for sale any Cut Flowers or Greenhouse Plants, but same can be supplied from a greenhouse adjoining the nursery. Write to C. E. Majors, florist, 1315 Mirick Ave., Denison, Texas, for information and particulars.

Addresses of Home Improvers Paid For

If you will send us with your order the names and post-office addresses of six of your neighbors who own and are improving their homes, we will put in with your order, if as much as \$3 or over, articles from our list, of your own selection, to the amount of 25 cents. For 12 such addresses, when order is \$4 or more, articles to the amount of 50 cents. This order does not extend to more than twelve addresses from one customer. Be sure to put the list of names on a separate paper from that of your letter or order, as the list goes to a different department. Unless list of names is separate from order or letter, we cannot allow the extra stock.

Plums

Named in the order of ripening.

Plant 18 feet apart each way, requiring 135 trees per acre. Succeed on thinner land than peach, with more clay, and thrive where the peach will. All succeed well nearly everywhere.

Read Plums and Plum Culture (Waugh), \$1.50.

Prices—Except Minco. All on Plum Roots.	Packed F. O. B. Denison			Prepaid if in orders of \$5.00 or more		
	Each	Doz.	100	Each	Doz.	100
3 to 4 ft.....	\$0.20	\$2.00	\$15.00	\$0.22	\$2.50	\$17.00
3 to 5 ft.....	.25	2.50	18.00	.30	3.00	21.00

Funk Early. Abundance crossed with an early Chickasaw variety. Tree vigorous and healthy, productive, free from rot and curculio. Fruit of good medium size, dark bright red, quality very good. Earliest of all to ripen. Well tested and valuable.

May Beauty. Same parentage as Funk Early. Ripening soon after, of similar description but of larger size. Well tested.

Red June. Early, ripens with early peaches; medium to large; good bearer; red all over; fruit pointed and flesh yellow, and very fine in quality.

Milton. A cross of Wild Goose with some American variety. Better in quality than Wild Goose, nearly as large. Bright red with small white dots, very handsome. Late bloomer, but ripens early, just before Abundance. Persistent to tree after ripening. Resists rot and curculio well.

Abundance. Medium if allowed to mature as the fruit sets on tree, but large when fruit is properly thinned. As this variety is inclined to overbear, it is best that the fruit be thinned by taking at least one-half to two-thirds the fruit off when size of small marbles, the remaining fruit will be of extra size to more than make the same yield. Roundish, skin yellow, washed with purple with a bloom; flesh yellow, juicy, sub-acid with apricot flavor, quality superb.

Roy. Same parentage as Funk Early. Similar in description to May Beauty, of which it is a sister, but ripens after it. Well tested.

Burbank. Large; clear cherry-red; flesh deep yellow; very sweet and agreeable flavor. Very prolific.

Gonzales. Fruit very large, meaty, of brilliant red; finest of flavor; good shipper and keeper. Tree very strong and immensely productive. Very valuable.

America. A hybrid of Robinson with Abundance. Tree very thrifty, symmetrical, spreading; fruit medium to large, bright golden ground with pink cheek, dotted white; flesh firm, stone medium to large, cling. Considered one of Burbank's best productions. Very valuable.

Wickson. One of Burbank's most remarkable hybrids; between the Kelsey and Simon plums. Very large, heart shaped; dark crimson, firm, of finest quality. Blooms very early, and will succeed in localities having late springs. Nothing finer in appearance or quality is known among plums.

Normand. Large, heart-shaped; yellow flesh; yellowish green skin. Of finest quality. Much prized by ladies for preserving.

Satsuma. Large, heart-shaped, with skin and flesh blood red to the seed. Much used for pickling.

Miner. Vigorous, prolific, healthy, old variety. Above medium size; good quality; free from rot and curculio. Very sure cropper.

Minco. Produced by us. Seedling of Miner pollinated by Wayland. Tree very vigorous, healthy and handsome. Fruit large, bright red, fine quality, freestone. Very late. Price 50 cents each, \$5 per dozen.

Wayland. Three very vigorous and prolific, healthy. Medium size, olive shape fruit of rich bright crimson, specked with white dots. Not damaged by disease or insects.

Ward. A wild hybrid found in Clay County, Texas, parentage unknown. Medium, heart-shaped, bright crimson, specked with white dots; firm, meaty; of very good quality when thoroly ripe. This description is of fruit on the original tree, ripe in the early part of September.

Apricots

Plant 18 feet apart each way, requiring 135 trees per acre. Succeed best in limestone soil; bloom very early in spring. Should be treated like peaches. Very successful in most parts of the West on high ground.

PRICES. See full explanation on back of order sheet.

	Each	3 to 4 ft.		4 to 5 ft.		
		Doz.	100	Each	Doz.	100
F. O. B. Denison.....	\$0.20	\$2.00	\$15.00	\$0.25	\$2.50	\$20.00
Prepaid.....	.25	2.40	17.00	.30	3.00	23.00

Royal. Early; large, excellent; one of the very best.

Cluster. This valuable variety is claimed to have never missed bearing any season since its introduction. Originated in Texas from seed of Russian apricot.

Moorpark. Medium, large, excellent.

Cherries

Plant 18 feet apart each way, requiring 135 trees per acre. Require very best drouth-resisting soil. They do better on limestone or gravelly soil than sandy soils. We grow only varieties of the Duke and Morello class (Sour Cherries), as they are the only classes that will succeed in this part of the South. The Sweet Cherries (Hearts and Bigarreaus) are not successful here.

PRICES. See full explanation on back of order sheet.

	Each	Per 12	Per 100
F. O. B. Denison.....	\$0.25	\$2.50	\$18.00
Prepaid when in orders of \$5 or more.....	.30	3.00	20.00

Dyehouse. About a week earlier than Early Richmond. Large, good quality, small pit. Light red.

Baldwin. Originated in Kansas. Fruit large, round, dark but transparent red. Slightly sub-acid, but rich.

Early Richmond. Medium, clear bright red. Quite acid.

English Morello. Medium, dark red or nearly black, acid, juice dark colored.

New Century. Hardest of all in tree for the South. Medium, dark red.

Mulberries

Plant 20 to 25 feet apart, requiring 109 trees per acre. Flourish in any soil or situation.

Prices. See explanation on back of order sheet.	Packed F. O. B. Denison			Prepaid if in orders of \$5 00 or more		
	Each	Doz.	100	Each	Doz.	100
1 yr., 2 to 3 ft.....	\$0.10	\$1.00	\$8.00	\$0.12	\$1.25	\$9.00
1 yr., 3 to 4 ft.....	.15	1.50	12.00	.17	1.75	13.00
1 yr., 4 to 5 ft.....	.20	2.00	15.00	.25	2.50	17.00

Munson. One of the largest, most prolific, and best mulberries of the Russian class. Originated by us, selected from among thousands of varieties grown from seed. The branches in fruit look like ropes of big berries. Earlier than Hicks.

Hicks Everbearing. Profuse bearer of fruit for three months; fine grower for shade; the best of all trees for the fowl yard, as the fowls greedily eat the berries. Later than Munson.

Peaches

Plant 18 feet apart each way, requiring 135 trees per acre. Thrive best on high, well-drained sandy loam, with clay sub-soil, but do well in black lands. Note how they should be cut back as explained under "Care of Trees," inside front cover.

Borers. Go thru your orchard in March and where you find gum around the surface, clean away the dirt and, with a knife or some sharp-pointed instrument, follow up the borers and remove them; then throw around the tree a small quantity of lime and ashes. This plan, if rigidly enforced, will keep borers down, give you better fruit, and greatly extend the life of the trees.

Thinning. When a tree sets an overload, it pays to thin out the fruit, even if two-thirds of the crop has to be taken off. It relieves the tree, and the remaining fruit will grow to be large, fine flavored, and handsome, whereas if the tree is left overloaded, the fruit will be small, inferior, of poor flavor. This season (1912) fully demonstrated the difference between trees with the right load and overload; there was more difference between such trees of same variety, than between two different varieties. The thinning should be done just when the young fruit is about the size of marbles, and thinned out so that the peaches will be not less than 3 to 4 inches apart on the tree. The extra price for the thinned fruit will more than pay for the fruit destroyed.

Explanation of Descriptions

The varieties in this list have been critically tested by us along with numerous other kinds in one or other of five successive test orchards planted within the past 35 years in different soils and situations, the last test including all the varieties, having been made this season (1912). Not a variety is included except the very best of each season of white, yellow, cling and free stone for each ripening. Desirable qualities in tree and fruit have determined the selections. The varieties are mentioned in the order in which they ripen.

The description generally gives the origin, productiveness of tree; the character of glands on leaf stem are indicated by the letters *g* or *r*, *g* meaning round or globose, *r* meaning notched or reniform; following the letters indicating the kind of glands, are letters indicating the size of the flower, *s* for small, *m* for medium, *l* for large, and *vl* for very large. Then following the letters indicating the size of the flower are figures indicating the date of blooming for the season (1908) in which occurred no frosts or other conditions to interfere with the regular succession of flowering. It has been observed that varieties having large flowers and blooming late are more certain bearers than those having small flowers and blooming early. The date is indicated by figures which are the dates in March that they bloomed in (1908) season; for example, 2-9 means March 2d to March 9th. The dates given will not be the same every year, but they will indicate the relative dates of one variety with another. In describing size and shape, figures are used, the first meaning the transverse diameter, the second, the diameter from stem to apex in inches; for example, 2x2¼ inches, indicates slightly oblong shape; 2x2 would indicate a round peach. The descriptions are made from good average specimens.

The varieties succeeding best in South Texas possess blood of the Chinese strain, among which are Early Wheeler, Carman, Mamie Ross, Family Favorite, General Lee, Munson Cling, Elberta, Munson Free. The entire list is successful for all other parts of the State. This list cannot be excelled.

SIZES IN STOCK.

Note.—We can supply June Budded trees 2 to 3 ft. and 3 to 4 ft. of all the varieties named in the Catalog. But can supply one year 4 to 5 ft. trees only in the following varieties: Carman, Elberta, Family Favorite, Henrietta, Mamie Ross, Salway, Munson Free, Munson Cling.

Prices—Except Early Wheeler, Munson Cling, Munson Free. See full explanation on back of order sheet.	Packed F. O. B. Denison			Prepaid if in orders of \$5.00 or more		
	Each	Doz.	100	Each	Doz.	100
June Bud, 2 to 3 ft.	\$0.10	\$1.00	\$ 8.00	\$0.11	\$1.15	\$ 9.00
June Bud, 3 to 4 ft. ....	.15	1.50	10.00	.17	1.75	12.00
One year, 4 to 5 ft. ....	.20	2.00	12.00	.25	2.50	15.00
Early Wheeler, any size. ....	.50	5.00	25.00	.50	5.00	25.00
Munson Free, Munson Cling. ....	.25	2.50	18.00	.30	3.00	20.00

PERIOD I—MAY 20 to JUNE 5

Mayflower. (North Carolina.) Red all over; large, nearly free. Ripened in 1912, 10 days ahead of Victor.

Victor. (N. T. Pirtle, Smith Co. Tex.) Productive r. l. 1-7. Size 2x2. White with attractive blush cheek. Ripens throughout, which is not usual with extra early varieties, such as Alexander. Semi-cling, seed small.

Early Wheeler. (E. W. Kirkpatrick, Collin Co., Tex.) Prolific. r. l. 2-9. Size 2x2¼. White blush cheek, flesh white, extra firm with true cling stone flavor. The best shipper among early varieties. Cling. 50c each; \$5 doz.

Alexander. Larger than Victor, brighter red, semi-cling; an old variety. There are several strains of this variety. By testing all we retained the best strain.

Yellow Swan. Productive. r. l. 1-6. Size 2¼x2¼. Apex flat. Skin yellow with bright crimson cheeks. Flesh yellow, free when fully ripe and firm. Quality the best of its season. Seed medium. Almost identical in every particular with Arp Beauty.

Strout. (Vinita, Okla.) Medium size. A true free stone, with firm flesh, white streaked with red, often of pronounced blood color. Sure bearer and free from worms.

PERIOD II—JUNE 1 to JUNE 10

Dewey. (J. D. Husted, Ga.) Productive. r. l. 2-9. Size 2x2¼. Skin orange yellow, nearly covered with dark crimson, more fuzzy than Alexander and resists rot better. Flesh yellow, moderately firm, free when fully ripe. Better in quality than any ripening earlier. Seed small.

Hynes Surprise. (E. F. Hynes, Mo.) Very prolific. g. l. 5-14: Size 2x2, apex small, pointed, without tit. Skin creamy white, little fuzzy, covered with dots and mottlings of pinkish crimson. Flesh white, free when well ripened. In quality equal to Dewey. Little attacked by rot. Seed small.

Mamie Ross. (John Ross, Dallas Co., Tex.) Sure, prolific. r. l. 1-7. Size 2½x2¼, small tit with small point. Skin rather fuzzy, creamy white with red cheek. Flesh white, rather soft, of fair quality, semi-cling. Seed medium. Has proven a profitable market peach.

PERIOD III—JUNE 10 to JUNE 20

Carman. (J. W. Stubenrauch, Lime-stone Co., Tex.) Very vigorous, sure and prolific. r. l. 2-9. Size 2¾x2½, small tit. Skin creamy, covered with stripes

and splashes of crimson, rather fuzzy. Flesh of better quality than Mamie Ross. The best peach of its season. Nearly free. Seed medium. A very valuable commercial variety.

Slappy. (S. H. Rumph, Ga.) Prolific. r. m. 3-9. Size 2¼x2½, tit large, suture distinct, sides uneven. Skin quite fuzzy, rich lemon yellow, more than half covered with crimson. A bright showy peach. Flesh yellow with little red at stone, firm as Elberta, of better quality, perfectly free. Seed medium. The finest commercial peach earlier than Elberta.

PERIOD IV—JUNE 20 to JULY 1

Family Favorite. (W. H. Locke, Fannin, Co., Tex.) From Chinese Cling crossed with some other good peach. Productive. g. m. 1-7. Size 2¼x2½, small tit. Skin quite fuzzy, clear creamy white with rich pink blush on one side. Flesh white, tint of red at stone, free, excellent quality. Seed medium. Introduced by us in 1880, and has become a valuable standard.

General Lee. (P. J. Berckmans, Ga.) Sure and prolific. r. vl. 1-9. Size 2½x2½, tit broad and short. Skin creamy, one-half next to stem covered with mottled dull red, little fuzz, much resembling Chinese Cling. Flesh white, red at stone, cling, quality excellent; firmer and better than Chinese Cling. Seed rather large.

PERIOD V—JULY 1 to 15

Munson Cling. (T. V. Munson, Tex.) From seed of Elberta. Equally prolific with Elberta. r. m. 4-11. Size 2¾x2¾, tit broad, short, suture distinct, sides nearly equal. Skin fuzzy, orange yellow, half covered with bright crimson mottling. Flesh yellow, firm as Elberta, of better quality, juicy. The showiest cling of its season, and the best. Seed large. Special price.

Elberta. (S. H. Rumph, Ga.) Cross of Chinese Cling with Crawford Early. Sure and prolific. r. m. 1-8. Size 2½x2¾, to nearly globose when fully developed, the largest specimens measuring 3x3, having little or no tit, suture shallow, sides nearly equal. Skin little fuzzy, orange yellow, more or less covered with crimson, according to soil and exposure. Flesh firm, of fair to good quality, sometimes a little bitterish. Free stone. Seed large. The leading commercial variety.

Chinese Cling. (Originated from seed brought from Shanghai, China.) Spreading habit, healthy, not very prolific. r. vl. 1-9. Size 2¾x2¾ up to 3x3½, or larger; in average size, probably the largest peach in cultivation. Skin creamy with short fuzz, mottlings of dull red covering

one-third to one-half of surface next stem. Flesh white with little red at seed, tender, very juicy, sprightly sub-acid. It is the parent of more fine commercial varieties than any other peach in cultivation, and yet not a valuable commercial variety itself.

Superb. (T. V. Munson, Tex.) From seed of Early Rivers crossed with Mountain Rose. Vigorous and prolific, one of the most resistant against late frosts. g. vl. 4-10. Size $2\frac{1}{3} \times 2\frac{1}{2}$, tit very small or wanting. Skin creamy white, one-third to one-half covered with bright crimson. Flesh white with very little red at seed, firm, of best quality, free stone. Seed small.

PERIOD VI—JULY 15 to AUGUST 1

Gold Dust. (J. C. Evans, Mo.) Prolific. r. s. 4-9. Size $2\frac{3}{8} \times 2\frac{3}{8}$, tit small. Skin quite fuzzy, orange, mostly covered with bright crimson, handsome. Flesh orange, very firm, a little red at stone, best quality, cling.

Munson Free. (T. V. Munson, Tex.) More certain and prolific than Elberta. r. m. 2-9. Size $2\frac{5}{8} \times 3$, tit small, suture distinct, slightly larger on one side. Skin quite fuzzy, greenish yellow, mostly covered with crimson. Higher color and better quality than Elberta. Flesh yellow, red near pit, firm, good to very good quality. Seed medium. Special price.

Belle of Georgia. Large; skin white, with red cheek; flesh white, firm, and of excellent flavor; the fruit is uniformly large and showy; very prolific bearer. A seedling of Chinese Cling. The standard market variety of its season. July 25-30, free.

Sylphide. Medium, white cling, of best quality. Sure and heavy bearer. Best to thin out fruit, so tree will not carry overload.

Bequett Cling. Large, fine, handsome. White flesh with blush red skin.

Bequett Free. (Calif.) Prolific. dbl. r. s. 2-9. Size $2\frac{1}{2} \times 2\frac{1}{2}$, suture indistinct, sides equal. Skin creamy, mostly covered with clear red of fine appearance. Flesh white with little red next pit, firm, of high quality, free. Seed medium.

PERIOD VII—AUGUST.

The ripening period of late varieties of peaches cannot be definitely given as they will vary much from year to year, according to weather conditions. We have known the following varieties to vary as much as three to six weeks. We name them as near the average date as possible.

Columbia. (Mr. Coxe, Ga.) Indian type. r. l. 5-9. Size $2\frac{1}{4} \times 2\frac{1}{4}$. Skin mottled brown, underlaid with dull orange yellow. Flesh rich, yellow, buttery, high quality, free.

Tarbell. Large, pale yellow, free stone, of the finest quality. Very showy.

Ringgold. (Wilkins, N. J.) Seedling of Heath Cling and an improvement on that variety. Productive. r. s. 1-8. Size $2\frac{1}{4} \times 2\frac{1}{2}$. Skin creamy white with streaks of blush near stem end. Flesh white to the seed, of best quality and sweet. Cling.

Henrietta. (Levy Late. Originated in Ky.) r. s. 4-10. Size $2\frac{1}{4} \times 2\frac{1}{4}$, tit prominent. Skin orange yellow, with crimson cheek. Flesh yellow, firm, sweet and of high quality. Cling. Very handsome.

Raisin Cling. (Coweta Co., Ga.) Supposed Columbia x Heath cross. r. l. 3-12. Size 2x2. Skin dull white, covered with mottled reddish brown. Flesh white, tinted with red. The finest quality of any cling known to us. Fine for sweet pickles.

Salway. (Thos. Rivers, England.) r. s. 4-12. Size $2\frac{1}{4} \times 2\frac{1}{4}$. Skin rich yellow, covered with crimson. Flesh rich buttery yellow, fine for canning. Free.

Dulce and Bell October are dropped, as they have proved by test to be very similar to and ripen at same time as Salway. Salway being equally good, older and better known, is retained.

PERIOD VIII—SEPTEMBER AND LATER

The varieties named below generally ripen in September, but, as with all late varieties, the season will vary. Some seasons those included in this ripening will hold on until October, while in other seasons they will ripen in the latter part of August.

Barnes. (Barnes Parker, Bell Co., Tex.) Productive. Contains Indian and Mexican blood. Very sure and prolific. r. l. 1-8. Size $1\frac{7}{8} \times 2$. Skin dull yellow, covered with reddish brown mottlings. Flesh yellow with red next to seed. Cling.

Bonanza. (T. V. Munson, Tex.) Sure and productive, and in drouthy seasons will carry its crop to maturity. The best of the late varieties, although the specimens will be small if there be drouth. r. s. 1-9. Size $2\frac{1}{4} \times 2\frac{1}{2}$, tit prominent and broad, suture distinct, sides unequal. Skin creamy white, with blush on one side near stem end. Flesh pure white with red around seed, firm, free. Seed small.

Sucess. (T. V. Munson, Tex.) Ripe in October; medium yellow, cling, fine quality.

Japanese Persimmons

Prices—Except Ta-mo-pan.
Price of Ta-mo-pan is \$1.50 each.

	F. O. B. Denison		Prepaid if in orders of \$5.00 or more	
	Each	Doz.	Each	Doz.
1 yr., 2 to 3 ft.....	\$0.30	\$3.00	\$0.35	\$3.50

Costata. Medium size, conical, pointed, somewhat four-sided; diameter 2 $\frac{1}{8}$ inches longitudinally and 2 $\frac{5}{8}$ inches transversely; skin salmon-yellow; flesh light yellow, dark flesh, and seeds occurring seldom; astringent until ripe, then very fine; one of the latest to ripen; a good keeper. Tree distinct; a rapid, upright grower, foliage luxuriant.

Hachiya. Large to very large, varying short point; very showy; diameter 3 $\frac{3}{4}$ inches longitudinally and 3 $\frac{1}{2}$ inches transversely; skin dark bright red, with occasional dark spots or blotches and rings at the apex; flesh deep yellow, sometimes having occasional dark streaks, with seed. Astringent until ripe, then very fine. The largest and handsomest of all. Tree vigorous and shapely.

Hyakume. Large to very large, varying from roundish oblong to roundish obovate, but always somewhat flattened at both ends; generally slightly depressed at the point opposite the stem; diameter 2 $\frac{3}{4}$ inches longitudinally and 3 $\frac{1}{2}$ inches transversely; skin light buffish yellow, nearly always marked with rings and veins at the apex; flesh dark brown, sweet, crisp and meaty; not astringent; good while still hard. The tree is of good growth and a free bearer.

Dai-Dai-Maru. Very large. Tomato-shaped. Pale yellow.

Okame. Large, roundish obovate, with well-defined quarter marks, point not depressed; diameter 2 $\frac{3}{8}$ inches longitudinally and 3 $\frac{1}{8}$ inches transversely; skin orange-yellow, changing to brilliant carmine, with delicate bloom and waxy, translucent appearance; light clear flesh when ripe, with light brown center around the seeds, of which it has several; loses its astringency as soon as it begins to ripen; quality fine. Tree vigorous and a good bearer.

Ta-Mo-Pan. (Meaning in Chinese "large grindstone.") This remarkable persimmon was obtained by the Department of Agriculture collector of plants in Northern China, in the Ming Tombs Valley. It is said to endure more cold than any of the Japanese varieties. With us for three years, it has been perfectly hardy. It is said to have the largest fruit of any of the known varieties, reaching as much as five inches in diameter, much flattened and with a peculiar suture extending around it equatorially. Flesh bright orange, free from astringency at all times; firm and of high quality. It promises to be hardy as far North as Kansas. It is exceedingly scarce in this country, and ours are the first trees offered for sale. We have only a few grafted on native persimmon roots, very fine trees, 3 to 4 ft., at \$1.50 each.

Kawakami Persimmon

A hybrid of one of the best Japanese with the Josephine. Fruit 2 inches in diameter. Tree hardy as far North as Illinois. We have both grafted and seedling trees. The difference is explained under prices of the Josephine Persimmon, which see.

Prices. See full explanation on back of order sheet.	F. O. B. Denison		Prepaid if in orders of \$5.00 or more	
	Each	Doz.	Each	Doz.
Grafted trees with cions from original tree, 1 to 2 ft.....	\$0.35	\$3.50	\$0.40	\$4.00
Grafted trees with cions from original tree, 2 to 3 ft.....	.60	5.00	.65	5.75

Josephine (American Honey) Persimmon

We have a tree of the native Persimmon found wild in Missouri by Samuel Miller, and by him named Josephine, bearing profusely of large, clear honey-colored fruit of finest quality, preferred by all to even the finest Japanese kinds. The tree was moved into our grounds among the Japan varieties, and continues to fruit abundantly. It has few small seeds in comparison with most varieties. All things considered, it is the finest Persimmon known to us.

Prices. See full explanation on back of order sheet.	F. O. B. Denison		Prepaid if in orders of \$5.00 or more	
	Each	Doz.	Each	Doz.
Grafted trees with cions from original tree, 1 to 2 ft.....	\$0.35	\$3.50	\$0.38	\$3.75
Grafted trees with cions from original tree, 2 to 3 ft.....	.50	5.00	.55	5.50
Seedling trees grown from seed of original tree, 1 yr.....	.10	.90	.11	1.00
Seedling trees grown from seed of original tree, 2 yr.....	.15	1.40	.18	1.60

The Josephine, to bear well, needs one or two of its seedlings planted near it. Grafted trees will bear the identical fruit as the original. Seedling trees will vary, but most of them will be similar; a few may be hybrids, as the original tree stands in orchard with Kawakami and Japanese varieties. About one-half of the seedling American Persimmons bear fruit, the others are male; hence in filling orders we put in two trees for every one ordered of the seedling trees.

Pecan Trees, Grafted Varieties

Prices. See full explanation on back of order sheet.	Packed F. O. B. Denison			Prepaid if in orders of \$5.00 or more		
	Each	Doz.	100	Each	Doz.	100
1 to 2 ft.....	\$0.60	\$6.00	\$45.00	\$0.65	\$ 6.50	\$50.00
2 to 3 ft.....	.75	7.00	60.00	.80	8.50	65.00
3 to 4 ft.....	1.00	10.00	75.00	1.00	11.00	80.00

Schley. Size medium to large. 1½ to 1¾ inches long; oblong, somewhat flattened; light reddish brown with a few small markings of purplish brown; shell thin, separating easily from the kernel; kernel full, plump, bright yellowish brown in color; flavor rich, nutty, in quality one of the best. Tree a good grower and on the whole a very excellent variety. One-year trees only.

Stuart. Nuts large or very large, 1¾ to 2 inches long, oblong with brownish shell, strongly marked with dark color. Shell of medium thickness and of very good cracking quality. Kernel full, plump, bright colored. In quality one of the best, the flavor being rich and sweet. A heavy bearer. Tree a strong grower, reaching an immense size, with large foliage.

Van Deman. Large to very large, from 1¾ to 2¾ inches long, rather slender, pointed at both ends. Color reddish brown with purplish brown markings.

Shell of medium thickness; cracking quality excellent. Kernel full and plump, bright brownish yellow; flavor sweet and good. Tree is vigorous, healthy, with large bright foliage. Altogether one of the most desirable varieties.

Russell. A medium or large-sized nut, 1½ to 1¾ inches long, oval and pointed, grayish brown with numerous small purplish black markings. Shell very thin, of excellent cracking quality; kernel plump and of good quality. This variety is a good grower, with small, clean foliage. Bears well and is very satisfactory. 1 to 2 ft. trees only.

Texas Prolific. One of Mr. E. E. Risien's productions. Long, 1½ x ¾. Shell thin. Quality best. A few trees in stock at \$1 each.

Moneymaker. Large, round, kernel comes out whole. Heavy bearer.

Pabst. Similar to Stuart. A leading commercial variety.

Seedling Pecan Trees

Grown from selected seed from an isolated tree bearing fine choice large nuts.

PRICES	Packed F. O. B. Denison			Prepaid if in orders of \$5.00 or more		
	Each	Doz.	100	Each	Doz.	100
2 yr., 1 to 2 ft.....	\$0.15	\$1.50	\$10.00	\$0.18	\$1.75	\$11.00
2 yr., 2 to 3 ft.....	.20	2.00	14.00	.25	2.50	17.00

Elaeagnus Longipes, Goumi

Here is a magnificent shrub, with leaves dark green above and silvery beneath, perfectly hardy, bearing a crimson, cherry-like fruit (with one small, long seed), of refreshing, tart flavor, making an immense crop every year, ripening in May here. **PRICE**, 50 cents each.

Blackberries

Plant 2 feet apart in rows, rows 7 feet apart, requiring 3,112 plants per acre. Succeed anywhere.

Read Fuller's Small Fruit Culturist. Price, \$1.50.

VARIETIES IN SUCCESSION	PRICES					
	Packed F. O. B. Denison			Prepaid if in orders of \$5.00 or more		
	Doz.	100	1000	Doz.	100	1000
McDonald appears to be a hybrid between a blackberry and dewberry. Large and good quality. The flower being pistillate needs a staminate or perfect flowering kind near by to pollinate; when thus pollinated it is very productive.....	\$0.50	\$2.00	\$15.00	\$0.65	\$2.50	\$18.00
Sorsby May. A blackberry larger than Early Harvest, and ripens about a week earlier. Very productive and a good shipper; very valuable on account of its extreme earliness.....	.50	1.50	12.00	.75	2.00	14.00
Dallas. Very vigorous, drooping, thorny, productive, large, fine. This is proving to be a very valuable market variety .....	.35	1.00	10.00	.50	1.25	12.00
Robison. Very vigorous, upright, prolific, uniformly very large; of best quality. Sells at the highest market price. Originated by Willard Robison, at Cisco, Tex. It has fruited here for a number of years, and has proven itself one of the most valuable varieties in cultivation. It endures the climatic hardships most excellently.....	.50	1.50	12.00	.75	2.00	14.00
DEWBERRY						
Mayes. (Austin's Improved, Austin-Mayes.) Very large, early, prolific.....	.35	1.25	10.00	.50	1.50	12.00

Strawberries

Plant 16 inches apart in rows, rows 3½ feet apart, requiring 9,000 plants per acre. Deep loamy, sandy soil, with clay sub-soil is preferable.

Read Fuller's Strawberry Culturist. Price, 25 cents.

Our plants are not like those handled by many growers—weak, old and mixed—but young, vigorous and pure. The very best varieties by actual test for the Southwest. Handled in the very best manner. We test nearly all varieties of any promise as they come out. The following are the cream for this climate.

The varieties are named in the order of ripening. Staminate kinds will bear alone. Pistillate varieties will require a staminate variety to be planted near them to pollinate them. S—Staminate. P—Pistillate.	PRICES					
	Packed F. O. B. Denison			Prepaid if in orders of \$5.00 or more		
	Doz.	100	1000	Doz.	100	1000
St. Louis. (S) Large, blunt end, light red, seeds prominent. Plant very strong..	\$0.25	\$0.75	\$5.00	\$0.30	\$1.00	\$6.00
Lady Thompson. (S) Blunt, top-shaped, medium to large, bright red.....	.25	.60	4.00	.30	.85	5.00
Klondike. (S) Large, blood red skin and flesh, fine flavor peculiar to itself..	.25	.60	4.00	.30	.85	5.00
Mellie. (P) Bright showy red. Cylindrical, pointed, with short neck. Very productive. Proved to be best to come thru drouth of past spring.....	.25	.60	4.00	.30	.85	5.00
Parker Earle. (S) Berry conical, large, with neck; glossy, scarlet crimson. Needs rich, well-drained soil; does best in hill culture .....	.35	1.00	6.00	.60	1.20	7.00

1912-1913

Grapes

We lead all competitors in this field

The Grapes have constantly been the most certain and profitable of any fruits that we have grown.

Plant 8 feet apart in rows, rows 9 feet apart; requiring 605 vines per acre. Read Foundations of American Grape Culture. Price, \$2.00. It tells all.

PRICES

Unless 1-year vines are especially ordered, we will fill all orders with 2-year vines, if in stock; if no 2-year vines of the variety ordered, will send first class 1-year. No difference in price between the 2 and 1-year vines. The price is based on 1-year vines. Either age will come into bearing at same time after transplanting.

VARIETIES On following pages are described in order of ripening. (Here grouped according to prices.)	Packed F. O. E. Denison			Prepaid if in orders of \$5.00 or more		
	Each	Doz.	100	Each	Doz.	100
(1) America, Concord, Captain, Catawba, Cloeta, Champanel, Delaware, Fern Munson, Goethe, Lindley, Lukfata, Manito, R. W. Munson, Valhalla.....	\$0.10	\$1.00	\$6.00	\$0.12	\$1.15	\$7.00
(2) Bell, Ben Hur, Beacon, Carman, Gold Coin, Headlight, H. Jaeger, Mericadel, Muench, Rommel, Wapanuka, Xlnta..	.15	1.25	8.00	.17	1.40	9.00
(3) Augustina, Amethyst, Brilliant, Bailey, Blondin, Campbell, Columbian, Dr. Collier, Delakins, Extra, Green Mountain, Herbemont, Hidalgo, Husmann, Jacquez, Manson, Red Giant, Winchell, Wine King, Xenia.....	.20	2.00	12.00	.22	2.25	13.00
(4) Armalaga, Captivator, Ericson, Edna, Hernito, Krause, Lomanto, Nitodal, President, Ronaldo, Salamander.....	.40	3.50	25.00	.42	3.75	26.00
(5) Ellen Scott, Last Lose, Longfellow. (Three of the most handsome grapes grown)	1.00	8.00	60.00	1.00	8.00	60.00

EXPLANATIONS OF ABBREVIATIONS AND SIGNS USED IN THE DESCRIPTIONS OF GRAPES ON THE FOLLOWING PAGES

All bearing grapes have one of two kinds of flowers—both kinds are pistillate, but one has perfect stamens and will bear alone; the other has imperfect stamens and will require perfect stamen variety blooming at the same time planted near to render the imperfect stamen variety fruitful. Some of the best varieties are those having imperfect stamens. In the following descriptions characters are given after the name of the variety which will indicate to the reader the kind of flower and date of flowering. So in selecting mates for the imperfect stamen kinds, select those varieties with perfect stamens, blooming within three days earlier or at same time. The perfect flowering kinds are indicated with an inverted comma ('); the imperfect stamen kinds with the normal comma (,). The date of flowering is indicated immediately after the comma. As all grapes bloom here in April and May, these two letters, (A) for April, and (M) for May, are used, the figures following these letters indicate the date in that month.

All dates mentioned are for Denison. While they will vary in other sections, the relative position will remain the same.

To Aid In Selecting Varieties for the Different Regions

While all of the varieties we list succeed to a greater or less degree here at Denison, Texas, on warm sandy soils with clay subsoil, there are other soils and regions where only certain varieties are successful. At the end of the description of each variety will be found capital letters indicating the regions for which they are recommended.

The letter **G** indicates for the Gulf Coast region, or 100 miles back from the Gulf north of Corpus Christi.

The letter **R** indicates those for the Rio Grande region and all south of San Antonio, and for El Paso and Pecos River regions; Arizona and California.

The letter **B** indicates those for Black Waxy and Limy soils thruout the south.

The letter **E** indicates for more or less sandy soils of East Texas and other moist regions of the Southern States north to Arkansas and Kentucky.

The letter **P** indicates for the Red Plain region of western Texas north of T. & P. Ry.; western Oklahóma; Oregon and Washington.

The letter **S** indicates for the Staked Plains west of the Red Plains region; western Kansas, and eastern New Mexico.

The letter **M** indicates for the central Mississippi region, and Atlantic slope, north of Carolina to latitude of Cincinnati and St. Louis.

The letter **N** indicates for New England States, New York, and southern Ontario.

The letter **W** indicates for Wisconsin and west to Rocky Mountains.

For decided success in the moister regions, mildew and rot must be prevented by spraying.

All the varieties possessing Post-Oak Grape blood, in order to get best results in cropping, should be treated the same as Herbeumont, that is, plant wide apart, as much as twelve to sixteen feet in the rows, and have long arm pruning. They do especially well upon the Munson Canopy Trellis, mentioned in Foundations of American Grape Culture, page 224. Distance apart to plant and kind of pruning required for best results are mentioned with each variety.

Described in order of ripening

(Many of these varieties have full page half tone illustrations in "Foundations of American Grape Culture.")

PERIOD I—LAST OF JUNE

Pearl of Casaba. (See under Vinifera list, page 24.)

Headlight. (A19) Hybrid of Moyer with Brilliant. Vine slender, but more robust than Delaware, and making much longer vines, less attacked by mildew, leaves resembling those of Brilliant, but not so large; clusters small to medium, very compact, shouldered; berries clear, dark red, globular, medium or above in size, very persistent. Skin thin, tough; pulp tender, very sweet, almost equal to Delaware in quality and the finest in quality of any American grape ripening so early. Seeds few. Price, group 2, page 12. E. P. S. M. N. R. W.

PERIOD II—JULY 1 to 10

Campbell Early. (A15) Hybrid of Concord, Moore Early, and Muscat-Hamburg. Cluster large, shouldered, berry very large, black, slightly ovoid. Better in quality than Concord, but equally as foxy. Price, group 3, page 12. E. S. M. N.

Manito. (A20) Hybrid of America and Brilliant. Growth very similar to America, endures extremes of climate very well. Clusters long, cylindrical, rather open, with long peduncle; flowers perfect, bears well alone, but better among other kinds blooming with it, very prolific; berries medium, globular, persistent, dark purple, with white specks; very distinct and unique in appearance; skin thin and tough, pulp very tender, juicy, sweet and agreeable, parting from the seeds with ease. Ripens very early, about with

Moore Early, packs beautifully and ships excellently. A very profitable market grape, also a good wine grape. Price, group 1, page 12. E. P. S. M. N. W.

Green Mountain. ('A17) Apparently Niagara-Delaware hybrid. Clusters same shape, but larger than that of Delaware. Berries medium, slightly ovoid, greenish white; skin thin and tender, but not given to cracking; pulp tender, very sweet and high quality. Very prolific. Price, group 3,

Lomanto. ('A20) Hybrid of Salado and page 12. S. M. N. W.

Malaga. Vine vigorous, prolific, healthy, no rot or mildew; leaf medium, having little pubescence; cluster above medium, conical, properly compact; berry very persistent, medium to large, spherical, dark purple or black, skin thin, tough; pulp melting, excellent quality; juice claret red. Valuable for limy soils and hot climate. See note under Nitodal. Price, group 4, page 12. B. E. P. M. N.

Brilliant. ('A17) (Lindley x Delaware.) Growth strong. Vine endures winters anywhere up to 15 degrees below zero. Clusters large, cylindrical, or somewhat conical, often shouldered, open to compact. Berries large, globular, light to dark red, translucent, with a thin bloom, very handsome when well ripened; skin thin, rather tender, but seldom cracks; pulp meaty, yet very tender, melting, and delicious, usually preferred for table and eating fresh to Delaware. Seeds readily part from the pulp. Ripens just before the Delaware and yields on an average fully twice as much. It ships about equally as well or better than Concord. Its foliage is less attacked by mildew than Delaware, and spraying with Bordeaux mixture will entirely prevent this. Price, group 3, page 12. R. E. P. S. M. N.

President. ('A18) Pure seedling of Herbert. Has a much better vine, which is strong, healthy, and prolific. Flower perfect. Cluster medium, compact; berry large, black, persistent, does not crack. Ripens with Moore's Early and of far more value in the South than that variety. Quality excellent, much better than Concord. Price, group 4, page 12. R. E. P. S. M. N. W.

Cloeta. ('A25) Parentage—America x R. W. Munson. Cluster large, berry large, black, handsome; skin thin, handles well; pulp tender, juicy, sprightly, far better quality than Concord. Vine very vigorous and prolific. Uses, market, table, red wine. 10 to 14 feet, long pruning. Requires hot, dry weather to acquire high quality. Price, group 1, page 12. E. S. M.

PERIOD III—JULY 10 to 20

Winchell. ('A17) Sometimes confused with the Green Mountain, but the true Winchell is a distinct variety. Cluster and berry larger than Green Mountain, and of yellowish white. Price, group 3, page 12. E. S. M. N. P.

Captivator. ('A18) A cross of Herbert with Meladel, that is a combination of Rogers No. 44, his best black grape, Delaware, Goethe,

and Lindley. The growth is fairly vigorous, foliage less attacked by mildew than Delaware. Very prolific. Cluster above medium, cylindrical. Berry large, round, of a beautiful bright translucent pinkish red, no handsomer grape grown. Skin thin, tough, without cracking. Pulp melting, of exceedingly delicious flavor, nothing superior. Seeds 1 to 2. Sugar of juice on Oechsles scale 85 to 95; acid per mill 6½. We think this grape will make a marvelous record over a very extensive region. Should prove hardy as far North as Central Illinois, Ohio, and in Massachusetts. In beauty and quality we are sure it is the finest grape yet produced in America. Ripens with Delaware. Price, group 4, page 12. R. P. S. M. N. E.

Delaware. ('A20) Full historic description, page 143, Foundations of American Grape Culture, and illustrated on page 145, same book. Cluster medium, berry medium, bright, red, juicy and of highest quality. Succeeds well in the South. Does not rot, but needs spraying to ward off Downy Mildew. Price, group 1, page 12. E. S. M. N. B.

Delakins. ('A20) A cross of Delago with Perkins, that is, a combination of Delaware, Goethe, and Perkins. It has the robustness of Perkins, the handsome cluster of the Delaware, but larger, and the size and shape of the berry of the Perkins, with the bright red of the Delaware. The berries are persistent, and in quality approaching the Delaware. It is very prolific and a splendid market and table grape. It should succeed over the same range of country as does the Delaware, and owing to its greater resistance to mildew and its fine market qualities, this variety will probably become popular. Ripens after Delaware. Price, group 3, page 12. G. R. E. P. S. M. N. W.

Rommel ('A18) Hybrid of Elvira and Triumph. Growth medium, endures climate better than Concord. Requires short pruning. Prolific. Slightly attacked by mildew in wet, sultry seasons, but less so than Delaware. Clusters medium to small ovate or cylindrical, often shouldered, compact, peduncle short. Berries large, globular, persistent, greenish yellow when fully ripe, skin very thin and delicate, too tender for long shipment, carries well 50 to 100 miles; very profitable for a home market grape, as it is always in demand on account of its most agreeable and fine eating qualities. Pulp melting and perfectly delicious when well ripened, but acid when under-ripe. Fruit rarely or not at all attacked by rot. Price, group 2, page 12. R. E. P. S. M.

Bell. ('A15) A hybrid of Elvira with Delaware. Vine vigorous, healthy, free from mildew and leaf folder, very hardy, a good sure producer; cluster medium, cylindrical, often with a shoulder, fairly compact; berry medium, round, greenish yellow, rarely attacked with Black Rot; skin thin, sufficiently tough to prevent cracking under ordinary weather changes; pulp rather tender, juicy, very sweet and agreeably flavored; ripens just before Concord. Price, group 2, page 12. E. P. S. M.

Wapanucka. ('A22) (Rommel x Brilliant.) Growth medium to strong, equal with

Concord, less attacked by mildew than Brilliant. Cluster medium to large, cylindrical, shouldered, properly compact; peduncle short to medium. Berries large, five-eighths to seven-eighths inch in diameter, globular, persistent, rich yellowish white, translucent; skin very thin and delicate. Ripe about with Delaware. Far superior to Niagara and Green Mountain. For nearby market and table grape there is no other variety superior, if equal to it. Very prolific, requires short pruning. Price, group 2, page 12. R. E. P. S. M. N.

Nitodal. ('A23) Salado hybridized with Malaga. Vine vigorous, healthy, cluster medium to large, conical, handsome; berry persistent, above medium, translucent, dark red; skin thin, never cracks; pulp melting, pure, fine, juice pale pink. Altogether very attractive and valuable; especially in limy soils and hot climate, and probably will succeed as far North as Missouri and Kentucky. This grape comes out of the species *Vitis Champini* of Southwest Texas which possesses endurance against climatic hardships in the South superior to any other species. This applies as well to Lomanto, Salamander, which are also bred out of this species by two generations of breeding. The parent, Salado, is a hybrid of one of the best *Vitis Champini* varieties with Brilliant. Price, group 4, page 12. G. R. B. E. P. S. M. N.

PERIOD IV—JULY 20 to AUGUST 1

Salamander. ('M3) A combination of Salado, Delaware, and Lindley. Vine very vigorous and healthy, enduring drouth perfectly and 15 degrees below zero of cold. Prolific, of medium handsome, compact clusters of good, medium translucent red berries, having thin tough skin, melting pulp of quality about equaling Delaware, seeds small. Price, group 4, page 12. G. R. B. E. P. S. M. N.

Lukfata. ('A20) (*V. Champini* x Moore's Early.) Growth strong. Endures heat, drouth and cold remarkably well. Succeeds in black, limy soils. Not injured by mildew. Cluster medium, ovate, sometimes shouldered, compact; berries globular, large, persistent; does not crack; pulp about same as Moore's Early, more juicy and very sweet and agreeable. Price, group 1, page 12. B.

Hernito. ('A26) A seedling of Roger's No. 44, Herbert. Vine very vigorous, healthy, with foliage similar to that of Concord, endures the climate of Texas better than Concord, but more specially recommended for Northern States where something much better than Concord is desired. Flowers perfect, cluster of medium size, compact; berry very large, black. Ripens before Concord and far superior to it; much more persistent to the cluster, never cracks and hence a much better shipper. Very prolific. An improvement upon the Herbert, which was regarded as Roger's best black hybrid. Price, group 4, page 12. R. E. P. S. M. N.

Niagara. ('A17) Clusters large, compact; berry large, yellowish-green; skin tender; pulp juicy, better in quality than Concord,

but not so good as Diamond. Needs spraying to ward off Black Rot. Better North than South, but succeeds better in the South than Concord. Needs short arm pruning in the South to prevent overbearing. Price, group 1, page 12. G. E. P. S. M. N.

Ericson. Seedling of America crossed with R. W. Munson. ('M10) Cluster medium to large, compact and attractive. Berry medium, black. Skin thin and tough. Seeds small. Fine for table and wine. The vine is hardy, healthy and vigorous, and resists attacks of insects well. Plant 3 to 10 feet apart. Medium length arms should be left in pruning, as described on page 226, Foundations of American Grape Culture. Price, group 4, page 12. G. E. P. S. M.

R. W. Munson. ('A23) (Big Berry Post-Oak x Triumph.) Growth strong. Clusters medium to large, cylindrical, often shouldered, peduncle medium. Berries when well grown, medium to large, globular, persistent; black without bloom; skin never cracks; pulp tender, juicy and of a very good quality, better than Concord or Beacon. Ripe just before Concord. Gives good satisfaction on market. Bears heavily on long pruning and when pollinated by other erect stamened varieties flowering at same time, its own pollen not being fully adequate, although its flowers are perfect. Concord and Brilliant good pollinators for it. Price, group 1, page 12. G. E. P. S. M.

Beacon. ('A22) (Big Berry Post-Oak x Concord.) Growth medium in South Texas, becoming stronger in North Texas, to very strong in Missouri. Very prolific, of large cylindrical clusters, often shouldered, moderately compact. Berries as large or larger than Concord, black, with rather heavy white bloom, hang to cluster about equally well with Concord, but not so well as Bailey; skin a little tougher than Concord, never cracks; pulp rather more tender than Concord, very juicy, sprightly and of a very similar flavor to Concord; rather more agreeable; seeds readily leave the pulp. Ripe here July 15 to 25. Price, group 2, page 12. G. E. P. S. M.

Concord. ('A18) Cluster medium to large, berry large, black with bloom. A well-known grape. Better North than South. In the South it does not ripen evenly. Price, group 1, page 12. S. M. N.

PERIOD V—AUGUST 1 to 10

Captain. ('A20) Parentage—America crossed with R. W. Munson. See description of these. Clusters very large; long cylindrical, reaching 10 to 12 inches; berry large, black with white bloom; skin thin; ships well; pulp tender, freeing seeds easily, quality nearly best, much better than Concord. Exceedingly vigorous and prolific. Uses, market, table, red wine. Medium season. 10 to 12 feet, medium pruning. Use Concord, Krause, or Champion as pollinators. Price, group 1, page 12. G. P. S. M.

Xinta. ('A22) (America x R. W. Munson.) Growth strong. Clusters large, cylindrical, shouldered, with medium peduncle, fairly compact, unless not well pollenized, then loose; flowers have reflex stamens and perfect flowering kinds should be planted

near, such as Brilliant, Delaware or Gold Coin. Berries medium to large, globular, persistent, black, with little bloom; skin thin, never cracks; pulp meaty, tender and of a very agreeable, sprightly quality. Ripe with or later than Concord. Very prolific on medium to long pruning; an excellent market and wine grape. Price, group 2, page 12. G. P. S. M. E.

Mericaldel. ('A26) A hybrid of America with Delaware, produced in 1898. Vine very vigorous and very productive; cluster large, berry medium, purple, very persistent to cluster; skin thin and tough; pulp tender and meaty, of very best quality; fine for table and market. Ripens late, just after Concord. Doing finely in Florida and Southeastern part of United States. Pronounced of the best quality by many who have taken part in our "grape-tasting parties." Plant 8 feet apart, medium arms in pruning. Price, group 2, page 12. G. E. P. S. M. N.

Champanel. ('A20) (V. Champini x Worden.) Growth rampant, exceedingly resistant to heat and drouth, growing well in limy black soils. Clusters large, conical, with long peduncle, rather open. Berries globular, large, black, with white bloom, persistent; skin thin, tough; pulp tender, juicy, very sprightly, acid unless well ripened, then quite agreeable; seeds rather large, easily leaving the pulp. Ripe about with Concord, which it resembles very much in cluster and berry. Price, group 1, page 12. B.

Krause. ('A20) This was produced from seed taken from sample clusters of a variety produced by Prof. E. W. Krause of Waco, Texas. Supposed to be a hybrid of Herbemont and Niagara. Vine is vigorous, usually healthy, slightly attacked by mildew in damp seasons. Very prolific of large handsome clusters of pearly white berries of medium to large size, of fine quality. Very handsome in basket and sells at highest price. Promises to be an exceedingly valuable grape for all of the Southwest. Price, group 4, page 12. G. E. P. S. M.

Amethyst. Parentage—Delago x Brilliant. Cluster medium; berry large, clear red, with delicate bloom; skin thin and tough; pulp tender, quality the best. Uses, market, table, white wine. Medium season, with Concord. Plant 8 feet apart, short arm. Requires spraying. Price, group 3, page 12. G. E. P. S. M. N.

Hidalgo. A combination of Delaware, Goethe and Lindley. Cluster large; berry large, yellowish white, skin thin and tough; pulp tender and melting, quality best; uses, table, market, white wine. Early, handsome, delicious. 8 feet, short arm pruning; spray. Price, group 3, page 12. G. E. S. M. N.

Dr. Collier. ('A29) Ten Dollar Prize Post-Oak and Concord Hybrid. Vine vigorous. Cluster large, conical, not very compact; berries large, globular, clear handsome red, persistent, does not drop or crack; skin thin; flesh a little pulpy, very juicy. Should be thoroughly ripe, otherwise rather acid; good quality. In Oklahoma this grape is put at the head as a profitable market variety. Price, group 3, page 12. E. P. S. M.

PERIOD VI—AUGUST 10 to 20

America. (A23) (Seedling of Jaeger. No. 70.) Growth very strong. Cluster conical, sufficiently compact. Berries very persistent, medium size, globular, black, with little bloom, and scatteringly dotted jet black, with white speck in center of dots; skin thin and tender, but does not crack; pulp melting, juicy, easily freeing the slender seeds, when fully ripe very rich in sugar; also rich in agreeable acid; possesses a very distinct, peculiar flavor, much liked by some; not "foxy," making a good combination market and wine grape. A very good port wine has been made from it without "fortifying." Very prolific with long arm pruning and when pollenized by other varieties, as it does not thoroughly pollenize itself. Beacon is a good mate. Price, group 1, page 12. E. P. S. M.

Bailey. ('A26) (Big Berry Post-Oak x Triumph.) Growth strong. Clusters large to very large, cylindrical or often branching, generally compact. Berries persistent, large, black, with little bloom; skin thin and tough, never cracking; pulp meaty, but not tough, juicy, sprightly, of pure very good quality, considerably above Concord; seeds readily parting from pulp. A valuable market grape, easily superseding Concord, especially in South-Central and Southwest Texas, where it has done remarkably well. Price, group 3, page 12. G. R. P. M. S.

Ben Hur. ('A28) Parentage a combination of Post-Oak grape with Norton and Herbemont. Vine very vigorous, very prolific, free from rot and mildew; cluster large; berry little under medium, black, persistent; pulp very tender, juicy, sprightly, sweet. We consider this one of the most valuable of American wine grapes. Price, group 2, page 12. G. E. P. S. M. R.

Blondin. ('A30) Combination of Ten-Dollar-Prize-Post-Oak, Norton Virginia, and Herbemont. Cluster large, compact, shouldered; berry medium, white translucent; skin very thin and tough; pulp very tender, juicy, sprightly, quality excellent, nearly best. Very vigorous, prolific. Late, with Triumph and Catawba in season. Very valuable as a late market and white wine grape. Price, group 3, page 12, E. P. S. M.

Valhalla. ('A20) A hybrid of Elvicand and Brilliant; that is, one-fourth Mustang, one-fourth Elvira, one-fourth Lindley, and one-fourth Delaware. A very vigorous drouth-enduring prolific vine, well suited for black lands and will endure Missouri winters. Cluster medium; berry large, bright clear red; thin, tough skin; tender, juicy pulp of quality nearly equaling Brilliant. Hangs on perfectly; never cracks or rots. Price, group 1, page 12. B.

Wine King. ('A26) A hybrid of Winona and America. Winona is a pure seedling of Norton Virginia, and quite an improvement on that celebrated variety, hence Wine King is a thoroughbred pure America blood of the finest wine properties and large enough in berry and cluster to make a good market grape. It has been sold in the market and gives excellent satisfaction. Produced in 1898. Cluster large, berry medium, black, very persistent. Skin thin, never cracks, pulp tender and juicy, rich and

sprightly, intensely red juice. Seeds small. Very vigorous, prolific; free from all diseases. Price, group 3, page 12. G. E. P. S. M. R.

Manson. ('A26) An exceedingly valuable white grape. A hybrid of R. W. Munson with Gold Coin, produced in 1899. Vigorous and productive; clusters large, berry above medium, of yellow color; skin thin and tough; pulp tender, quality excellent. Ripens late, with Triumph. Price, group 3, page 12. E. P. S. M.

Extra. ('M1) (Big Berry Post-Oak x Triumph.) Growth strong; cluster oblong to cylindrical, sometimes shouldered, moderately compact. Berries persistent, globular, medium to large, dark purple to black, with moderate bloom; skin thin, tough, never cracks; pulp tender, juicy, sprightly, agreeable, sweet; seeds easily parting from the pulp. Price, group 3, page 12. G. E. P. S. M. R.

Xenia. ('A20) Parentage: Delaware, Goethe, and Triumph. Clusters medium, compact, very large, white; skin thin and tough; pulp meaty, tender, highly flavored, best. Good grower, prolific. Very late. 8 feet, short arm pruning. Price, group 3, page 12. E. P. M. R.

PERIOD VII—AUGUST 20 to 30

Hermann Jaeger. ('M12) A hybrid produced by T. V. Munson in 1885 by using pollen of the Herbemont upon one of the best varieties of *Vitis Lincecumii* found wild in this vicinity. Vine exceedingly vigorous, healthy and prolific. It will probably endure the winters as far North as 40°. Bunch very large, shouldered or double-shouldered, compact; berry medium, of a dark purple, covered with a rich bloom, very persistent to the stem; skin thin, tough; pulp melting, very juicy, sweet and sprightly, of very good quality; seeds small. Price, group 2, page 12. G. E. P. S. M.

Catawba. ('A18) Cluster medium, conical; berries above medium, clear dark red, globose; skin thin, tough; pulp rather tender, juicy, sprightly, with a slight Muscat flavor, not foxy. Excellent for table and wine. Does well North and fairly well South. Price, group 1, page 12. E. P. S. M.

Armalaga. ('M2) A hybrid of Armlong (which is a hybrid of native Post-Oak grape with Black Eagle) and Malaga. The vine is vigorous and healthy. Flower perfect. Cluster large and compact. Berry large, yellowish-green, translucent, persistent to cluster. The skin is thin, tough, yet pleasant to taste, without astringency. It endures shipping as well as Tokay. In quality equal to the best foreign grapes. This promises to be very valuable in all of the drier portions of the Southwest, as it is much hardier than pure *Vinifera* kinds. Its fruit would be taken by anyone not acquainted with native blood as a pure foreign grape and will sell equally well with such, while the vine is immensely superior to any of the foreign. Its quality is much richer than Malaga. Price, group 4, page 12. R. E. P. S. M.

Edna. ('M3) Hybrid of Armlong with Malaga, and similar in every way to Armalaga although the vine seems to be more vigorous. Clusters as large and as handsome

as Armalaga. For this season, no four grapes, foreign not excepted, can excel the Ellen Scott, Ronaldo, Armalaga, Edna and Last Rose. Price, group 4, page 12. G. R. E. P. S. M.

Ellen Scott. ('M3) Armlong hybridized with Herbemont. Vine beautiful, healthy, vigorous, prolific. Suitable to the South as far North as St. Louis and Cincinnati. Cluster large to very large, conical. Berry large, translucent, violet covered with a delicate bloom. Skin thin and tough. Pulp tender, very juicy and sprightly, of pure high quality, reminding one of the best foreign grapes. A very handsome table and market grape. Ripens after Catawba. This grape ought to be especially valuable in West and Southwest Texas where the European varieties will grow, and we believe will become a valuable commercial variety for those regions, as well as regions farther North and East. It has splendid shipping qualities. We anticipate for this grape a great future, and believe we have produced no grape of greater value. Price, group, 5, page 12. G. R. E. P. S. M.

Augustina. Combination of Delaware, Goethe, Brilliant. Cluster large; berry very large, translucent carmine red, very handsome; skin thin and tough; pulp meaty, tender and juicy, quality the best, with very delicious characteristic flavor. Good grower, very prolific. Table, market, white wine. Season very late, after Catawba. Plant 8 feet, short arm pruning. Spray. Price, group 3, page 12. R. P. S.

Carman. ('A26) (Post-Oak No. 1 x Triumph.) Growth vigorous; foliage never attacked by leaf folder or mildew, very prolific. Cluster large to very large, have reached two pounds in rare instances, shouldered or branched, conical, very compact. Berries persistent, medium, globular, black with thin bloom; skin thin and tough, never cracking; pulp meaty, firm, yet tender when fully ripe, of pure, rich quality, much superior to Concord; seeds easily leaving the pulp. Price, group 2, page 12. G. E. P. M.

Ronaldo. ('M4) Armlong-Malaga hybrid. Of the same general character as Armalaga, only the vine more vigorous and larger clusters. White. Price, group 4, page 12. G. R. E. P. S. M.

Columbian. Seedling of Isabella, and first introduced as Union Village. ('M10) Cluster small; berries immensely large, purple. Quality fair. Ripens unevenly. Its extreme large berries make it a novelty for those who wish large berries to be the prime object. Fine for jelly. Price, group 3, page 12. E. P. S. M.

Gold Coin. ('A23) (Norton x Martha.) Growth medium. Cluster medium or above, ovate shouldered, proper degree of compactness. Always sets a crop of well-filled clusters; peduncle medium to long. Berries large, globular, yellowish when fully ripe, persistent; skin thin, tough, never cracks, and rarely attacked by rot; pulp about same consistency as Concord, very juicy and exceedingly sweet; retains a little of the Martha flavor; liked by most persons. Very handsome in the basket and markets excellently; has always been very profitable. Price, group 2, page 12. E. M.

PERIOD VIII—SEPTEMBER

Grapes in this period, while ripening here the last week of August, and first week in September, will hang on for several weeks without deteriorating, as the nights are cool and birds have left.

Jacquez. (Le Noir, Black Spanish.) ('M2) Very prolific. Cluster rather open, but long and large. Berries small, very juicy and sprightly. Fine for red wine. Does well in Southwest Texas in semi-arid regions. In moister regions requires spraying to keep off mildew and Black Rot, to which it is subject. Price, group 3, page 12. R. G. P.

Herbemont. ('M4) Vine very vigorous, healthy and long lived in the South. Clusters large; berries small to medium, brownish red or translucent purple, not coloring much when in dense shade of foliage. Juicy and sprightly. Fine white or amber wine. Much subject to Black Rot which will have to be kept in check by spraying. Well adapted for the South and only as far North as Kansas, as winters with 15 degrees below zero and colder will damage it. Price, group 3, page 12. R. G. P.

Longfellow. ('A30) Hybrid of Armlong with Griesa, the latter a very fine Italian grape. Vine fair grower, very prolific, healthy. Clusters extremely large, often 10 to 12 inches in length. Berry large, oval, persistent, black, of high quality. One of the most magnificent show and market grapes, adapted to all varieties of soil and for regions as far North as Missouri. Will compete with foreign grapes in market. Plant 8 feet, with short arm pruning, as described on page 226, Foundations of American Grape Culture. Will require spraying in damp re-

gions. Price, group 5, page 12. G. R. P. E. S. M.

Muench. ('M2) A hybrid of Neosho (a Missouri Post-Oak grape found by H. Jaeger) and Herbemont. Vine very vigorous and free from all diseases; cluster large to very large; berries above medium, purplish black; pulp very tender and meaty, of fine quality. Sells readily in the market, also fine for table. Price, group 2, page 12. G. E. P. M.

Fern Munson. ('M4) (Post-Oak No. 1 x Catawba.) Growth very strong. Cluster medium to large with long peduncles. Berries globular, medium to large, very persistent; very dark purplish red to nearly black; skin thin, tough; pulp firm, but not tough; very juicy, sprightly, with very agreeable Catawba flavor when fully ripe; seeds leave the pulp readily. Ripens very late in August or early in September, and hangs on until frost if desired, becoming excellent in quality and giving full satisfaction in market. Very profitable, as it ripens when all old varieties are gone. Free from black rot. Has endured 27 degrees below zero, and has borne well the following season. It endures drouth excellently. Price, group 1, page 12. G. R. E. P. S. M.

Last Rose. (, M5) A hybrid of Armlong and Jefferson. Vine vigorous, healthy and prolific. Cluster very large, compact, long peduncle, conical, with heavy shoulder. Berry medium to large, dark bright red, round. Pulp tender, of very good quality. Ripening very late with or later than the Fern Munson, probably the latest grape in the list. Adapted to the same regions as the Ellen Scott. A very handsome market grape. Price, group 5, page 12. G. R. E. P. M.

European (Vinifera) Varieties

Plant 8 feet apart in rows, with rows 9 feet apart, requiring 605 vines per acre.

Read Fungi and Fungicides. Price, \$1.00.

PRICES. Except where noted.

	Each	Per 12	Per 100
Packed on cars at Denison.....	\$0.15	\$1.50	\$10.00
Packed and prepaid to your depot.....	.17	1.60	11.00

These succeed in far South and West Texas, especially with irrigation, equally as well as in California, but fail entirely in Central and East Texas, owing to phylloxera, rot, mildew, etc.; but by grafting on resistant roots and spraying with Bordeaux mixture, succeed in all but extreme North Texas, and with winter protection can be fruited there.

Pense. (Malaga.) (Spanish.) Vigorous, and healthy; cluster very large; berry large, meaty, ovate, white; table, market, raisin.

Muscat Rose. We have fruited this variety two very wet seasons and have found it to be the freest from mildew and rot of any of this class yet tried, of which we have tested about sixty varieties. It is very vigorous, prolific, has large conical clusters of large oval violet berries, meaty, juicy, sprightly, of the highest, most delightful Muscat flavor. Ripening soon after the Concord. Price, \$1.00 each.

Pearl of Casaba. This is a new Hungarian variety that is creating great interest among the grape growers of that country, as it is by far the earliest fine market grape known. We fruited it three seasons and it ripened some ten days earlier than the Headlight. It is one of the freest from mildew and rot of foreign grapes. The cluster large, conical with long peduncle. Berry above medium, white, very tender, juicy, of delicious Muscat flavor. This promises to be

one of the best introductions of Vinifera grapes yet made to this country. Specially recommended for regions suitable for such varieties. Price, \$1.00 each; \$8.00 per dozen.

Flame Tokay. Very vigorous, prolific; large cluster and very large berry; bright pink; very meaty and firm. Fine quality when fully ripe. A famous commercial variety for long shipments.

Grape of Escal. Introduced into the United States from Palestine by General Lew Wallace. Immensely large cluster. Berries very large, ovoid, purplish black, very firm and meaty, hence a fine shipper. Does not crack. Very handsome and showy grape. Price, \$1.00 each; \$8.00 per 12.

Violet Chasselas. Vigorous; cluster very large; berry large ovate, violet, beautiful, superb quality. Table, market, wine.

Zinfandel. Dark purple, medium size berry, large cluster, fine quality, excellent for red wine.

Southern Muscadines and Hybrids

Succeed in deep rich soil thruout the South. Require much high trellis room. Plant 16 to 20 feet apart in rows. Require little or no pruning. Fruiting varieties, to render them fruitful, need male vine growing near to pollinate them.

PRICES	On Thomas and Scuppernong		On Sanalba and San Rubra		On all others	
	Each	Doz.	Each	Doz.	Each	Doz.
F. O. B. Denison.....	\$0.25	\$2.50	\$1.00	\$8.00	\$0.50	\$4.00
Prepaid in orders of \$5.00 or more..	.30	2.75	1.00	8.00	.50	4.25

Thomas. Very large, black, two to five berries to cluster, not persistent. Best of the pure black muscadines. Good wine.

Scuppernong. Large bronze yellow, juicy, good wine. Four to six berries to cluster.

The following are hybrids of the Scuppernong made by us. The La Salle and San Jacinto being of the first generation and the others of the second generation from the Scuppernong.

La Salle. Hybrid of Muscadine and Post Oak. Large, black berry with 6 to 15 to cluster and more persistent than Thomas. Skin thin, pulp tender and better quality than Scuppernong. Earliest to ripen of this class.

Cluster a little more filled than La Salle, about three times the size of Scuppernong. Quality a little better than La Salle and follows it in ripening. Very prolific. Same blood as La Salle.

Sanalba. Hybrid of San Jacinto and Brilliant. Larger cluster than Scuppernong; about the size of San Jacinto; large white berry, thin skin, pulp tender, quality fine; the richest in sugar of any variety of this class yet produced, having 92 degrees of sweetness when Scuppernong had only 65 degrees. Very highly endorsed by critical judges as far the best variety of this class. Very vigorous, prolific.

Sanmelaska. Same parentage as Sanalba, with somewhat larger berries than Sanrubra, black; cluster as large or larger than San Jacinto; of excellent quality; 81 degrees sugar when Scuppernong was 65. Very vigorous and prolific. Best black of this class.

Sanrubra. Same parentage as Sanalba, but clear, translucent red; cluster about the same size as in San Jacinto; berry not quite so large as Scuppernong; much more persistent to cluster; skin quite thin, but never cracking; pulp melting and of best quality. Nearly as sweet as Sanalba; a great acquisition. Very vigorous and productive.

Sanmonta. Parentage San Jacinto x Herbemont; cluster as large or larger than Sanmelaska, sometimes having 30 or 40 berries, which are black and a size larger than Herbemont; skin thin and pulp very juicy; melting, of fine sprightly quality; seeds small; vine exceedingly prolific and vigorous; promises to be a great wine grape of this class; when Scuppernong is 65 sweetness, San Jacinto is 76 and Sanmonta 77.

Labama. Hybrid of San Jacinto and Brilliant (?). Large black berries similar to La Salle, but of better quality and with larger clusters. Vine exceedingly vigorous and prolific.

Male Muscadine. To pollinate the bearing varieties to render them fruitful. One male for each six or less bearing vines will answer if all are in same plat. At least one male should be in each plat, and one male for each six bearing vines when there are many bearing vines in the row. Price, 25 cents each; \$2.50 per dozen.

San Jacinto. Berry above medium.

Hybrid Grape Seeds

Every year we have calls for seeds of leading varieties of grapes, especially those of our own origination. To somewhat meet this demand we have this season saved and put up in packages of about 100 hybrid seeds each of the following kinds: America, Armalaga, Augustina, Bailey, Beacon, Blondin, Brilliant, Carman, Captivator, Cloeta, Champanel, Campbell Ea, Concord, Captain, Delaware, Ellen Scott, Extra, Fern, Gold Coin, Headlight, Hidalgo, Husmann, Mericadel, Muench, Moore Early, President, R. W. Munson, Rommel, Wapanuka, Wine King, Xlnta. See descriptions of these on preceding pages.

Each variety named has seeds in the packet pollinated by several of the others named. Very valuable varieties may be expected.

Plant the seeds in rich garden soil at any available time from November to February, cover about an inch. The seeds are slow in germinating.

Price, per packet, by mail, 25 cents; 12 packets, \$2.00; 6 packets, \$1.00.

Shade and Ornamental Trees

Your chief happiness lies in the growing ornaments surrounding your home. Such ornaments refine and purify. Neglect them not. Plant 20 to 25 feet on sidewalks; 25 to 30 feet apart in yards and parks.

Read Waugh's Practical Landscape Gardening. Price, 50c.

See full explanation on back of order sheet.

PRICES

	F. O. B. Denison			Prepaid in orders of \$5.00 or more		
	Each	Doz.	100	Each	Doz.	100
American Elm. Large-leaf elm, healthy, quick growth, long-lived. A desirable shade tree in every way.						
Sizes: 3 to 4 feet.....	\$0.10	\$1.00	\$ 7.00	\$0.15	\$1.25	\$ 8.00
4 to 6 feet.....	.20	2.00	12.00	.25	2.50	14.00
6 to 8 feet.....	.25	2.50	16.00	.30	3.00	20.00
8 to 10 feet.....	.35	3.50	25.00	.50	5.00	35.00
Black Locust. (Sweet Locust.) A splendid dry climate shade ornamental or grove tree. Every prairie farm should have a grove of this for shade and fence posts.						
3 to 4 feet.....	.10	1.00	6.00	.15	1.25	7.00
4 to 6 feet.....	.15	1.50	9.00	.20	2.00	12.00
6 to 8 feet.....	.20	2.00	12.00	.25	2.50	16.00
8 to 10 feet.....	.25	2.50	18.00	.30	3.50	25.00
10 to 14 feet; under 1½ inch caliper.....	.40	4.00	30.00	.60	5.00	45.00
Extra heavy, 75c to \$2.00 each.	2.00	20.00	150.00	4.00	45.00	.....
Carolina Poplar. Rapid grower, large round glossy green leaves, quivering in slightest breeze.						
3 to 4 feet.....	.10	1.00	7.00	.15	1.25	8.00
4 to 6 feet.....	.15	1.50	12.00	.20	2.00	14.00
6 to 8 feet.....	.20	2.00	16.00	.25	2.50	19.00
8 to 10 feet.....	.30	3.00	24.00	.50	5.00	40.00
Hackberry. A very hardy healthy tree, holding leaves until late. Bark rough, leaves small but dense. Does well all over the South and specially adapted for dry climate and limy soils. 2 to 3 feet						
3 to 4 feet.....	.10	1.00	8.00	.11	1.10	8.75
4 to 6 feet.....	.15	1.60	12.00	.17	1.85	14.00
6 to 8 feet.....	.20	2.00	15.00	.25	2.50	20.00
8 to 10 feet.....	.25	2.50	20.00	.35	3.50	30.00
Maple. Soft or Silver. The best; a favorite, quick, handsome, beautiful scarlet in fall. 3 to 4 feet						
4 to 6 feet.....	.10	1.00	6.00	.15	1.25	7.00
6 to 8 feet.....	.15	1.50	10.00	.20	2.00	12.00
8 to 10 feet.....	.20	2.00	15.00	.25	2.50	20.00
10 to 14—1 to 1¼ caliper.....	.25	2.50	20.00	.35	4.00	30.00
	.35	4.00	30.00	.60	6.00	50.00
Red Bud. (Judas Tree.) A very pretty ornamental tree. Blooms very early in spring, full of pinkish-red flowers, handsome foliage. 3 to 4 feet						
4 to 6 feet.....	.25	2.50	.....	.30	3.00	.....
6 to 8 feet.....	.35	3.50	.....	.45	4.50	.....
8 to 10 feet.....	.50	5.00	.....	.75	7.50	.....
8 to 10 feet—heavy bodies.....	.75	7.50	.....	1.25	15.00	.....
Sycamore. Quick, hardy, long-lived, no disease. Very symmetrical in growth. 3 to 4 feet..						
4 to 6 feet.....	.10	1.00	8.00	.15	1.50	9.00
6 to 8 feet.....	.15	1.50	12.00	.20	2.00	14.00
8 to 10 feet.....	.20	2.00	15.00	.25	2.75	20.00
10 to 12 feet.....	.30	3.00	24.00	.50	5.00	40.00
	.50	5.00	40.00	.75	8.00	65.00
Umbrella China. Spreading umbrella-shaped top, attains to 15 to 20 ft. Dark green compound leaves, striking and beautiful. Profuse in spring with fragrant violet flowers.						
8 to 10 feet—heavy bodies with formed tops, heavy	1.00	10.00	75.00	2.00	22.00	175.00
(No smaller size this year.)						
Male Russian Mulberry. Non-fruiting. An excellent round-headed shade tree, well adapted for street planting.						
3 to 4 feet—one year.....	.15	1.50	10.00	.18	1.80	12.00
4 to 6 feet—one year.....	.20	2.00	16.00	.25	2.50	18.00
6 to 8 feet—one year, not branched.....	.25	2.50	20.00	.30	3.00	23.00

Roses

Read Henderson's Practical Floriculture. Price, \$1.50.

PRICES

	Each	Per 12	Per 100
Packed and F. O. B. Denison.....	\$0.20	\$2.00	\$15.00
Packed and prepaid to your depot.....	.25	2.50	18.00

See full explanation on back of order sheet.

Strong, Open-Ground, Two-Year Plants

The following list includes the most superb varieties, both old and new. The plants are thrifty and vigorous, growing in open ground.

All these have been in bloom thruout the season, and we know them to be strictly pure and true to name and description. Our roses always give the best of satisfaction.

EVERBLOOMING WHITE AND BLUSH

Frau Karl Druschki. Pure white Jacqueminot style flower. Hybrid perpetual.

The Bride. Pure white, with tinge of pink when planted in the garden; large, full and most perfect form.

Clothilde Soupert. Vigorous, profuse bloomer, with medium, very full, white flowers, with pink center.

The Queen. Pure snow-white; sweet and fragrant; petals are thick; makes fine buds on long stems; good grower.

Antoine Revoire. Very handsome Camelia form. Outer petals almost white, gradually becoming flesh pink toward center; robust, healthy.

Bessie Brown. Exceedingly handsome, petals recurring most gracefully, very delicate shade of shell pink or flesh.

Kaiserin Augusta Victoria. Pure white, fragrant; fine buds and flowers on long stems; profuse; strong grower.

White Cochet. Identical in shape and habit with that splendid pink rose, Maman Cochet, except the color is white, changing to blush.

Carnot. Flesh-tinted white. Long beautiful bud, cupped, wax-like.

BUFF AND YELLOW

Etoile de Lyon. Rich, yellow, full, fragrant, pretty; profuse all summer.

Blumenschmidt. Pure citron-yellow; outer petals edged tender rose. A sport from Mademoiselle Franceska Kruger, which it resembles in form.

Heien Good. Delicate yellow, suffused with pink.

Marchael Neil. Large, deep yellow, climbing habit. Needs winter protection.

Marie Van Houtte. Canary-yellow, deeper center, the border of the petals tipped with bright rose; large, full and fine form, a free and continuous bloomer.

PINK

Pernet Triumph. Rich, dark, bright pink; large, beautiful bud on strong stem.

Catherine Mermet. Vigorous, large, full; bright flesh color; very sweet.

Caroline Testout. Light pink of same shade as Hermosa.

La France. Upright, very large, full; delicate pink, sweet, profuse.

Duchess of Albany. Habit of plant, shape and size of flower similar to that of La France, but more profuse and of deeper pink.

Franceska Kruger. Fine rich pink, creamy towards center; slightly penciled with deeper pink on outer petals. Healthy plant, great bloomer.

Maman Cochet. Rose or pink, shaded with salmon; profuse, fine bud and flower; strong grower; a very superior rose; one of the best for outdoor planting in Texas, also excellent for cut flowers.

Aurora. One of the grandest of all Hybrid Tea Roses. Color clear, bright pink, full and double to the center.

Bridesmaid. A grand pink Rose for all purposes, not only a good garden Rose but forces well. Splendid buds.

Duchess de Brabant. Light rose shading to salmon; very free, a good grower.

Beauty of Stapleford. Rosy-crimson; makes a fine shapely bud and flower.

Paul Neyron. Upright, vigorous plant, clear pink, large.

W. R. Smith. Light, clear shell-pink.

SCARLET AND CRIMSON

Meteor. Large, clear, rich, dark crimson; profuse; strong grower; full.

Etoile de France. Clear crimson scarlet, superb every way.

Madame Masson. Strong and hardy; flowers large and profuse, very double; flowers dark crimson.

Rhea Reid. Flower large and double, very free blooming and exquisitely fragrant, rich dark velvety-red.

General McArthur. Bright crimson, shade lighter than Etoile de France.

HARDY CLIMBERS

Crimson Rambler. One of the finest climbers; magnificent trusses of deep crimson flowers; makes a fine show as a climber and profuse bloomer.

Climbing Paul Neyron. Large flower, pink; constant. A superb variety, a fine companion for the next variety.

Climbing Meteor. A deep, double-crimson climber. Constant in flower.

Climbing Augusta Victoria. Most beautiful white bud, and flower equaling in beauty the bush Kaiserin Augusta Victoria; constant.

Climbing Testout. Very strong. Light pink.

Evergreens

Prices. See full explanation on back of order sheet.	F. O. B. Denison			Prepaid in \$5.00 orders		
	Each	Doz.	100	Each	Doz.	100
CONE-BEARING CLASS						
Arborvitae. Chinese, dark green.						
3 to 4 ft.....	\$0.50	\$5.00	.....	\$0.80	\$ 8.00	.....
4 to 5 ft.....	.75	8.00	.....	1.25	12.00	.....
Red Cedar.						
2 to 3 ft.....	.30	3.00	\$24.00	.40	4.00	\$30.00
3 to 4 ft.....	.60	6.00	.....	1.00	10.00	.....
Cedrus Deodora. A rapid growing, graceful, successful evergreen for the South, light bluish green.						
8 to 10 in.....	.25	3.00	.....	.30	3.50	.....
2 to 3 ft.....	1.00	.....	.....	1.50	.....	.....
Cedrus Atlantica. Slow growing, hardy, handsome, bluish green with shorter needles than the Deodora.						
6 to 10 in.....	.35	3.50	.....	.40	3.75	.....
Cryptomeria Japonica. (Japanese Cedar.) Same habit of the expensive Norfolk Pine (Araucaria), but is perfectly hardy outdoors. Light lively green.						
1 to 2 ft.....	.25	2.75	22.00	.30	3.50	25.00
2 to 3 ft.....	.40	4.50	.....	.60	6.50	.....
Trailing Juniper. Dark green variety; very hardy in the South. Grows low, trailing on the ground.....	.50	5.00	.....	.75	8.00	.....
BROAD-LEAVED CLASS						
Magnolia Grandiflora. The grandest of all evergreens and flowering trees. Has large, glossy, bright green leaves. Succeeds thruout Texas and Oklahoma, as well as in other Southern States. By clipping off all but a few of the tip leaves when taken up, and treated as in our handling, they are readily transplanted. We do not clip the leaves off unless so instructed.						
6 in. to 1 ft.....	.15	1.50	10.00	.20	1.75	11.00
1 to 2 ft.....	.25	2.50	18.00	.30	3.00	20.00
2 to 3 ft.....	.50	4.00	30.00	.60	5.00	35.00
3 to 4 ft.....	.75	8.00	.....	1.00	9.00	.....
4 to 5 ft.....	1.00	10.00	.....	1.50	14.00	.....
Cape Jessamine. A very handsome shrub of glossy evergreen leaves. Blooms in May and sometimes thruout the summer and fall, exquisitely beautiful, fragrant, camelia-like, pearly double white flowers, hardy from Red River southward. Nice 1-year plants.....	.25	2.50	20.00	.30	2.75	22.00

Flowering Shrubs

See full explanation on back of order sheet.

VARIETIES AND DESCRIPTIONS.	PRICES			
	Packed f.o.b. Denison		Packed and prepaid	
	Each	Doz.	Each	Doz.
ALTHEAS—(ROSE OF SHARON)				
Joan de Arc. Medium size flower, very profuse, pure white, double.....	\$0.35	\$3.00	\$0.40	\$3.50
Banner. Large, profuse. Delicate flesh color with crimson splashes on outer petals.....	.35	3.00	.40	3.50
Pearle. Large, pure white with deep carmine at base of petals.....	.35	3.00	.40	3.50
Duchess de Brabant. Dwarfish plant. Rosy red.....	.50	4.00	.50	4.00
CAPE MYRTLES				
Imperial Pink, and Crimson. Upright, splendid summer bloomers with showy fringy flowers in large terminal heads....	.25	2.50	.30	3.00
DEUTZIAS				
Crenata. Blooms in March. Pink, upright. Profuse and sweet.....	.15	1.50	.20	2.00
Watsonii. (Pride of Rochester.) Very double, pure white....	.15	1.50	.20	2.00
POMEGRANATES				
Double Salmon. Large waxy-like beautiful flower. Half hardy in North Texas. Hardy Waco, Tyler, and South.....	.20	2.00	.25	2.50
SPIREAS				
Argentea. Upright, medium grower, with large spikes of white flowerlets, profuse. Pretty and effective in bouquets. Easy to grow. Blooms in summer.....	.15	1.50	.20	2.00
Billardii. Vigorous grower, upright, rose-pink colored spikes similar in shape to Argentea, to which it would make a good mate.....	.15	1.50	.20	2.00
Prunifolia. Snow white double flowerlets, covering all of the branches, very early.....	.25	2.50	.30	3.00
Reevesii. (Bridal Wreath.) Large, round clusters of pure white double flowers that nearly cover the plant. Blooms early in spring. More desirable than Snowball.....	.20	2.00	.25	2.50
Van Houte. Pure snow white, single flower, with dark eye in center, borne in globose clusters similar to Reevesii in this respect, very graceful.....	.25	3.00	.30	3.00
OTHER HARDY SHRUBS				
Bush Honeysuckle. Upright with bending canes. Blooms in February with sweet white flowers.....	.15	1.50	.20	2.00
Lilac. Quite fragrant.....	.20	2.00	.25	2.25
Pyrus Japonica. (Scarlet or Japan Quince, Devil's Fire.) A gorgeous sight of fiery red flowers very early in spring; in full bloom before leaves come out. Fine for single specimen, screen or hedge.....	.15	1.50	.20	2.00
Philadelphus. Syringa. Pure white flowers and very fragrant. Flowers similar in appearance to a single white rose, not quite so large and more waxy. Very profuse. Blooms in April.....	.15	1.50	.20	2.00

Hedging Plants

VARIETIES AND DESCRIPTIONS.	PRICES					
	F. O. B. Denison			Prepaid if in orders of not less than \$5.00		
	Each	Doz.	100	Each	Doz.	100
California Privet. One of the most popular; used for screening or hedging purposes around yards and lawns; also splendid for single specimens. Nearly evergreen.						
1 year, 1 to 2 feet.....	\$0.10	\$0.75	\$4.00	\$0.15	\$1.00	\$5.00
2 year, 2 to 3 feet.....	.20	1.50	7.00	.25	2.00	10.00
Hardy Orange. (Citrus Trifoliata.) This has proven by test here one of the most beautiful and efficient hedges known. In three years will turn stock. Does not sprout. As tap roots go straight down, does not exhaust soil any great distance away. Has proven perfectly hardy at 15 degrees below zero. In spring is full of beautiful white flowers, and full of yellow fruit in fall. It is easily transplanted. 15 to 30 inch.....	.15	1.25	7.50	.17	1.50	9.00
2 to 4 feet.....	.25	2.50	15.00	.35	3.50	20.00

Ornamental Vines

See full explanation on back of order sheet.

	Each	Per 12	Per 100
Packed and F. O. B. Denison.....	\$0.20	\$2.00	\$15.00
Packed and prepaid.....	.25	2.50	17.00

Climbing Roses. See list under Roses.

Honeysuckle, Chinese Evergreen. Foliage light green, dense, rapid grower; flowers white and buff.

Honeysuckle, Fuschia Leaved. Of the coral type, vine upright, flowers red on outside of corolla with yellow inside, perpetual bloomer, very fragrant, generally evergreen, one of the best climbers. Foliage dark green.

Honeysuckle, Halls. Flowers very fragrant, white in opening, becoming buff. Very profuse, perpetual from early spring until fall; evergreen.

Honeysuckle, Yellow Trumpet. With yellow flowers.

Trumpet Creeper. A stout, woody, handsome vine, with compound leaves and perpetual, waxy, large, tubular orange flowers in clusters; fine to ornament outhouses, tree bodies, etc., as it climbs by aerial roots.

Wistaria. American purple. Hardy; fine for arbors, porch screens, etc. Profuse in early spring.

Virginia Creeper. (Ampelopsis quinquefolia.) Five-lobed or fingered leaf; bright green in summer, turning scarlet in fall; completely covers dead trees, brick walls, fences. Not poisonous.

Perennials

PRICES

	Each	Per 12
Packed, F. O. B.....	\$.10	\$1.00
Packed and prepaid.....	.12	1.25

Iris. A fine bedding perennial, blooming early in spring, with double flag-like flowers, in various shades of blue and purple. We have an assortment of 10 of the best German varieties.

Zebra Grass. The prettiest and most

enduring of all grasses. Cross striped with thin lines of white. Makes soft plumes in fall.

Pampas Grass. A strong growing grass, producing fine white plumes for winter decorating.

Hybrid Hardy Perennial Hibiscus

By hybridizing the native species *Hibiscus Moscheutos*, *Hibiscus Militaris*, and *Hibiscus Coccineus*, we have obtained from the common Marsh Mallows a most remarkable lot of splendid varieties in numerous shades from pure white with crimson eye, thru most delicate and rich pinks from blush to dark pink, crimson of many shades, and glowing scarlet, as tho glossed with varnish. The colors all are of clear, fresh, lively shades. This group of wonderful flowers, rich enough for the garden of any king, eclipsing *Cosmos* and *Shasta Daisies* a thousand times, we have produced in a few generations of selecting and crossing. The flowers are often 8 to 12 inches in diameter and glow like suns of various colors. As soon as known these new creations will become exceedingly popular, as the plants are of the easiest culture and are perpetual bloomers thruout summer in the driest seasons. They grow 3 to 6 feet tall. The tops die down in the fall but roots live for many years, sending up many stalks to flower each season. The seeds sown early in spring will produce blooming plants the latter part of the first season.

Of all the wonders produced by hybridization, none is more remarkable or strikingly beautiful for bedding in borders or in the garden than these.

We offer SEEDS of pink, crimson and white in separate packets, or mixed, at 25 cents per packet; and ROOTS of these colors, that will bloom from May to October, at 25 cents each. Seeds free by mail at price named. In orders of \$5.00 or more will prepay the roots at 30 cents each.

One variety, the most gorgeous varnished scarlet with handsome cut leaves, we have named

Scarlet Cuspidata

Of this we have no roots to offer this season, but offer seeds at 50 cents per packet of about 100 seeds. This variety is worked into a pure strain that closely reproduces itself.

The Auto-Spray No. 1 The World's Standard Compressed Air Sprayer

Adapted for every variety of spraying where a hand sprayer can be used. Made in heavy brass or galvanized iron as desired, and has tank capacity of three gallons of solution. The pump is of heavy brass, 2 inches in diameter, and two or possibly three pumpings will empty the tank under higher and more constant pressure than any other knapsack sprayer. The brass tank will withstand chemical solutions, and is recommended, also the Auto-Pop shut-off, which is automatic in action and operates a self-cleaning wire through the nozzle.

	Net Cash		Net Cash
Auto-Spray No. 1-A, brass tank, stop-cock, \$6.75		Auto-Spray No. 1-D, galv. tank, auto-pop, \$5.40	
Auto-Spray No. 1-B, brass tank, auto-pop, 7.65		Brass 2-foot extensions.....	.45
Auto-Spray No. 1-C, galv. tank, stop-cock, 4.50			

The Auto-Spray No. 3-B. The Best Whitewash and Painting Machine and General-Purpose Sprayer ever manufactured

This is a strong, powerful hand sprayer with a capacity of 8 gals. of mixture. It is perfectly adapted to all-around use, for tall trees, shrubs and vines, as well as for applying whitewash or cold water paints. It is as simple as it is strong in construction. The reservoir is made of heavy galvanized steel, the pump being all brass. An agitator attached to the handle keeps the solution thoroughly mixed. Easily carried from place to place or mounted on a wagon. Absolutely the most popular for applying whitewash and paints. Furnished with complete equipment, which includes 8 feet of the best 3-ply discharge hose, 8 feet of iron extension, lever shut-off and vermored nozzle.

	Net Cash
Auto-Spray No. 3-B, galv. tank, with full equipment.	\$11.20
Auto-Spray No. 3-A, brass tank, with full equipment	13.60

The Auto-Spray No. 24. Barrel Sprayer for Orchard and Field Crops

For those who require a barrel sprayer of exceptional durability and high pressure, this machine is specially recommended. It may be operated all day without fatigue, and is warranted to operate four nozzles if required. All working parts and valves are fully exposed and instantly get-at-able. The plunger is fitted with outside graphite packing which can be readily adjusted, and will seldom require renewing. The air chamber is large and insures a steady, constant pressure.

	Net Cash		Net Cash
Auto-Spray No. 24, pump only.	\$12.80	Bamboo brass lined extension, with stop-cock and drip shield, length up to 10 feet	\$2.40
Mounted on Barrel	16.00	Non-Clog Atomic Nozzle, brass.....	1.00
20 feet 3 ply, 1/2-inch discharge hose.....	2.88		

Non-Clog Atomic Nozzle

This nozzle is intended for use with all barrel pumps and power sprayers. It is made of cast bronze or aluminum and is fitted with standard 1/4-inch pipe thread so that it will fit all connections of standard make. It is positively the only nozzle that will not clog, despite the claims of other manufacturers. Can be adjusted by a simple mechanism to throw every graduation of spray. Each nozzle is furnished with 4 discs, with apertures of different size, giving the nozzle capacity of one, two, three or four vermoreds, according to the disc that is used.

	Net Cash		Net Cash
Non-Clog Atomic Nozzle, brass.....	\$1.00	Non-Clog Atomic Nozzle, aluminum	\$1.20

We will furnish you a complete spray pump catalog on request, showing the most complete line of spray machinery in the United States. The above are leading styles for all common uses.

Formula for Bordeaux Mixture

Copper sulphate, 4 lbs.; quick or stone lime, 4 lbs.; water, 50 gallons; or 3 lbs. copper sulphate, 3 lbs. quick lime and 50 gallons of water; or 5 lbs. copper sulphate, 5 lbs. of lime and 50 gallons of water.

Dissolve the copper sulphate in 4 gallons hot water by suspending it in a sack near the top of the water. When dissolved pour into the tank and fill tank half or two-thirds full. Slake lime and add 10 or 15 gallons of water and pour it into tank. Fill tank and stir it vigorously. Always dilute the copper sulphate and lime as directed before pouring together, not afterward.

Ferrocyanide test. Dissolve 1 ounce of yellow prussiate of potash in a pint of water. Drop it into the mixture and if it turns brown more milk of lime should be added. Add milk of lime until the solution will **not turn brown**. For Peaches and Japan Plums use 2 lbs. of copper sulphate and more lime, for the foliage of these plants is often injured by strong Bordeaux.

FOUNDATIONS OF AMERICAN GRAPE CULTURE

By **T. V. MUNSON, Denison, Texas**

This work has taken its place as the best book on grape culture in America, as is evidenced by the many highly complimentary testimonials from men who stand high in the viticultural world, as well as botanists, vineyardists, and amateur grape growers.

The book is strongly bound in buckram, with beautiful title on cover, embossed in gold. It is printed upon fine glazed paper, giving most beautiful, clear impressions of type and halftone full page engravings, 90 in number, 252 pages in all, 7½x10 inches. The book contains 8 chapters upon the different divisions of the subject, as follows: I. Botany of American Grapes. II. Breeding of Varieties of Grapes. III. Description of Varieties. IV. Adaptation of Varieties. V. How to start a Vineyard, including Trellising, Pruning, Training, etc. VI. Protecting the Vineyard from Insects and Fungi. VII. Disposition of the Crop. VIII. The Grape for Home Adornment, Shade, Fruit, and Health.

The book securely packed will be sent by post or express prepaid to any part of the United States, Canada, Mexico, Cuba, and Porto Rico, for \$2.00. To European countries, and other countries of the Postal Union, the book will be sent by registered mail prepaid for \$2.25.

Remit by P. O. Order, registered mail, express money order, or bank draft, at our risk. Other methods at sender's risk. Address

T. V. MUNSON & SON, Publishers :: Denison, Texas

A FEW OF MANY TESTIMONIALS RECEIVED

Bracken, Comal County, Texas.

Sept. 6, 1909.

Grains of Gold In a shell of paper is "Foundations of American Grape Culture." I find it very valuable help to decide what varieties to plant in different soils.

(Signed)

Albert Andreas,

Practical Grape Grower and Wine Maker.

Manhattan, Kansas, Sept. 8, 1909.

I am absolutely delighted with the book and feel that you have made a great contribution to knowledge. The book is the only complete and satisfactory thing of its kind in existence, and is extremely interesting and valuable to plant breeders. I cannot too highly compliment you on the superb quality of the photographs, even the pubescence on the leaves comes out strongly. The seed and twig photographs are beyond criticism. Your book is certainly a classic in viticulture, and I believe that it should be a very satisfactory book for horticultural classes in Agricultural Colleges. To have accomplished this superb work is the crowning achievement of your years of service to American Grape Culture.

(Signed)

H. F. Roberts,

Professor of Botany, Kansas State Agricultural College.

Geneva, New York, Sept. 10, 1909.

I have read your grape book with great interest and pleasure and I am sure that it is a most valuable contribution to the literature of our viticulture. The plates are exceptionally well made and your printer has made a good job of his work.

(Signed)

U. P. Hedrick,

Professor of Horticulture New York Agricultural Experiment Station, and Author "Grapes of New York."

Cupertino, Calif., Sept. 12, 1909.

Your charming book, "Foundations of American Grape Culture," is invaluable to all viticulturists no matter where they

live; and it will be appreciated more and more as time passes and as it becomes known among the lovers of the grape.

(Signed)

Wm. Pfeffer,

Expert Vineyardist and Wine Maker of California.

Boston, Mass., Sept. 13, 1909.

I have received your monograph on "American Grape Culture," and wish to send you my hearty congratulations. It is the most complete presentation of the subject which has ever appeared, and should be in the hands of every one who is interested in the study and cultivation of grapes.

(Signed)

J. L. Goodale, M. D.,

Amateur Grape Grower.

Seattle, Wash., Sept. 15, 1909.

The pomological world is deeply indebted to you for this last act, that of giving it the benefit of your life-long researches and experiments with the grape in published form. This book will always remain a classic on the subject on which you have written. I have looked it over carefully and am delighted with it throughout. It will remain as one of the treasures of my library and be handed down to those who follow me.

(Signed)

H. E. Van Deman,

Ex-Pomologist, U. S. Department of Agriculture and Eminent Authority on Horticultural Matters.

Nursery, Texas, Sept. 17, 1909.

Your "Foundations of American Grape Culture" is a very valuable book, such as never before appeared in our literature. No one has hitherto so thoroughly taken hold of the subject. Every time I pick it up I become more and yet more impressed with your completely thorough way of dealing with the grape.

(Signed)

Gilbert Onderdonk,

Eminent Horticulturist of Texas and Writer Upon Grapes.