

NEW. THE VERY BEST. TRUE TO NAME.

General Descriptive Catalogue

AND

PRICE LIST.

SEASON OF 1890-91.

Nuts, Prunes, Fruits, Grapes,
ORANGES, ETC.



MAYETTE WALNUT.

BARREN HILL NURSERIES,

NEVADA CITY, CAL.

FELIX GILLET, PROPRIETOR.



1890-91.

TERMS.

Our terms are invariably cash (and we intend to stick to that rule, not having a stock large enough to warrant us in making credits for any amounts to anybody). Remittances may be made, according to the amount of orders, by Express or Postal Money Orders, Registered Letters, Bank Drafts and Express. Very small amounts (50 cents to \$1.00) can be sent in postage stamps of two and five cents.

PACKING.

We want our patrons to bear well in mind that "good packing" is the cheapest part of a bill of trees.

The very best way of packing trees is in boxes made out of light lumber.

We charge only for the cost of the box—nothing for packing. The average cost of a box 9 to 12 feet long is from \$1.00 to \$2.50, according to height and width.

Our way of baling (for small orders) is in sackcloth and pine needles, which make a very light packing. Charges for bailing moderate.

Boxes, bales and packages delivered free of charges to the railroad or express office.

After shipment, goods are at purchaser's risk. Any errors made immediately corrected.

SPECIAL NOTICE.

In filling orders, we never substitute one sort for another, when out of it, unless ordered to do so.

No trees offered for sale but our *own* mountain-grown trees, and the *imported* sorts, as specified on Catalogue and Price List.

CAUTION.

We would caution our patrons against buying from agents purporting to be ours, as we have no agents whatever throughout the State for the sale of our valuable kinds of Nut and Fruit Trees.

RARE KINDS OF FRUITS

That should have a place in all gardens—at least one or two trees of each.

EVERBEARING BLACK MULBERRY (Noir of Spain),
MEDLAR MONSTROUS,
SORBUS DOMESTICA,
AVELINE FILBERT,
CONSTANTINOPLE QUINCE,
APRIL CHERRIES,
PREPARTURIENS WALNUT,
ST. CATHERINE PRUNE,
D'ENTE PRUNE,

NUMBER OF TREES TO THE ACRE.

40 feet apart each way		27
35 " "		35
30 " "		48
24 " "		69
20 " "		106
18 " "		135
15 " "		194
12 " "		302
10 " "		436
8 " "		681
6 " "		1210
5 " "		1742
4 " "		2622
3 " "		4840

PART FIRST.

NUT-BEARING TREES.

Walnuts, Chestnuts, Almonds and Filberts.

We would call the attention of the public to the valuable kinds of Walnuts and Chestnuts, some quite rare yet and entirely new to this country, that we have imported and introduced into California and the United States the last twenty years, and of which we give herewith a well detailed list.

We will add that all our Walnut seedlings are trees of the "second generation," that is, grown from nuts borne on the original tree, or on trees grafted from the original, so enabling us to give our patrons a better guarantee as to those seedlings retaining the main characteristics of the original type; walnut varieties degenerating very fast from the seed, till at the third or fourth generation they entirely go back to the mother type or common walnut (*Juglans Regia*).

We will furthermore state that our trees are beautifully and heavily rooted, as only mountain trees are, the long and heavy tap-root of the Walnuts being accompanied with lots of lateral roots and any quantity of fibres, thus insuring the growth of all kinds, and of whatever size and age.

WALNUTS.

Our large collection of Walnuts comprises over fifteen distinct varieties of the English Walnut (*Juglans Regia*), introduced by us into this country from Europe the last twenty years and having special characteristics—some being recommended either for the large size and fine shape of the nuts, or for their surprising fertility and precocity; others for their lateness in budding, and that enables them to withstand, uninjured, late frosts, so common in the spring, that hardly one-tenth of the whole area of the State may be said to be exempt of them; and in planting walnut trees, this immunity against frost should be given the preference to any other characteristics, qualities and advantages of the kind, for the first requisite for the walnut wherever late frosts in the spring are prevalent, is to be *hardy* (see description of hardy kinds, such as Mayette, Vourey, Parisienne, Franquette and others). But the question has been often put to us, which among our fine collection of walnuts we do consider the best to plant for family use, and which the best for market. So we shall right here answer plainly these two questions.

THE BEST WALNUT FOR FAMILY USE.

As the size, shape, even color of the shell, is not precisely an object whenever a walnut tree is planted in the family garden, but rather the quality of the kernel, thinness of the shell, precocity and fertility of the tree, no variety recommends itself better for the family garden than the Præparturiens, and, we will add, also the Cluster Walnut. Surely, there are varieties more late in budding out, and that might be preferred wherever late frosts in the spring are the rule; but, on an average, the Præparturiens will do in almost all parts of California.

Præparturiens, or Fertile Walnut—(Second generation).—This new variety of the *Juglans Regia* family was introduced by us into California in the winter of 1870-71, and in our grounds in the mountains of Nevada County are the first trees of that kind that ever produced fruit in this State. The nuts of the original or first generation Præparturiens are rather small; those of the *second generation* only are of a larger size, 70% being from medium large to quite large, and 30% of a smaller size. As to the nuts of the third and fourth gener-

ations, they are from small to medium, a small percentage being of a fair size; in other words, from the third generation the Præparturiens, like all walnut varieties, goes back to the mother type or common French walnut. However, the nuts of the Præparturiens, of whatever generation, are of first quality, full-fleshed, well flavored, the meat being invested with a thin, light-yellow skin, and the shell also thin and soft.

The points of superiority which the Præparturiens possesses are many. First, it bears earlier than any other kind, bearing very often, when not transplanted, at two and three years; hence its name, Præparturiens, Fertile or Precocious—from *Parturiens*, bearing, *Præ*, before, bearing before the usual time. Second, it blossoms late enough in the spring, though not so late as Parisienne, Mayette, Chaberte, Franquette, but from two to four weeks later than the California common English, or Los Angeles walnut, thus being less likely to be injured by late frosts. Third, its pistillate and staminate blossoms are in full bloom at the same time, which is another guarantee for a regular crop every year. The irregularity of bloom of the common California walnut is one of its greatest objections and drawbacks, as its uncertainty as a bearer arises according to localities, both from this irregularity and the nipping off of its tender wood by frost in the fall. Fourth, it is very productive, and on that account was first named "Fertile" walnut. This tendency to bear large crops at an early age is, in fact, the most important characteristic of the Præparturiens. See figures 1, 2, 3.

But only "Second Generation" trees, which are grown from nuts borne on the original, as are all our second generation trees, should be planted in preference to third and fourth generation trees, the kind advertised by many as Præparturiens, and so inferior in all respects. For it is of no use denying the fact that walnuts, like all nut trees, deteriorate very fast from the seed, and from the third generation go back to the common type from which the variety first originated.

The second generation Præparturiens trees that we offer for sale are regular standard trees, growing to a good height, and have nothing whatever to do with the "Dwarf Prolific," Præparturiens so-called, said to be in full bearing at six feet.

Cluster Walnut, or Juglans Racemosa.—This remarkable kind of Walnut, also introduced into California and the United States by us, is a worthy rival of the Præparturiens, and whose planting is warmly urged in France by the leading horticulturists of that country. The *Juglans Racemosa* derives its name from the Latin word *racemosus*, meaning abundant in clus-

ters, full of clusters, which is the main characteristic of the Cluster Walnut, whose nuts grow on the tree in clusters of eight to fifteen nuts, and even twenty to twenty-eight. Otherwise, in habit, size, form, and foliage, the Cluster Walnut does not differ from the *Juglans Regia*, or English Walnut. We have in our possession, and taken by our order, a beautiful photograph representing a cluster of fifteen nuts, taken from one of the trees whose crop of nuts we had secured. The cluster of nuts is seven inches long, by three and a half wide, and looks more like a bunch of short bananas or very large grapes, than nuts, so rare is it to see nuts growing in such long, immense clusters. (See on back cover, an outline of that cluster of nuts.)

The Cluster Walnut, like the Præparturiens, reproduces itself well from the seed, provided, that the nuts be gathered from trees grafted from the original type.

When getting to bear, the nuts are first found in bunches of two or three, which number is increased every year, when finally the tree gets to bearing those astonishing clusters of nuts from twelve to fifteen, and even more.

Mr. Huard Du Plesis, in his work on the Walnut, page 9, expresses himself as follows on the *Juglans Racemosa*:

"Among the various kinds of Walnuts there are few that deserve to be so extensively planted as the Cluster Walnut; its fruit, as large as the common kind, is found in bunches of twelve to fifteen; we have counted as many as twenty-eight on one single cluster. The crops of that variety are simply astonishing; we have seen one of those trees, the only one to be found upon our place, for it is yet a rare kind, give in ordinary years as many as fifteen to twenty double decalitres of nuts (a double decalitre is a measure of five gallons); and in good years, as many as thirty."

Mr. Bertin, a well-known horticulturist of France, states that he did see on the originator's place in Belgium, one of those trees, quite young yet, which had 140 clusters of 8 to 12 nuts each, besides smaller ones.

The trees that we offer for sale have been grown from nuts borne on a "genuine" Cluster Walnut; but we do not think that more than 70 to 80% of the trees be true; that is, of having retained that particular characteristic of that type, of growing long clusters of nuts, as shown on accompanying cut on back cover.

BEST VARIETIES OF WALNUTS FOR MARKET.

The best marketable walnuts are, undoubtedly, those that are the largest, fairly shaped, thin-shelled, (not Paper-Shell, a kind that should never be planted for market), and with a fine, fat, sweet kernel. This is independent of other characteristics,

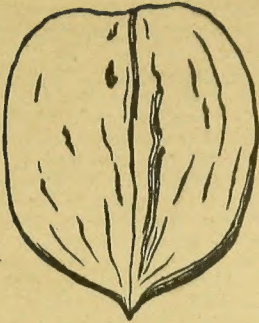


Fig. 1.

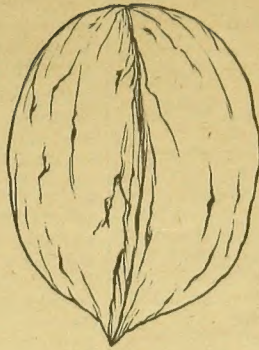


Fig. 2.

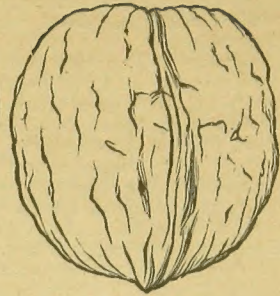


Fig. 3.

"SECOND GENERATION" PRÆPARTURIENS WALNUT.

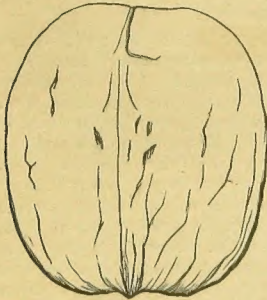


Fig. 4.
PARISIENNE.

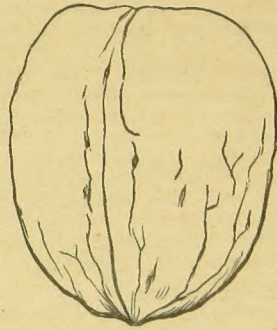


Fig. 5.
MAYETTE.

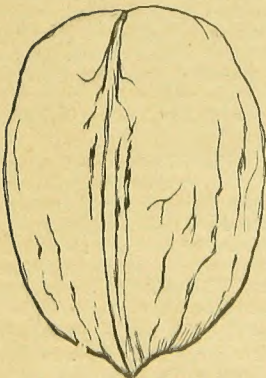


Fig. 6.
FRANQUETTE.

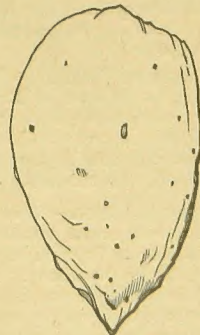


Fig. 7.
GROSSE TENDRE ALMOND.

All the Nuts on this Plate "California Grown."

such as fertility, hardness and lateness in budding out. Whenever a variety combines all the above characteristics, it might very well be called the "boss" variety to plant for market.

For size and beauty of the nuts, no varieties can surpass the Mayette, Franquette and Parisienne (see accompanying cuts, representing nuts of these three fine varieties). But size and beauty of the nuts, are not the only advantages of these three kinds over others, for they are, besides, hardy, budding out late, and seldom injured by frost in the spring. As to the kernel, it is fine, corresponding full to the size of the shell, with a sweet, nutty flavor.

The Mayette, Franquette and Parisienne are grown in large quantities in the East of France, and are exported to the north of Europe, whither they bring a pretty good price. On account of the tariff, and the high price of these nuts, none but the *trash* from Dordogne (in Western France) is exported to the United States. We shall now give a short description of those fine market varieties.

Mayette Walnut.—This is one of the finest dessert nuts grown; it is quite large and uniformly so, well shaped, with a light colored shell; the kernel is full fleshed, sweet and nutty. But what renders this remarkable kind so much more valuable is to be very late in budding out, which enables it to escape the disastrous effect of late frosts in the spring; it is also an abundant bearer. (See fig. 5.)

Parisienne Walnut.—This beautiful nut, also one of the finest for dessert and market, was originated in the southeast of France, and not in the neighborhood of Paris, as its name would imply; its beauty made it called "Parisienne," in honor of the capital of France. The nut is large, broader at the small end than the Mayette and the Franquette, and has a very pretty shape. It is as late and hardy as Mayette. (See fig. 4.)

Franquette Walnut.—Originated a century ago, in the east of France, by a man named Franquette; it is exceedingly large, of an elongated oval, and very attractive; it buds out very late in the spring and has a full-fleshed, sweet kernel. (See fig. 6.)

Vourey Walnut.—This new and valuable kind is of recent introduction, and was originated near Vourey, in the southeast of France, hence its name. It resembles in shape the Mayette, and is one of the hardest kinds introduced by us into this State.

We never had these four varieties of walnuts injured by frost in the spring, or at any time, at the altitude of our place, 2500 feet above the level of the sea.

Meylan Walnut.—A new and most beautiful variety, originated near the little vil-

lage of Meylan, in the walnut district in France. Much cultivated for exportation in the latter country, but mostly to the north of Europe.

Mesange, or Paper-Shell Walnut.—This nut has the thinnest shell of any variety known; it derives its name of Mesange from a little lark of that name, that goes to the kernel through the tender and thin shell. Very productive, and quite rich in oil. We do not, however, recommend the growing of this variety for market, on account of the thinness of the shell, which breaks off too easily in handling the nuts, or even when they drop on the ground off the tree. Like the Paper-shell almond, the nuts of the Paper-shell walnut are carried away in the woods by bluejays, birds very fond of nuts of all kinds.

Weeping Walnut.—A new and curious kind of walnut, the branches drooping down like those of a weeping-willow; very ornamental. The nut is of medium size, well shaped and of first quality. Solely propagated by grafting.

Serotina or Late Walnut.—This variety is most valuable where late frosts are common, on account of its lateness in budding out. The nut is of medium size, well shaped; the meat very sweet and highly flavored; one of the best nuts so far grown in our grounds. Very prolific. It is this variety that produces the "After Saint John" Walnut; nurserymen marking out every Serotina in nursery row that puts forth about St. John's Day, and selling such trees under the name of After Saint John Walnut. It reproduces well enough from the seed.

Chaberte Walnut.—An old and most valuable variety; late in budding out. The nut is well shaped and of fair size, the kernel of extra fine quality; very productive. The Chaberte was originated a century ago by a man named Chaberte, hence its name; it is very rich in oil, and is cultivated on a large scale in the east of France, where nut raising is one of the leading industries of the country.

Gant or Bijou Walnut.—A remarkable variety for the extraordinary size of its fruit. The shell is thin, with rather deep furrows; those of the largest size being made into ladies' companions, where to stow away gloves or handkerchief; hence the name "Gant" Walnut. The kernel, though, does not correspond to the size of the shell.

Barthere Walnut.—A singularly-shaped nut, elongated, broad at the center and tapering at both ends; the shell is harder than that of other sorts. Entirely reproduced by grafting.

Vilmorin Walnut.—A cross between the English and Eastern Black Walnut. The nut has the shape of the English Walnut,

and the shell the appearance and hardness of the Black Walnut. A very curious nut, but not desirable for market. Propagated by grafting.

Monophylla Walnut.—One of the most curious varieties of walnut, with a very ornamental foliage. Entirely propagated by grafting.

Ash-Leaved Walnut.—Very ornamental; bears a nut of fair size and good quality.

Third Generation Præparturiens.—Having grown and fruited third and fourth generation Præparturiens the last fifteen years, it enabled us to come to the conclusion that from the third generation the Præparturiens, though grown from nuts borne on genuine trees of the second generation, loses the characteristics of the original, and goes back to the mother type, or *Juglans Regia*. We cannot, therefore, advertise such trees as true Præparturiens. The nut is smaller than that of the second generation, but, like the latter, it is full-fleshed, very sweet and the flesh quite thin.

All the trees that we have scattered throughout the State, and outside of it, the last twelve years, under the name of Præparturiens, were "second generation" trees—trees grown from nuts borne on such trees are consequently nothing else but third generation Præparturiens, or common French walnuts. So is it the case with trees grown from nuts borne on trees grafted from our second generation stock. Nuts borne on the original tree or trees grafted from the original are the only nuts to produce second generation trees; and that is what makes second generation trees so scarce and so much dearer.

GRAFTED WALNUTS,

Our collection of *grafted* walnuts is the rarest and most valuable collection of that kind to be found anywhere, not excepting Europe, the trees being all grafted from the original stock. But for the present we have grafted walnuts only of the following kinds: Mayette, Franquette, Chaberte, Parisienne, Barthère, Cluster, Vourey, at \$1.50 per tree.

The difficulty in grafting the walnut is such, that we have to keep up the prices of this class of trees at such high figures; it explains also the scarcity of "grafted" walnuts. We will add that, with the exception of Mayette, we have but a very small stock of each kind, and would therefore decline orders even by the half dozen of any single kind.

AMERICAN WALNUTS.

Butternut.—This kind is indigenous to the United States, and well-known throughout the New England, Middle and Western

States. The fruit is elongated; the nut hard and rough, with prominent ridges; the kernel pleasant flavored and oily, whence the name butternut.

Pecan Nut.—This variety is found in the valley of the Mississippi and its tributaries. The tree is beautiful, with a straight and well-shaped trunk. The nut, is oblong and smooth, and the kernel sweet and highly flavored.

Texas or Mammoth Pecan.—This is, undoubtedly the largest and finest Pecan grown in any parts of the Southern States—the home of that pretty nut, the Pecan. We have nice 2-year old trees of this remarkable variety, grown from nuts procured from the valley of San Saba, Texas.

Hickory Nut—(Shell Bark).—The hickory grows tall and slender, with rough and shaggy bark. The wood is much used in making hoops, whip-stalks, axe-handles, etc.; the fruit contains a thin-shelled, richly-flavored kernel.

California Black Walnut.—This species of walnut is indigenous to California. The fruit is spherical, the nut hard but smooth, and not furrowed like the Eastern Black Walnut; the kernel is rich and oily. This walnut is of rapid growth, spreading out more than the Eastern kind, but going to bearing sooner.

Eastern Black Walnut.—Well known variety from the Eastern States.

CHESTNUTS.

MARRONS OR FRENCH CHESTNUTS (SOLELY PROPAGATED BY GRAFTING).

No nuts degenerate so fast from the seed as the chestnut; it is to say that none but "grafted" trees should be planted to grow such large and beautiful nuts for market as are the Marron chestnuts or French chestnuts, so superior to the Italian and Spanish chestnuts.

All the varieties that we describe in this catalogue have been bearing with us, some of them for sixteen years; so we are able to tell about their qualities, size and flavor of the nuts; and we do not hesitate in highly recommending such varieties as Combale, Nouzillard, Quincy, Grosse Precoce and Chalon Early, varieties that we propagate exclusively by grafting, and under their respective French name.

Marron De Lyon.—Fruit large, roundish, sweet and well flavored. Does not seem to do as well in California, as far as bearing qualities are concerned, as it does in Europe. (See Fig. 14.)

Marron Combale.—This variety is regarded in France as valuable as the Marron De Lyon, being even more productive. Here in California we find it to do admirably well; it is very productive, and bears

enormous nuts, sweet and highly flavored. We highly recommend this splendid variety of Marron, which has been fruiting with us for the last sixteen years, as one of the best to cultivate in this State. (See Fig. 13.)

Marron Merle.—Nut large, first quality; very productive.

Marron Grosse Precoce.—As its name shows, it is a very early kind, and wherever the summer is short, or not warm enough to ripen the other sorts, this kind should be planted in preference. The nut is large, very sweet, and well flavored. A precocious bearer.

Marron Nouzillard.—One of the most desirable kinds to plant; the nut is large, though not so large as that of the Lyon and Combale, but very pretty; this is a very prolific kind and also a precocious bearer. Trees in nursery rows bear nuts.

Chalon Early.—The most precocious yet of our collection; bears in nursery rows. The nut is medium large, very pretty indeed, and sweet.

Marron Quercy.—Another prolific and precocious kind; bears very heavy. The nut is large, or rather medium large, first quality. This is the kind grown in the southwest of France.

Marron Bertrand.—Precocious, early, fine, large nut. Very desirable.

Early Marron or Avant Chataigne.—This is a very early kind, like Grosse Précoce, and sure to ripen where summers are short or cold. Medium large, sweet, pretty nut.

Japan Mammoth.—**Not** very large, sometimes divided in two by inner skin, sweet and of first quality. Not so thrifty as the French Marrons. We do propagate this kind also, by grafting, our cions being taken from *bearing* trees, which is a guarantee that the burr will fill as soon as the trees be of bearing size. We would advise our customers not to plant any seedlings, because of so many of them producing burrs, with nothing in them. Better pay a little more for *grafted* trees, and have trees that will surely bear.

American Chestnut.—The fruit of this variety is a great deal smaller than that of European kinds, though the kernel is very sweet and well flavored. Propagated from the seed.

ALMONDS.

We have several fine varieties of Soft-Shell almond, introduced by us into this State from the almond district of Southern France, and which we find as hardy, if not harder, than any kind we have tried yet.

Grosse Tendre, or Improved Languedoc.—The finest and largest almond to be

found on the Pacific Coast; it has also the advantage on the Paper-Shell and well-advertised varieties in this State, of blooming later, being harder and very productive. (See Fig. 7.)

Princess, or Paper-Shell.—The kind most esteemed at dessert, and so common in the shops of confectioners. The shell is so thin that it can be crushed between the fingers; kernel fat, sweet and rich.

Hard-Shell.—The common kind with a shell as hard as that of the Black Walnut.

Provence.—Is of recent introduction. This nut, which is a kind of flat, is much sought after by confectioners; by striking the nut on the suture with a small hammer, the shell splits open in two, letting out the kernel entire.

FILBERTS.

No nut tree, we believe, is so little understood in California as this pretty little member of the great nut family, the Filbert. We have heard of filbert-growers in this State grubbing up their "bushes" because they would not bear; and the general complaint is that filbert bushes do not bear, or bear very little. That there is a misunderstanding in regard to Filbert culture is obvious, so we will give a short sketch on the Filbert, its culture and training, and how to make it bear.

Whether Filberts are planted orchard-like, or in cordons around a field or alongside a ditch, or in rows through an orchard or vineyard, or in groups, or isolated, by themselves; they should, in every instance, to bear well, be trained as a *tree* and not as a *bush*. It is as easy to train the Filbert as a standard or half-standard tree as any nut or fruit tree. It is true that the Filbert, especially when young, has a great tendency to grow sprouts from the roots all around the body of the tree; those sprouts should be unmercifully grubbed up, whenever showing up themselves; as soon as the trees are branched and gone to bearing, such sprouts cease coming up.

In the family garden, the Filbert might be made to branch at four to five feet; nothing, indeed, more pretty than a Filbert tree made to branch out at that height. But in the field or orchard, where the Filbert is solely planted for its crop of nuts, the trees should be made to branch at 3 to 3½ feet. As the best stock to plant is that grown from "layering," the stock obtained from the nursery may be, and generally is, very small; one should therefore be very careful to take off all shoots that will invariably come up from the roots so as to give all the sap to the tree proper, which, on the second or third year, as the case may be, is made to branch out at 3 to 3½ feet.

Filbert trees should not be planted closer

than 12 to 15 feet in the row; but a very important point, to make the trees bear well, is to plant the rows of Filberts very wide apart, 100 to 150 feet. We have for years advised the owners of large vineyards to combine Filbert growing with that of Grapes; now, and more than ever, since wine has become such a drug on the market, should our advice be heeded. The Filbert not being a large tree and spreading out but moderately, would not stand in the way of Grapes nearest to it; and as Filberts to do well require space, the rows should be made to stand widely apart, which again would be no detriment to the Grapes.

Of all classes of Nut and Fruit trees, none is better benefited by constant moisture than the Filbert; in fact, in certain soils and localities, irrigating should have to be resorted to, particularly early in the summer, so as to insure a crop of nuts every year. We beg the owners of Filbert "bushes" who complain that their "bushes" do not bear, to go to work at once to trim the bushes out and up, letting stand the straightest and largest shoot and sawing the others all off below the ground, and making that remaining shoot branch out at 3 to 3½ feet; and grub up afterward all sprouts that are bound to grow up all around the foot of the tree. After awhile, or as soon as the trees will have grown a good sized top and gone to bearing, will the roots cease throwing up suckers.

This method of planting and training the Filbert is very simple, and it is really wonderful what a change is brought out in the bearing qualities of the Filbert when trained and treated as described in this short sketch.

BEST VARIETIES OF FILBERTS TO PLANT.

Among the many French, English, Italian and Spanish Filberts that we have tried and grown in our grounds for the last twenty years, none have proved to be more prolific than the "Avelines." The Avelines are generally oval in shape, with a rather thin shell and kernels smooth as that of Walnuts. Whether the inner skin of the Avelines is red or white, is what constitute the Red and White Avelines. We do highly recommend the Red and White Avelines, the Du

Chilly, the largest and finest Filbert grown; the Grosse Blanche (Large White) of England, a magnificent cob nut; and Sicily. All these varieties of Filberts have been introduced by us into this country from Europe, and all our trees are grown from "layering," being therefore "true." The Filbert degenerates fast from the seed, and we think it more safe, though it is a very slow way of propagating, to grow the Filbert from layering; this, too, explains the comparatively high price of our trees.

Red Aveline.—Fruit large, ovate; flavor sweet, pleasant and nutty; shell thin; kernel smooth, and from the fact that it is invested with a very thin skin of a beautiful bark wine color, hence, its name of Red Aveline. (See fig. 22.)

White Aveline.—In every respect the same as the above, with the exception of the kernel being invested with a thin white skin. (See fig. 22.)

Grosse of Piedmont.—Fruit large and round; quite productive. Very much like the sort kept in stores, and imported from Italy. (See fig. 23.)

Sicily.—Fruit large, round, sweet and nutty, smooth kernel.

Large White of England.—Very large, long, white sort, from the filbert district of England; largely cultivated for market.

Kentish Cob.—A valuable English sort; large, long, beautiful nut.

Purple-leaved.—A very pretty, ornamental variety, the leaves being of a dark purplish hue, looks beautiful grown as a standard tree.

Du Chilly.—An entirely new variety from France, and the largest filbert we have ever fruited in California. The nut is of an elongated oval, very broad, over an inch in length and three-fourths of an inch broad. The nuts seem to be uniformly large, and the bushes quite prolific. (See fig. 21.)

All the varieties we offer in the above list are guaranteed to be "true," they being propagated from layering. We have also a few grafted trees of Du Chilly, English Cob, and Bysance, a kind with the bark like that of Cork Oak.



Fig. 23—Piedmont.

PART SECOND.

PRUNES.

It may be useless on our part to point out the importance of the Prune interest in California, and to demonstrate through figures, statistics and the like, of what vast import is to our State this infant industry, to which development such a large area of our great State is so well adapted.

So far, in California, a variety of the Prune D'Ente or D'Agen, called here, on account of its small size, "Petite Prune D'Agen," has been almost exclusively cultivated. This Petite Prune, which is exceedingly sweet and well flavored, makes an excellent prune if properly dried or cured; but some objections are made concerning its small size and, in some cases, light color, when compared to the much larger and darker product of the French. These two defects, whatever be the general qualities of that prune, are serious ones; and it was the main reason why we did advise the planting and testing of the best known sorts cultivated in the renowned prune districts of Europe. We have ourselves, for the last five or six years, investigated in the most thorough manner this prune question, imported from the very prune districts of France the best known types of that famous prune, going there under the name of D'Ente or Robe De Sergent; and found out that our Petite Prune is a true type of the D'Ente, its botanical characters being identical, and the fruit as richly flavored and sweet as that of its French ancestor. We furthermore ascertained that there was no such thing as a "Grosse" or "Petite" prune D'Ente or D'Agen, and that such names had been used, and wrongly so, in this State; and, finally succeeded in narrowing down this prune question to a simple question of "size," the fruit of the D'Ente in France attaining a much larger size than that of the California D'Ente, or Petite Prune. But the last three years' experience has demonstrated to us beyond a doubt that we are able to grow in California as large and fine prunes as are grown in the valley of the Lot, the home of the French Prune, in France, if planting the same sorts and taking care of them and pruning them in the same manner. Undoubtedly the soil and climate have much to do regarding the size and quality of Prunes, and it cannot be reasonably expected that in certain sections of our State, as sweet and large prunes can be grown as in other sections more favorably adapted to that class of fruit. We exhibited at the meeting of the State Horticultural Society at San Francisco, on the 31st of August, 1888, the largest D'Ente or French prunes, and also St. Catherine prunes, grown on our imported stock, that were ever grown in this State, some D'Ente prunes weighing as much as $1\frac{3}{4}$ ounces. Pruning, we found out, has much to do with the size of the French or D'Ente prune; not so with that other renowned prune, the St. Catherine.

The D'Ente trees that we offer are of two kinds: grafted trees, and trees "true from the root." For grafting purposes we use the Myrobolan stock—not that we think that it is the best stock for that prune, but it is presently the stock *a la mode*. Everybody wants it, and we have to please our patrons. We believe the Myrobolan to be well adapted to the soil of our mountains and in localities much exposed to winds, but we have doubts as its being as well adapted to the soil of our valleys.

Our other stock, or D'Ente "true from the root," is neither budded nor a seedling. It is propagated in this way: Sprouts growing at the foot of old and large trees, themselves true to the root, are taken off and planted close together in a propagating bed to root them well, and the ensuing spring planted in nursery rows, where they are trained like other trees.

In the snow horticultural belt of our mountains—that portion of our mountains where it snows in winter, but which is also adapted to the growth of fruit trees, and extending from 1,200 to 3,000 feet—the great impediment to the successful growth of stone fruits is the "Gum"—that mysterious disease peculiar to stone fruit trees and so severe, in that belt, on budded or grafted stock. It is there, more particularly, that this type "true from the root," a splendid gum resistant stock, should be planted in preference to grafted stock; for, thanks to that stock, prune-growing might become possible and profitable in the very midst of our mountains, and it is a fact that mountain-grown prunes are exceedingly sweet and highly flavored. Still, as the type "true from the root" is not inferior to the grafted type of the D'Ente propagated in California

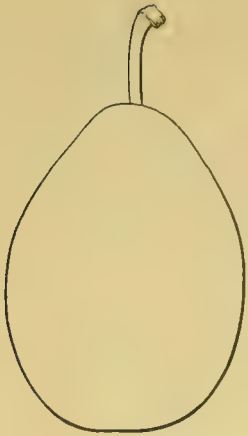


Fig. 15.
LOT D'ENTE.

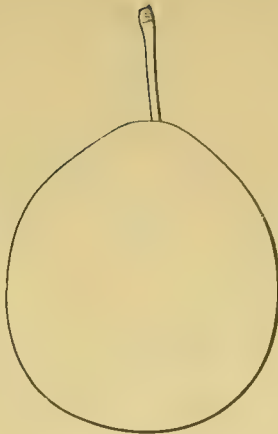


Fig. 16.
ST. CATHERINE.

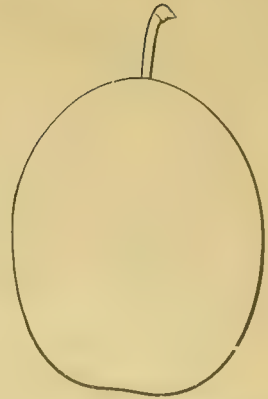


Fig. 17.
PUYMIROL D'ENTE.

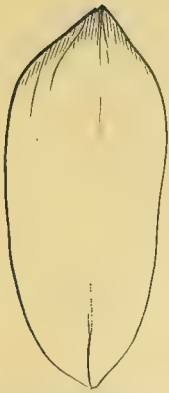


Fig. 18.
MAMMOTH PECAN.

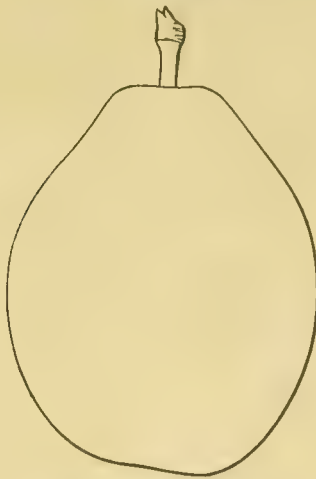


Fig. 19.
MONT BARBAT D'ENTE.

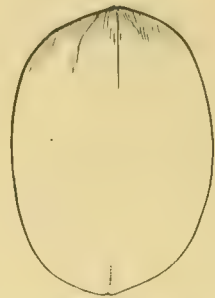


Fig. 20.
MAMMOTH PECAN.



Fig. 21.
DU CHILLY.

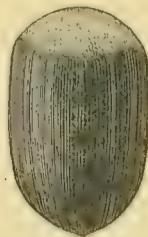


Fig. 22.
AVELINE.

under the name of French or Petite Prune, and its system of roots might be better adapted to certain soils than the Myrobolan, on which stock that prune is grafted, it might just as well be planted elsewhere than in the snow belt of our mountains.

We found out in the wet winter of 1889-90, through which so many prune trees throughout the State perished, that that D'Ente stock "true from root" withstood splendidly the deadly effects of the extra moisture brought down to the roots by the incessant rains of that winter.

The advantage of grafted trees is that when a prune is found to be of exceptionally large size, or to be in some other ways superior to the common kind, all these characteristics are surely retained by grafting, and may be propagated on any kind of stock. Wherever prune trees grafted on the root do well, and are not subject to the gum, they may be planted even in preference to trees "true from the root;" but in the snow belt of our mountains no other stock than "true from the root" should be planted.

We will now give a description of the varieties of prunes imported, tested and propagated by us, these last eight years, and of which we have a few trees ready for market.

Prune D'Ente, or D'Agen, or Robe De Sergent.—This is the kind that produces the famous French Prune, shipped all over the world from Bordeaux, France, with the United States of America" for its best and most extensive market; and it is the very variety cultivated in the great prune district of the Lot, with Agen for an entrepot.

The D'Ente is of medium to large size, in some instances, quite large. The fruit is generally pear-shaped or pyriform, broad at the center and tapering towards the stem. The suture is slight, the skin thin, covered with heavy bloom; violet red. The pulp is yellow, sweet, but little flavored; juicy, though not to excess. It ripens from the latter part of August to the beginning of September. The tree is vigorous, very productive and a constant bearer. The best types of that prune are found in the valley of the Lot, in France, where that celebrated prune originated.

Mont Barbat D'Ente.—We secured this type from the orchard of that name, which means Barbat Hill, a type that obtained thirty-two first premiums for the beauty and size of its prunes, at the District Fairs of the Lot, in France. This variety is admirably adapted to be cured as a dessert prune, to be eaten out of hand, it being of a very large size and drying fine. The fruit is pyriform and quite broad through the center, and, if cured properly, will make a large, pulpy, soft, delicious prune. (See Fig. 19.)

Lot D'Ente.—The type the most propagated in the great prune District of the Lot, in France. The fruit is not so broad as that of the Mont Barbat, but more oval in shape. (See the above description of Prune D'Ente.) This is the type which, propagated "true from the root," and not by grafting, proves such a good "gum-resistant" stock, and the only one we would advise fruit growers living in the snow-belt of the mountains to plant, as being better able to withstand the attacks of the gum than budded trees.

California D'Ente, or Petite Prune, or French Prune.—This good and pretty type of the Prune D'Ente was introduced from France into California in the year 1857, by Mr. Pierre Pellier, of San Jose, and has since been propagated all over the State, under the name of Petite or French Prune. The name of Petite (small) was given to it so as to distinguish it from a larger type, the Hungarian or Pond's Seedling, thought at the time to belong to the same family, and which went and is going yet on some nurserymen's catalogue under the wrong name of "Grosse" Prune D'Agen. This type of the D'Ente is excellent for drying; the fruit is from small to medium, more or less pyriform, according to localities; reddish-purple, violet-red in our mountains; very sweet, and juicy enough.

That name of French or Petite Prune should be entirely dropped off by nurserymen, prune growers and packers, and its real name, California D'Ente, substituted in its place. The Prune D'Ente goes all over the world under no other name—not a box, canister or glass jar leaving the port of Bordeaux, which ships away millions of them, but under that name. "French" Prune is no name at all, for the Saint Catherine, a fair rival of the D'Ente and yellow when fresh, is as much French as the D'Ente and as old, too. Prune D'Agen, that the city of Agen has tried pretty bad to have substituted to the true name of that prune (D'Ente), has been rejected by the shippers of that prune in France. So let us, if we are to meet on the same markets, home or abroad, the French article, give to our prune its true name, "California D'Ente."

Loire D'Ente.—The type commonly kept and propagated in the valley of that name, in the northwest of France, and which, for that reason, we have called "Loire" D'Ente; it is certainly a false type of the D'Ente proper, as is found in the valley of the Lot; its botanical characters, wood, buds, leaves and also fruit, vary considerably from those of the true D'Ente. It is a very prolific kind; the

fruit is oblong, with a well-defined suture, and certainly not pyriform; much darker in color, fresh, than the Lot or California D'Ente; it ripens a week or two before the two latter ones; it dries well, but has not the sweet, and rich flavor of the true type.

This is the type that some nurserymen in California have imported from the nurseries of the Loire Valley, thinking that it was a pure type of the D'Ente, and which they are advertising under the name of Robe De Sergent, or *true Prune D'Agen*, which it is not.

Puymirol D'Ente.—This is another type of the D'Ente, but differing much in its botanical characters from the D'Ente proper; it originated at Puymirol, in the southwest of France. The fruit is uniformly large and of a fine shape, like shown in Fig. 17. It is somewhat more early than the D'Ente, very sweet, and dries well; it makes a first quality prune. The tree is productive, the fruit growing around the limbs much like the Greengages and St. Catherine, close together.

Saint Catherine.—An old variety, and one of the most celebrated kinds. Extensively cultivated in the valley of the Loire (France), where D'Ente gives poor results. Besides making a superior prune, it is also much esteemed for preserving, and is excellent for dessert. The fruit is of medium size, obovate or roundish oval, with a rather well marked suture on one side; skin just thick enough to allow the fruit to dry splendidly; of a golden pale yellow; overspread with a thin bloom, and sometimes becoming rose violet on the sunny side. The flesh is yellow, firm and juicy, adhering but little to the stone; (here in California we find it a perfect free-stone), the flavor is very rich, perfumed; one of the best prunes to eat fresh. It ripens, according to localities, from the later part of August to the middle of September. A vigorous grower and constant bearer; propagated "true from the root."

The fruit *fresh* stands shipping well; dried it retains the most of its bulk, and turns very dark.

In size the St. Catherine compares well with the French or D'Ente prune? (See Fig. 16).

Italian Questche.—Medium to large; dark purple; cures well.

German Questche.—Fruit long, oval purple; separates from the stone; cures well.

That New and Valuable Prune.

(The " " D'Ente.)

We have for the last two years mentioned in our Catalogues this new and large-fruited variety of the French prune not yet put to market, and which we secured five years ago from the Prune District in France.

This remarkable prune, that we have fruited for the last three years upon our place, is a parent of the D'Ente, or French prune, and was discovered ten years ago in an old abandoned monastery near Clairac, in the valley of the Lot, in France. It is undoubtedly the largest and finest dessert variety of that famous prune, the D'Ente, or French prune. The fruit grows uniformly large, is more oval in shape than the D'Ente proper, and exactly of the same color as the French prune, that is, bright red to violet red; it dries splendidly, and is equal to the very best prunes of the French for sweetness, flavor, size and beauty; it dries, too, very dark.

Before putting this fine prune to market, we have endeavored to find out everything about it; that the fruit is uniformly large and beautiful, curing nicely, there is no question about it, and the appearances are that it is a good bearer.

For the present, however, and for obvious reasons, we will keep to ourselves the name of that remarkable prune, till we are ready to introduce it to market; so for this reason we shall decline any orders for trees or cions.



Almond Blossom.

PART THIRD.

FRUIT TREES.

CHERRIES.

We wish to call special attention to those most valuable kinds of Cherries introduced by us into California, those *April* kinds, the earliest ones to be found in the State, viz: Early Tarascon, April Guigne, Guigne, Marbrée, and Early Lamaurie. Near Vacaville, in Solano county, cherries were picked on our Guigne Marbrée between the 25th and 28th of March. The same kind, at this altitude (2,600 feet), is ripe to pick about the 10th of May.

Early Tarascon.—One of the earliest and most prolific cherries, growing in immense clusters. Fruit medium large, roundish, inclining to oval; skin dark red, almost black at maturity; flesh purplish red, sweet and rich flavor; very small stone. First week in April.

Guigne Marbrée.—As early as Tarascon; also very productive. Fruit medium large, roundish oval; skin dark red; flesh purplish red, tender, juicy, delicate flavor. Stones quite small.

April Guigne.—Medium large round, dark red, very early. (Of recent introduction.)

Early Lamaurie.—A new and very early kind, much prized for its precocity and beauty. April. (Of recent introduction.)

Bigarreau Grosse de Mezel.—Fruit very large, oblong, heart-shaped; skin dark red, very glossy, nice flavor. June.

Glossy Black.—Hardy and very productive; medium large. June.

Queen Hortense.—July.

Montmorency.—July.

Napoleon Bigarreau.—July.

Early Purple Guigne.—May.

Yellow of Crimea.—Late.

Violet Bigarreau.—New.

Black Tartarian.—Medium.

Royal Hative, or Mayduke.—One of the most popular sorts; fruit roundish, growing in clusters; flesh reddish, tender and melting. A constant and heavy bearer. May.

PLUMS.

Common Green Gage.—Fruit medium, round; greenish yellow; very juicy. August.

Bayay Green Gage.—Large, round, greenish yellow; excellent flavor. Late.

Diaphane Green Gage.—Very light greenish color, almost transparent; delicious. Middle of August.

Duane's Purple.—Very large, egg-shaped, reddish purple, sweet. Very early.

Coe's Golden Drop.—Very large, oval, yellow, nicely flavored. September.

Monsieur Rouge.—An old, esteemed variety. Fruit large, perfectly round, dark red; juicy, and nicely flavored; a perfect freestone. August.

Royale de Tours.—Large, purple; juicy, sweet, rich. Very early.

Damas de Tours.—Medium, dark blue; productive; quite early. July.

Jaune Hative, or Early Yellow.—The earliest plum, not even excepting the Cherry plum. Medium, oval; skin amber-yellow; of nice and pleasant flavor. July.

Cherry Plum, or Red Myrobolan.—Round, medium, light red; juicy, but little flavored. July.

Pond's Seedling.—The largest plum known; egg-shaped, light purple, juicy; little flavored. September.

Petite Mirabelle.—A small but delicious plum. Very juicy, rich flavor.

Blue Damson.—Small, obovate, sweet, little flavored. Good for preserving.

Monsieur Jaune.—Round, medium large; yellow, juicy; nicely flavored. August.

Violet Perdignon.—Fruit medium large, skin deep purple, covered with a deep azure bloom. Very late; hanging well on the tree.

Double Robe.—Fruit very large, red-violet; very juicy, sweet and highly flavored. One of the best dessert plums.

Red Perdignon.—Fruit large, round, bright red, juicy, well flavored; as fine as Double Robe. Early.



Fig. 8.
CHABERTE.

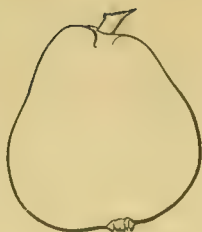


Fig. 9.
SORBUS.

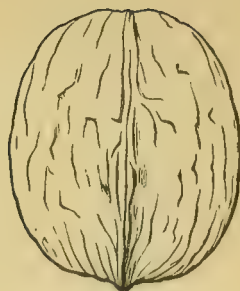


Fig. 10.
CLUSTER.



Fig. 11.
EVER-BEARING BLACK MULBERRY.
(Noir of Spain.)

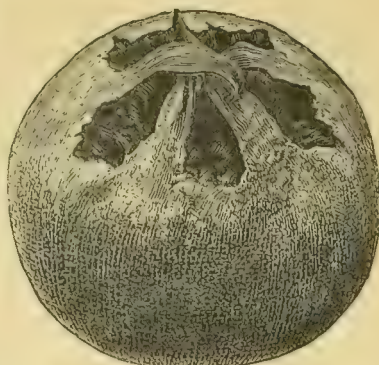


Fig. 12.
MEDLAR.

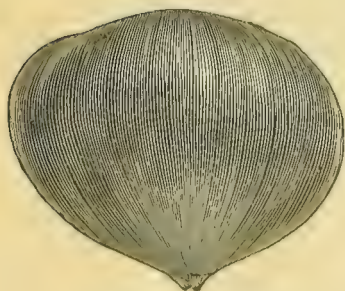


Fig. 13.
MARRON COMBALE CHESTNUT.
[California Grown.]

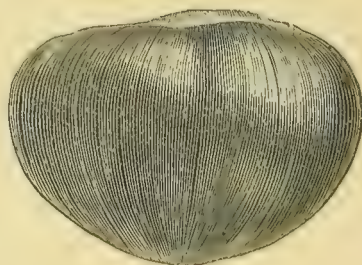


Fig. 14.
MARRON DE LYON.
[California Grown.]

APRICOTS.

Boulbon.—One of the best for shipping; new and valuable variety. Very large, with a cheek dotted with carmine.

Peach of Nancy.—One of the best.

Esperen Early.—The earliest apricot; medium large, juicy and well flavored.

Musk Early.—A new variety obtained from the south of France. It is claimed to be as early as Esperen, and to have a rich, musky flavor. (Didn't bear with us yet.)

Mexico.—Medium large; very sweet, very juicy, delicious flavor. One of the very best.

PEACHES (FREESTONES).

Amsden, Alexander, Briggs Red May, St. Ascydes, Hale's Early, Grosse Mignonne, Early Crawford, Belle of Doué, Nivette, Late Chatenay, Piquet's Late, Red Magdalen, etc.

CLINGSTONES.

Royal George, Day's White, 20-ounce Cling (orange).

NECTARINES.

New White.—Orange, violet or purple.

PEARS.

Duchesse d'Angouleme.—October.

Sugar Pear.—August.

Bartlett.—August to September.

Summer Dojenne.—July.

Beurre Clairgeau.—November.

Winter Nellis.—January.

Beurre Easter.—Late.

Passe-Grassanne.—Very large; one of the finest winter kinds. February to April.

Bergamotte-Esperen.—Medium large; highly flavored; keeps till April.

Blanquette.—The earliest pear; small, grows in big clusters.

Assumption.—Immense pear, earlier than Bartlett; fine, juicy, highly flavored pear. Only a few trees this season at 50 cents each.

APPLES.

Spitzenberg, Newtown Pippin, Winesap, Swaar, Rhode Island Greening, White Pearmain, Red Astrachan, Yellow Bellflower, Stump, Golden Reinette, Red Calville, White Calville, Winter Rambour.

Red Calville.—A magnificent, bright red apple, large and highly flavored. Early winter.

Winter Rambour.—One of the best keepers; medium large, flat, with a pretty carmine cheek.

FIGS.

San Jose Black.

White Magdalen.—The earliest.

Jaune Longue.—Yellow.

Noirmoutier.—Yellowish red.

Pagaudiere.—Yellowish red.

Buissonne, Franche Paillarde, Versailles Napolitaine.

White Adriatic.—Splendid for drying.

MULBERRIES.

Noir of Spain, or Ever-Bearing Black Mulberry.—Fruit very large, sweet; most delicious flavor; very juicy. This variety, introduced by us into California, is acknowledged as being the very best of the Black Mulberry family. Its growth is slow, but it grows and thrives in any kind of soil and at any exposure. The Noir of Spain blossoms out so late in the spring that it is never injured by frosts. From the time the berries commence to ripen (July), it keeps on bearing until October. (See Fig. 11.)

QUINCES.

Constantinople.—The largest quince known; bright golden yellow; very productive. The boss quince.

Portugal.—Very large; much esteemed. Very productive.

MEDLARS.

Medlar monstrous.—The largest of Medlars; very productive. When picked from the tree, the fruit is very harsh and astringent, like the persimmon and sorbus, but through the winter it gets mellow, and is then really palatable. Ripens in January.

The Medlar, or *Mespilus Germanica*, is a very pretty tree—fine foliage and large blossoms, the latter coming out so late that they are never nipped by frost. The Medlar is a precocious, prolific and regular bearer. Every garden should have a Medlar tree or two. (See Fig. 12.)

SORBUS.

Sorbus Domestica.—A native of Europe, growing to a height of thirty to forty feet. The wood of the sorbus is very hard and finely grained, and is much used by engravers and cabinet makers. Its beautiful umbels of white flowers are succeeded by most pretty little fruit, having the shape of small pears with a red cheek. Like the Medlar, the fruit has to get mellow before it is fit to eat. The sorbus is as much an ornamental as a fruit tree, and is well recommended for both. (See Fig. 9.)

ORNAMENTAL TREES.

Cornus Mascula.—A very showy tree, with innumerable umbels of rather bright yellow flowers, which bloom in February. A very hardy tree, never being injured by frost; fruit amber yellow, of the size of a small olive, but more slender. Another variety is "red fruited."

Holland Linden.—Large, light green leaves. Rapid grower.

Hungarian, or Silvered Linden.—Large, thick leaves, dark green, silvery underneath; makes a splendid shade tree.

Horse Chestnut.—A very pretty shade tree.

Canada Poplar.—An erect and rapid grower, very ornamental.

Long-leaved Elm.—The finest kind; grafted on the root.

CALIFORNIA LILIES.

"White" and "Tiger" Lilies, 50 cents each; 75 cents per mail.

Pink roots, with description of the flower, 50 cents per root. (Too heavy to be shipped by mail.

SELECT ROSES.

We are able to present to our customers this season, the very finest select roses, budded on *Manetti stock*, at 2 to 3½ feet from the ground, and of the following varieties:

La France.—A magnificent remontant rose; the color is of a lovely rose, with silvery lustre. A constant bloomer, and very sweet scented. The first crop of flowers in the spring, bears roses from 5 to 6 inches in diameter. Extra fine.

Coquette Des Blanches. (Queen of the White.)—Medium size, very double, sweet scented; a constant bearer. White, some with a light purplish tint. Very pretty.

Baronne Prevost.—Flowers flat, large, dark rose, very fragrant. Extra fine. Remontant.

Duchesse De Nemours.—Medium, large, brilliant, dazzling red; splendid. Remontant.

Comtesse De Morny.—Bright rose, very large; from 4 to 5 inches. Remontant.

Richard Cœur De Lion.—Large, flat, brilliant deep rose. Remontant.

Coquette De Lyon.—Tea rose, canary bird yellow; beautiful. A constant bearer.

Belle Lyonnaise.—Tea rose, copper yellow. Elegant; remontant.

Gloire des Mousseuses.—A magnificent moss rose.

Queen of Perpetuals.—Blooms the whole year around. White, with light rose tint. Very pretty.

Gloire de Margottin.—A brilliant light red hybrid; a vigorous grower. New and fine rose.

CLIMBERS.

Belle of Baltimore.—Growing in large clusters; small to medium; white and rose-tinted.

Seven Sisters.—Very pretty and rapid climber. Grows in clusters of six to eight—en little roses of all shades. Most charming.

ROSES GROWN FROM CUTTINGS.

La Neige.—Pure white.

Souvenir of the Queen of England.—Very large, bright rose. Remontant.

Also *Comtesse De Morny*, *Duchesse De Nemours*, *Richard Cœur De Lion*, *Hermosa*, *Moss Rose*.



Sorbus Domestica.

PART FOURTH.

GRAPES.

TABLE, RAISIN AND WINE VARIETIES.

No Phylloxera in our Mountains.

We offer to the public rooted vines and cuttings of the most complete and magnificent collection of foreign grapes to be found in California and the United States, a good many of those varieties having been procured, at great expense, from abroad.

241 varieties (table, raisin and wine varieties); and every winter we are adding many more to our already large collection. The very earliest varieties to be found anywhere, as much as 25 days earlier than Sweet Water!

We have this season *rooted vines* of only 130 varieties, but cuttings of the others.

We are adding, every season, new varieties to our already vast collection; in this way have we found which are the varieties best suited to our soil and climate, and also the *earliest* kinds and the most valuable for market. Our collection of Muscats is unique, and comprises grapes of all colors, viz: black, blue, maroon, red, rose, white, gray, green and yellow. Our early varieties—the earliest ones to be found in the State—ripen as much as 25 days before “Sweet Water.”

Our space does not permit to give a full description of each variety, many of which, however, are extra fine ones.

Chasselas Bulhery.—A splendid white grape, from two to three weeks more early than Sweet Water. Bunches large, well set; berries medium large, round, white, transparent, finely flavored. Excellent for shipping.

Chasselas Dupont.—Bunches large, well set; berries medium to large, round, perfectly transparent, juicy, sweet, splendid flavor. Very productive. White. One of the very best for table use and shipping, on account of its beauty, quality and productiveness.

Chasselas De Fontainebleau or Thomery.—Bunches medium; berries medium, well set, round, sweet, well flavored; skin thin. Early.

Chasselas De Pondichery.—Bunches large, well set; berries very large, spherical, white, peculiar and nice flavor; skin thick. Late.

Chasselas Rose.—Bunches medium, well set; berries medium, sweet; skin light pink. Very early.

Chasselas Royal Red.—A beautiful variety. Bunches large, well set, berries large, round, juicy, highly flavored; deep red, turning almost to black at full maturity. Very productive. Medium.

Chasselas Violet.—Bunches long, rather loosely set; berries large, elongated oval, very sweet; rich flavor. Violet color, with heavy bloom. A most beautiful and delicious grape. Very early.

Calabre Blanc.—A magnificent shipping grape. Bunches medium large; berries medium large, well flavored, skin thick, amber white. Stems tough. Medium late.

Caserno Noir.—Bunches large; berries large, oval, juicy, very sweet, well flavored; jet black. Early. A splendid variety.

Fintindo.—Bunches very large berries large as Damson plums, flesh firm; black, Very fine. Medium.

Blauer Portuguiser.—Small bunches; berries small, juicy, sweet, black; *extra early*.

Boudales.—Magnificent variety. Bunches large, well set; berries large, oval, black, sweet, fine flavor. First quality.

Celestino Noir.—Beautiful black grape. Bunches well set; berries large, oval, sweet. Medium.

Gros Makara (Algeria).—A superb grape. Bunches very large, well set, berries very large, round, inclining to oval; sweet, well flavored. Black. Heavy bearer. Medium.

Gros Sapat.—Bunches large, well set; berries large, oval, sweet, delicious flavor; black, with heavy bloom. Very early. A beautiful variety.

Gros Damas.—Bunches large, well set; berries large, roundish-oval, juicy, highly flavored; jet black. Medium. Very fine.

Gros Guillaume.—Bunches large, well set; berries large, sweet, highly flavored; black. Medium. Fine variety.

Gros Gromier.—Bunches very large, thickly set; berries medium, sweet; pink colored; enormously productive. Medium.

General De La Marmorata.—Bunches large, well set; berries large, roundish-oval, transparent white; sweet and splendidly flavored. Medium. Very handsome variety.

Ischia, or Genoa Early.—Bunches small to medium; berries medium, sweet; jet black. Very early; over four weeks more early than Sweet Water. The first black grape to ripen with Black Magdalen.

Malingre Early.—Bunches medium; berries medium, oval, juicy, sweet, well-flavored; white. Very early. Two weeks more early than Sweet Water.

Minestra.—Bunches large, well set; berries large, sweet, well flavored; black. Very fine. Medium.

Magdeleine Noire.—Bunches medium, thickly set; berries small, juicy; black. The earliest black grape with Ischia, ripe three weeks before Sweet Water.

Magdeleine Blanche.—Bunches medium large, well set; berries roundish oval; medium, sweet, juicy, well flavored; very productive; white. Very early; one of the earliest white grapes.

Malvoisie Blanc.—Bunches large, well set; berries medium, very sweet, well flavored; skin thick; white. Enormously productive. Late.

Nun's Teat (Mammelle De Religieuse.) Bunches very large; berries large, round inclining to oval, firm and white. Medium.

Muscato Blanco.—Berries round, inclining to oval, white with pink tint at full maturity; earlier than Muscat of Alexandria.

Mission, or Los Angeles.—Bunches large, loosely set; berries medium, very sweet; enormously productive. Late.

Œil Noir (Black Eye).—Bunches large, well set; berries olive-shaped, large, very sweet, juicy; highly flavored. Early. A splendid variety.

Pearl of Anvers.—Bunches medium, well set; berries medium large, sweet, juicy, well flavored; transparent white. Excellent. One of the earliest, ripens three weeks before Sweet Water.

Poulsard Noir.—Bunches large, well set; berries large, roundish-oval, sweet, juicy; highly flavored; jet black. Very fine. Medium early.

Ramonia of Transylvania.—Bunches heavy and well set; berries very large, round, as large as Damson plums; sweet, well flavored; dark blue, with heavy bloom. Medium. A most magnificent grape.

Shiras.—Bunches long; berries large, olive-shaped, sweet and highly flavored; dark blue, with heavy bloom. Very early.

Sabalskankoi (Bulgaria).—Bunches long and well set; berries large, an inch long, cylindrical; nice pink color; as good for shipping as Tokay. Medium late.

Seedless Black Corinth.—Dried, it is known under the name of "Zante Currants."

Seedless Rose Corinth.

Seedless White Corinth.—Heavy bearer.

Seedless Sultana.—Bunches large, shouldered; berries small; seedless, sweet. Splendid for drying.

Tokas.—Magnificent blue grape; bunches large; berries very large, round, dark blue, fine flavor. Medium.

Tokay (Flame Colored).—Bunches very large, well set; berries very large, olive shaped, firm, pink colored. Very showy and an excellent grape for shipping.

Ulliade.—Bunches very large; berries quite large, oval, sweet, well flavored; black; very productive. Medium. One of our finest varieties.

Black Hamburg.—Large and black.

Sucre De Marseilles.—Round, light red; muscat flavored.

Kish Misk Ali (from Persia).—Round, very large, black.

MUSCATS.

Our collection of Muscats, the finest one to be found anywhere, comprises the most delicate kinds, and grapes of all colors, viz: Black, blue, red, rose, gray, maroon, white, yellow, green.

Muscat of Alexandria.—Bunches large; berries large, oval, firm, well flavored. Late. One of the best for drying.

Muscat Bifere.—Round, white.

Muscat Cailaba.—Black; early.

Muscat Eugenie.—White; rich.

Muscat Gris.—Whitish gray.

Orange-Flowered Muscat.—Most delicate, rich flavor. Early.

Muscat De Saumur.—Early.

Blue Muscat.—Bunches small to medium; berries medium, juicy, sweet; nice dark blue. One of the earliest grapes; ripens three weeks before Sweet Water.

Red Muscat of Madeira.—Bunches medium; berries medium large; nice dark pink color; nicely flavored. Medium.

Muscat De Frontignan.—Bunches cylindrical, medium; berries set close, like corn; very juicy; highly flavored; one of the earliest grapes.

Muscat Marron.—Chestnut color.

Muscat Lazarelle.—Berries round, medium, white, firm, sweet; highly flavored. Delicious. Medium.

Muscat Sarbelle.—Very large, round, firm, nicely flavored. Medium.

Muscat Romain.—Long bunches, thickly set; berries round. Medium.

Muscat Caminada.—Pretty much like "Muscat of Alexandria," but berries thicker set.

WINE VARIETIES.

We would call the attention of grape-growers and viticulturists to our fine collection of wine varieties. Many of these varieties have been introduced by us into this State the last seventeen years and thoroughly tested; we cannot but warmly recommend every one in the list.

Aramon.—Black; heavy bearer.

Alcantino De Florence.—Black; early.

Aunis.—Black; heavy bearer.

Aramon-Bouschet.—Black.

Alicante-Bouschet.—Black.

Carbenet, or Carbenet of Medoc.—Black; early. Very fine bouquet.

Carbenet-Sauvignon.—Black.

Chauche Noir.—Black.

Cot-de-Tourraine.—Black; early.

Cot-a-Queue Verte.—Black; early.

Charboneau.—Black; heavy bearer.

Carignan.—Black.

Delhys Noire.—Black; productive.

Etraire - De - L'adui.—Bunches very large, shouldered; berries medium, round inclining to oval, juicy, deep black; very heavy bearer. Medium early. Said to be a resistant stock. Very vigorous.

Grenache.—Black; heavy bearer.

Gamay.—(Petit). Heavy bearer.

Gamay Malin.—Black; early.

Gros Rouge.—Deep red; early.

Jurason Noir.—Black.

Mondeuse De Savoie.—Deep blue.

Mataro.—Black; heavy bearer.

Malbeck.—Black; heavy bearer.

Merlot.—Black; early.

Meunier.—Black.

Morastel-Bouschet.—Deep black.

Pineau of Burgundy.—Black; early.

Pineau Blanc.—White.

Pineau Gris.—Grayish white.

Petit Bouschet.—A cross between Teinturier and Alicante. Bunches medium; berries medium, very dark-juiced; good bearer; very early.

Petite Sirah.—Black; early.

Riesling.—White.

Sauvignon Jaune.—Bunches medium; berries medium large, well set, transparent, yellowish-white. Early. Produces in California a superior white wine.

Semillon Blanc.—White.

Teinturier.—Bunches full and close; berries small, round, full of very dark juice. Excellent for coloring light wines. Very early.

Zinfandel.—Black.

AMERICAN VARIETIES.

Catawba.—Vigorous grower; very productive. Late.

Champion.—Bunches small; berries medium; deep black; highly flavored. Very early.



Blossom of the Medlar.

PART FIFTH.

SMALL FRUIT.

STRAWBERRIES.

Rubies. (French.)—Fruit large, regular, conical but broad; sweet, well-flavored, deep brilliant, glossy scarlet. First rate for shipping. Early.

Carolina Superba. (French.)—Fruit very large, two inches long; conical in shape, regular; bright scarlet. Prolific. Very early.

The Lady. (English.)—Large, broad, light crimson; sweet, peculiar flavor; very productive. Medium. Bears a second crop in the fall.

Flora. (French.)—Large, long, well-shaped; deep scarlet; heavy bearer. Medium.

Princess Dagmar. (English.)—Uniformly large; immensely productive; conical shaped; sweet, excellent flavor; light crimson. Bears a second crop in the fall.

Downing. (American.)—An old but valuable variety; every rooted runner bears in the ensuing spring; splendid sort to cultivate in matted rows. The earliest strawberry that we have ever grown upon our place, and we have tested more than a hundred varieties. Fruit small to medium large, roundish-ovate, deep crimson; seeds deeply imbedded; flesh tender, rich, excellent flavor. Should be in all gardens.

La Bicolore. (French.)—Half red, half white, medium large, very sweet and nicely flavored; easy to pick. Very early.

Beauty of England. (English.)—A perfect beauty; berries very large, brilliant scarlet. Medium.

British Sovereign. (English.)—Large, conically shaped; red; very handsome.

Bolsselot. (French.)—Large; conically shaped; deep scarlet; very fine. Medium early.

Crystal Palace. (English.)—A most superb variety; berries very large; long, fat, splendidly shaped; brilliant scarlet; the most handsome berry of our collection.

RASPBERRIES.

French Everbearing. (Three crops a year.)—Very large; deep crimson. Very early.

Golden Queen.—Yellow, very prolific.

BLACKBERRIES.

Wilson's Early.—Large, oblong, jet black, sweet, rich. Very early.

Kittatiny.—Large, very long, glossy black; well flavored. Medium early.

Lawton.—Large, sweet, well flavored; good bearer.

CURRANTS.

Imperial Red.—Bunches long; prolific.

Imperial White.—Bunches long, berries large.

Cherry.—Fruit of the largest size, red; prolific.

Fay's Prolific.—Greatly inferior to Cherry in size of berries and productiveness.

Naples Black.—Berries large, jet black. Prolific.

ENGLISH GOOSEBERRIES.

The Gooseberry plants we offer for sale are grown from "layering" and well rooted, and guaranteed to faithfully correspond to the description we give herewith. We will add that our Gooseberries go only under one name, and that that name is not changed every other year to suit the whims or speculative propensities of enterprising tree and plant dealers.

Alma.—Large, roundish-oval, greenish.

Australia.—Large, oval, amber-white.

Angler.—Very large, light green.

Bank Europe.—Large, oval, greenish-white.

Broom Girl.—Very large, round, inclining to oval.

Britannia.—Large, oblong, yellow, somewhat hairy.

Bunker Hill.—Very large, round, white.

Crown Bob.—Very large, roundish, oval, white, rosy cheek; a little hairy.

Conquering Hero.—Large, oblong, greenish, red cheek.

Echo.—Large, oval, greenish-white.

Freedom.—Very large, oblong, rosy cheek.

Free from Fault.—Very large, round inclining to oval; greenish-white, red cheek.

Guido.—Large, oval, red, little hairy.

Gunner.—Very large, roundish, green, somewhat hairy; almost as large as a walnut.

Green Mountain.—Large, oblong, green.

Golden Chain.—A magnificent berry, two inches long; elongated, oval, amber white.

Greengage.—Medium large; perfectly round; greenish-white, transparent; a daisy.

General.—Very large, round, green.

Irmong.—Large, oblong, green; a little hairy.

Justicia.—Large, oblong, white; somewhat hairy.

Lion's Provider.—Very large, elongated, oval; red all over at maturity.

Lady Laster.—Very large, oblong, white; a few hairs.

Lady Delamere.—Large, round, inclining to oval, transparent green.

La Favorite.—Very large, roundish oval, green.

Lulu Painter.—Large, oval, green.

Lobster.—Very large, oblong, red.

Larnout.—Large, oblong, white.

Marigold.—Large as a walnut; round, transparent white.

Major Hilbert.—Large, roundish-oval, red.

Merry Monarch.—Very large, oblong, bright red, somewhat hairy.

Morning Star.—Very large, round, inclining to oval; transparent white.

North Briton.—Large, roundish-oval, greenish-white.

Overall.—Large, oblong, green.

Prince Regent.—Very large, elongated, oval, white.

Proft.—Large, oblong, white.

Pern.—Large as a walnut; round, inclining to oval, white; a few hairs.

Princess Royal.—Medium, round, red; a few hairs.

Queen.—Very large, roundish oval; amber white.

Rockwood.—Very large, almost round, amber white.

Rigby's Honeymoon.—Large, oval, white.

Roaring Lion.—Very large, roundish-oval; white, with red cheek.

Rob Roy.—Medium large, oval, red.

Red Robin.—Large, oval, red.

Snowdrift.—Large, oblong, light green.

Sir John.—Large, round, inclining to oval; amber white.

Slaughterman.—Large, oblong, greenish-white.

Shadwick's Sportsman.—Medium large, amber-yellow; a little hairy. Very prolific.

Smiling Beauty.—Large, roundish-oval, green.

Shumper.—Large, oblong, green.

Speedwell.—Large, oblong, light red.

Sander.—Large, oval, light yellow.

Top Marker.—Very large, oval, pink color.

Traveler.—Large, almost round, greenish-white.

Taylor's Ballerophon.—Large, oval, white.

Volney.—Large, oblong, greenish white.

White Lurin.—Large, oval, white.

Wellington's Glory.—Large, oval, greenish white.

White Smith.—Very large, round, white.

Washington.—Large, oval, rosy cheek.

ORANGES AND LEMONS.

The little trees that we offer for sale have been expressly *grafted* for us in the Island of Corsica, on the Mediterranean Coast; the grafts being all taken from *bearing* trees, which explains the blooming of the trees at such an early period. Nothing more pretty than those little lemon trees covered with flowers when so young.

Portugal Orange.—The great favorite all over Europe; juicy, sweet, thin skin.

Blidah Mandarin.—A variety of the blood orange from Algeria, a fair rival of the Portugal on the European market, and claimed to be superior to any other blood orange grown.

Corsica Lemon.—In all respects the equal of the Sicily Lemon, of which it is a variety; raised in large quantities in the Island of Corsica for the European market.

Large-fruited Lemon or Cedrat.—The kind generally used by confectioners for preserving.

All these Orange and Lemon trees are imported from the Island of Corsica, being shipped to us with the earth kept around the roots with a piece of sack-cloth tied up to the butt of the tree, and are kept up here in our green-house mostly in pots.

We offer trees that have been already one season in our conservatory.

Trees with grafts two years old, from 6 to 16 inches, 75 cts. to \$1 per tree; \$9 to \$11 per dozen. By express, 50 cents extra per dozen, for packing. By mail, \$1 to \$1.50 per tree.

Per hundred, \$60, including packing.

PRICE LIST.

SEASON OF 1890-91.

WALNUTS.

SECOND GENERATION TREES.

The fact that *second* generation trees are grown from nuts borne on the original, or trees grafted from the original, render that class of trees quite scarce—so much so that we could not supply certain kinds by the thousand, and other kinds hardly by the hundred.

Præparturiens, Cluster, Franquette, Mayette, Chaberte, Parisienne, Serotina.—(Second generation seedlings.)

First size, 4 to 6 feet, only a few trees, 75 cents each; second size, 3 to 3½ feet, \$8 per doz., \$50 per hundred; third size, 2 to 2½ feet, \$6 per doz., \$40 per hundred; fourth size, 10 to 20 inches, 2 to 3 years old, \$5 per doz., \$35 per hundred. One and two-years old trees (not transplanted), \$3 to \$4 per dozen, \$20 to \$25 per hundred, according to sizes.

We have, in the first four sizes, a better stock in Præparturiens and Cluster than in any other kinds; but we have a good stock of 1 and 2-year old trees, nicely rooted, of all the kinds mentioned in this list. Our stock, however, is too small, and the trees (second generation trees) too hard to be got to permit us to give *special* rates to the trade. A discount per thousand of 1 and 2-year old trees.

Third Generation Præparturiens—trees grown from nuts borne on our second generation trees, 50 % less than second generation trees, or from \$12 to \$25 per hundred, according to sizes.

Butternuts and Pecans.—First size, 50 cents each, \$5 per doz.; second size, \$4 per doz.; third size, \$3 per doz.

Mammoth Texas Pecan.—2-year old trees, \$4 per dozen.

Hickory (Shell Bark).—50 cents each; \$4 per dozen.

California and Eastern Black Walnut.—25 cents each.

CHOICE GRAFTED WALNUTS

(See catalogue, under that head.) \$1.50 per tree; would decline orders by the dozen.

CHESTNUTS.

Grafted Marron Chestnuts.—First size, 5 to 7 feet, \$9 per dozen; second size, 3 to 4½ feet, \$8 per dozen; third size, below 3 feet, \$6 per dozen.

Chestnuts are a class of trees difficult to bud, and have to remain longer in the nursery than common fruit trees, hence they have to be charged a higher price.

ALMONDS.

First size, 50 cents; \$5 per dozen. Second size, \$4 per dozen.

FILBERTS.

(Propagated from "layering.")

50 cents each; \$5 per dozen. Second size, \$4 per dozen; layers, not transplanted, \$2 per dozen.

Grafted trees, 75 cents each.

PRUNES.

Lot D'Ente and Saint Catherine (true from the root).—From \$2 to \$4 per dozen; and \$15, \$18 and \$20 per hundred, according to sizes.

We do not guarantee every tree to be true, especially the Lot D'Ente; that stock coming from France somewhat mixed, probably at the rate of 5 to 8 per cent.

Mount Barbat and Lot D'Ente (Grafted on Myrobolan and Black Damas).—\$15, \$20 and \$25 per hundred. (None of our home stock left, everything having been engaged through the summer; only small imported trees, of Mount Barbat on Black Damas, and Lot D'Ente on Myrobolan, at \$15 to \$18 per hundred. On account of the new Tariff and heavy duties on trees, we cannot quote our imported trees at lower rates.)

Plums.—\$3 to \$5 per dozen.

CHERRIES.

April Cherries.—First size, \$5 per dozen; second size, 2 to 3½ feet, \$4 per dozen.

All other kinds, from \$3 to \$4 per dozen.

APRICOTS.

From \$4 to \$5 per dozen.

PEACHES AND NECTARINES

(A small stock this season.)

20 to 30 cents per tree; \$2 to \$3 per dozen.

QUINCES.

25 to 50 cents each.

BLACK MULBERRIES.

Noir of Spain.—50 cents to 75 cents each.

MEDLARS.

50 cents each.

FIGS.

25 to 50 cents each; \$2 to \$5 per dozen.

SORBUS.

25 to 50 cents per tree.

BARTLET PEAR.

First size, \$4 to \$5 per dozen (only a few trees.) Second size, 3 to 6 feet, \$2.50 to \$3 per dozen—\$15 to \$20 per hundred; below 3 feet, \$12 per hundred.

All other sorts of Pear, but Assumption, \$3 to \$4 per dozen.

Assumption Pear.—50 each; \$5 per dozen.

APPLES.

Twenty-five to 30 cents per tree; \$2 to \$3 per dozen; \$15 to \$18 per hundred.

FANCY AND ORNAMENTAL TREES.

Cornus Maseula.—Standard, 50 cents each.

Silvered Linden.—\$4 to \$5 per dozen.

Canada Poplar.—25 cents each.

SELECT REMONTANT OR EVERBLOOMING ROSES.

Standard trees, budded on Manetti stock, at 2 to 2½ feet, 50 to 75 cents each; \$5 to \$7 per dozen.

Small trees budded near the root, \$1 per mail.

SMALL FRUIT.

Strawberries.—50 cents per dozen; \$3 per hundred. By mail, 75 cents per dozen; \$3.50 per hundred, including packing and mailing.

Raspberries and Blackberries:—75 cents per dozen; \$4 per hundred.

Currants.—First size \$2 per dozen; second size \$1.50 per ~~hundred~~ ^{doz.} By mail, \$2 per dozen.

Gooseberries.—First size plants 25 cents each; \$2.50 per dozen; second size (layers, not transplanted), \$2 per dozen. By mail, \$3 per dozen.

Essay on "Grafting the walnut," illustrated with eight cuts, with general Catalogue, 25 cents by mail.

MISCELLANEOUS.

Rhubarb.—25 cents per root; \$2 per dozen.

Cives.—25 cents per bunch.

Bamboo:—25 cents per root; 50 cents by mail.

Pampas Grass:—25 cents and 50 cents per root.

GRAPES.

Table Varieties.—Boudales, Ramonia, Orange-flowered Muscat, Pearl of Anvers, Chasselas Bulhery, Chasselas Dupont, Ischia, Black and White Magdalen, Tokas, Sabalskankoi, Gros Sapat, Blue Muscat, La Marmora, Muscat Sarbelle, Ulliade, Fintindo, Gros Makara, Chasselas Violet, Schiras, Caserno, Blauer Portuguiser, Gros Damas, Calabre, Minestra, Œil Noir.

Rooted Vines.—Rooted vines \$3 per dozen; \$4.00 by mail.

Cuttings.—\$1 per dozen (six varieties to a dozen); \$1.25 by mail.

All other Varieties.—Rooted vines \$2 per dozen; \$2.50 by mail. Cuttings, 50 cents per dozen; 74 cents by mail.

Wine Varieties.—Rooted vines, \$8 to \$12 per hundred. Cuttings, \$3 to \$4 per hundred.

Scions for Grafting.

Walnut and Chestnuts, long enough to make two grafts, 25 cents each; \$2.50 per dozen.

Black Mulberry, Medlar, Prunes, Apricots, \$1.50 per dozen.

These prices include packing and mailing. No less than one dollar's worth sent in one order.

Trees and Plants by Mail.

This is a great inducement offered to people living far away from reliable nurseries, or wishing to procure only a few trees, or obtain some of our new and rare kinds of fruit, nuts and ornamental trees or plants.

The trees we offer to send by mail are well rooted for their size, which is not over two feet in length, roots and top, so as to conform with mail regulations.

Thanks to our superior way of packing trees and plants sent by mail, we guarantee to have them reach any part of the United States in as fresh a condition as when leaving our nurseries.

Walnuts.—50 cents each; \$4 to \$5 per dozen.

Grafted Marron Chestnuts.—\$1 per tree.

Prunes.—\$4 per dozen.

Filberts.—50 cents each; \$4 and \$5 per dozen.

Foreign Walnuts and their Culture.

BY FELIX GILLET.

[Essay read before the Fruit Growers' Convention at Los Angeles, Cal., 1890.]

Of all branches of horticulture so far experimented upon in California, I do not think there is one so little understood and so much under a cloud as walnut culture is. This is due to several causes; chief among them has been the indiscriminate propagation all over the Pacific Coast for forty years, of one of the most delicate varieties of the English Walnut, to be found anywhere, and known here under the name of the "Los Angeles" walnut, first started in the old mission of that name. Another cause that has had the effect of retarding the progress and spreading of walnut culture throughout the State, has been the stand taken by eminent walnut growers of Southern California, and their erroneous statements in papers read before horticultural societies and conventions, and the false impression made by them on the public mind, that walnut culture could not successfully be carried on but in a very small section of the State, bordering the sea in the counties of Los Angeles, Ventura and Santa Barbara, and where to this day the most of the walnut crop is grown. Now, there is as much truth in that as there is in the idea entertained by people in Southern California, that no oranges can be grown profitably for market north of San Bernardino county. Indeed, some of the best oranges I ever ate came from Smartsville in the foothills of Yuba county, a few miles from Marysville and right in the heart of Northern California.

In discussing the adaptability of our State to the successful growing of this or that class of fruit or nuts, we should always bear in mind the great diversity of soil and climate to be found in a State like California, extending as it does from the burning deserts of Arizona to the snowy peaks of Siskiyou, and that in nine-tenths of this vast extent of country the walnut is liable to be injured by late frosts in the spring; hence the advisability of planting none but hardy kinds.

The idea that walnut culture in Califor-

nia is possible only in those little valleys bordering the sea in Southern California, is, I must say, a preposterous and erroneous one. "The area of land suitable for successful walnut growing is very limited," said a well-known nut-grower in an essay on English walnuts, before a former Fruit-Growers' Convention. "It requires well drained, deep, sandy, bottom land, well protected, and where no 'live oak' trees have grown within the last century." Now, I do strongly object in the presence of facts to the contrary, to the above banishing of walnut culture from 9-10ths of the area of the State of California, and I do not care, either, what Pliny said 2,000 years ago, on that subject, but will cite an instance in the course of this essay that will set at naught the theory that walnuts will not do well "where an oak forest has recently existed." That walnuts will grow more luxuriantly and bear larger crops at comparatively earlier age, in deep and rich bottom land, well drained, well protected and with plenty of moisture, is an obvious fact; though there arises another question, whether it is advisable to plant walnuts, a class of trees requiring so much space and so little dependent on the nature of the soil, in our richest land, so well adapted to the growing of other valuable crops that have absolutely to be raised in rich land. My experience in walnut culture, and for twenty years I have imported, propagated and fruited all the leading varieties of Europe, besides having collected a large amount of data on that subject from nut-growing countries, warrants me to say that walnut culture can be successfully carried on on the whole Pacific Coast, provided we plant none but hardy kinds; in fact, the success of walnut-culture in California lies exclusively in the hardiness of the kind to be planted.

The Los Angeles walnut, which, by the way, has been constantly propagated from the seed for the last forty years, without any regard to the degenerating of the spe-

cies, has three big defects that should make every one reject this variety as worthless, except where it is known to do well. First, it puts forth too early, from two to eight weeks before the foreign kinds, and it is injured by late frosts in the spring three years out of four. Second, it does not mature its wood well in the fall, and it is nipped again by early frosts at that time. Third, it blooms very irregularly, as the owners all over the State can very well ascertain in the Spring at blooming time, the male flowers or catkins all dropping off before the female flowers or nuts have a chance to show themselves; consequently, the nuts not being fertilized by the pollen or yellow dust secreted by the catkins, drop off after attaining the size of a large pea. In this way does that variety keep barren or at least so unproductive that it has already induced many people throughout this State and Oregon to cut down their trees, some of them over thirty years old; they having come to the conclusion that the country was not adapted to the walnut; while it is that worthless kind, the Los Angeles walnut, that is not adapted to our climate and that of Oregon.

Here is a good illustration of the case under-discussion. A short distance from Nevada City is a large Los Angeles walnut tree, measuring 2½ feet in diameter at the base, having been planted when four years old, in 1860. That tree yielded in 21 years, 17 nuts, all in one year. In 1881 it was grafted into a *Præparturiens*, and in 1884 bore for a start 400 to 500 nuts, and last year, though the hailstorm on the 27th of April did considerable damage to the nuts then partly out in bloom, five bushels of nuts were gathered from that tree, and lots were carried away into the woods by bluejays, birds very fond of acorns and softshell nuts of all kinds. This very tree stands 75 feet below a huge oak tree, which has been permitted to stand there on the right hand side of the entrance gate, on account of its beauty. That oak tree measures four feet in diameter with a top from sixty to seventy feet in height; though its branches do not meet those of the walnut, it towers up above the latter. In the vicinity and on the hillsides are many other oak trees, but much smaller, and that again sprung up after the cutting down of large oak trees years ago. Well, this close proximity to oaks does not seem to hinder in the least the growth, development and bearing qualities of the walnut, as it should be the case if there were anything true in that assertion, that "walnuts would not do well where an oak forest had recently existed."

The irregularity of bloom of the Los

Angeles walnut and its consequent unreliability as a bearer, also its tenderness, first drew my attention to walnut culture in California and induced me to introduce into this country the best and most hardy foreign kinds known. In that way did I experiment these last twenty years on the following foreign varieties: *Præparturiens*, Cluster, Mayette, Franquette, Parisienne, Grenoble, Serotina, Chaberte, Grand Mesange or Paper-Shell, Vourey, Meylan, Culong, and also fancy kinds, like Weeping walnut, ash-leaved walnut, Mammoth walnut, and others.

Those foreign varieties differ widely from each other, all having special characteristics, some being recommended either for the extraordinary size and fine shape of the nuts, or for their surprising fertility and precocity; others for their lateness in budding, which enables them to withstand, uninjured, late frosts, so common in the spring that hardly one-tenth of the whole area of this State may be said to be exempt of them. A question, however, has often been asked which among the large collection of foreign walnuts may be considered the best to plant for family use, and which the best for market? A question of much importance, so that no mistake should possibly be made.

As the size, shape, even color of the shell, is not precisely an object whenever a walnut tree is planted in the family garden, but rather the quality of the kernel, thinness of the shell, precocity and fertility of the kind, no variety recommends itself better for the family garden than the *Præparturiens*, or Fertile walnut. Surely, there are varieties more late in budding out, such as Mayette, Vourey, Parisienne and Franquette, that might be preferred wherever late frosts in the spring are the rule, but, on the average, the *Præparturiens* will do in almost all parts of California as the walnut par excellence for the family garden. The *Præparturiens* is not precisely a large walnut, though "second generation" trees bear nuts of a fair size, some of them quite large, but it is so fertile and bears such good crops from the very start and when being quite young, that it renders that kind very valuable. I have found the *Præparturiens* to give good crops where the Los Angeles walnut was barren; in Dutch Flat, high up in the Sierras, in the foothills of Butte county; in Marin county, close to the sea; in Stockton; in Nevada, 2,600 and 2,800 feet elevation in the mountains, and in many other places.

Now, as to what varieties of walnuts to plant for market: It is a fact that the best marketable walnuts are those that are the largest, fairly shaped, thin-shelled not (pa-

per shell, a kind that should never be planted for market), light colored, and with a fine, fat, sweet kernel. This is independent of other characteristics, such as fertility, hardness and lateness in budding out. Whenever a variety combines all the above characteristics it might very well be called the "boss" variety to plant for market.

For size and beauty of the nuts, I find that no varieties can surpass the Mayette, the Parisienne and Franquette, which I have fruited in California. But size and beauty of the nuts are not the only advantages of these three fine kinds over all others, for they are, besides, hardy, putting forth late, and seldom, if ever, injured by frost in the spring. (They never were on my place at an altitude of 2,600 feet.) As to the kernel of these three kinds, it is very fine, corresponding fully to the size of the shell, with a sweet and nutty flavor. As to their fertility in California, I cannot tell much yet, for my bearing trees are rather young; but the way they bear is encouraging. The Prèparturiens, Chaberte, Vourey, Cluster and others have more or less claims as nuts for market.

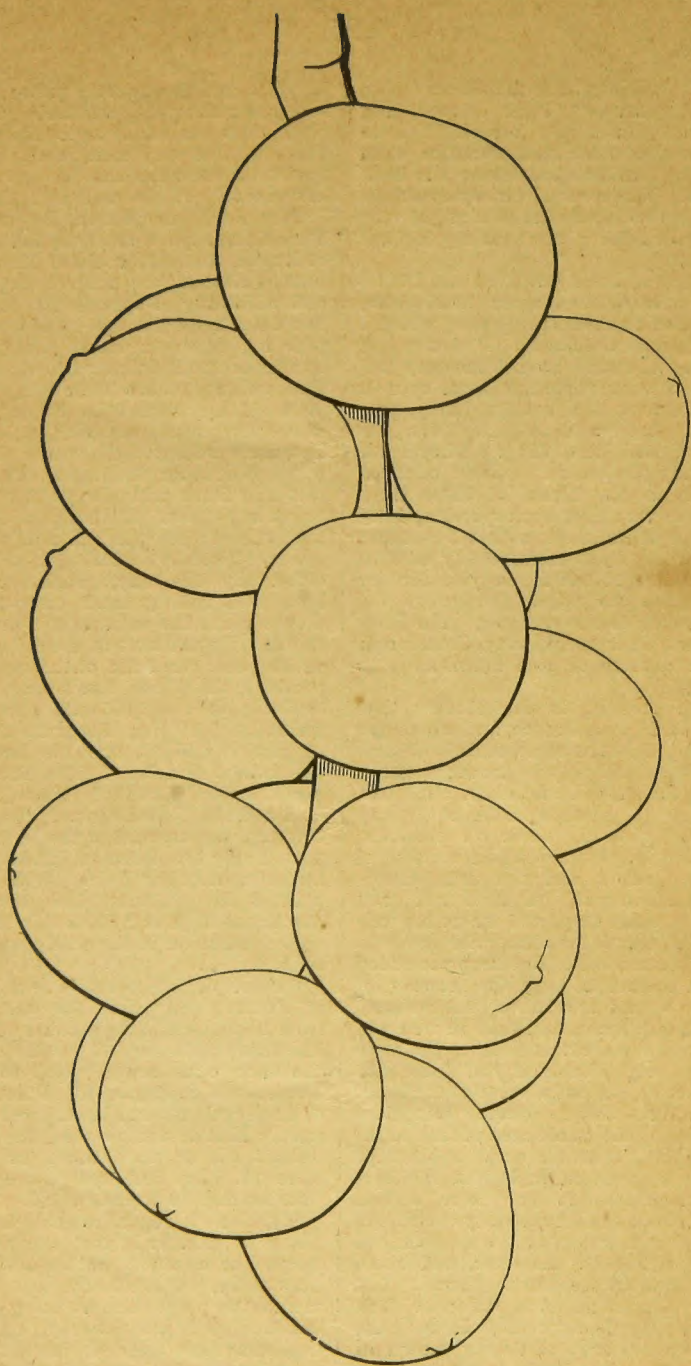
Walnut growing is an industry that ranks very high in France, and which can be developed on the same scale in a State like California, if only we are wise enough to study the French method a little and do as they do, planting none but hardy kinds, and planting them on plateaux, hillsides, rolling land, along side roadways, around large fields and vineyards, in cordons and avenues, on soils not well adapted to other crops and where the walnut in the course of time will grow to gigantic dimensions. But keep your deep and rich bottom land for the growing of other crops, and remember that walnuts require much space, and that in rich and valuable land walnut growing might after all, prove unprofitable, if you take into consideration the extra value of the land.

The walnut belt in France comprises two-thirds of the whole area of that country, extending from the ocean to the Alps and Jura mountains, and from the Pyrennes mountains to the Loire, a belt where exists a similar diversity of soil and climate as is found in California from one end of the State to the other, and up to to 2,500 to 3,000 feet in the Sierras. The finest walnuts in that immense belt came from the department of Isere in the southeast, and are exclusively grown on grafted trees; the kinds most generally propagated, on account of their hardness and beauty of the nuts, are the Mayette, Franquette and Parisienne; the latter is found to do better in light soil, while the

Mayette and Franquette prefer a rocky soil, but rather deep and rich. The Chaberte, less particular as to the nature of the soil, but very rich in oil, is much grown for the oil mills. To give an idea of the extent of the walnut industry in France, I will say that the Department of Isere alone exports annually to the capital of Russia, \$100,000 worth of Mayette walnuts. Most of the walnut crop of that and adjoining Departments is carried down the river Rhone to Marseilles on pine log rafts, at which port nuts and lumber are both delivered for the market. The walnuts of the Isere bring the best price of any walnuts in France, 5 to 8 cents per pound, according to years; in fact, Isere walnuts sell with a premium, which is another illustration of that truth that fine fruits will always bring better prices anywhere. In that part of France the walnuts are planted a little everywhere, especially on rolling land and hillsides. By the way, whenever having level and rolling land on your place, always plant the walnuts on rolling land. In the Department of Dordogne, from which come the bulk of the walnuts exported to the United States from France, statistics show 600,000 walnut trees. The walnut crop of that Department, in nuts for market and oil, amounts annually to one million of dollars. The nuts are exported to the north of France, Switzerland and the United States. To the latter country, on account of the tariff, are exported only the common kinds. In the Department of the Loire, 15,000 acres are planted in walnuts, the trees being planted as high as 2,300 feet in the mountains; and so on in the whole walnut district.

Walnut picking costs five cents a bushel in France, and prices for walnuts vary from half a cent to eight cents per pound. The cheap nuts are sold to the oil mills; the finer ones are shipped to market. Paris alone consumes 15 million pounds of dried walnuts and 10 million of fresh nuts. Half of the oil used in France is walnut oil, or three times as much as olive oil. One hundred pounds of walnuts average 18 pounds of oil.

My advice in regard to those foreign varieties of walnuts is, that where the Los Angeles or common walnut of California does badly, people should not hesitate a moment to plant them as being so much superior and more hardy, and where that same Los Angeles walnut does well, to give at least those foreign kinds a fair trial, and see if they would not prove more profitable than the common kind. It is as easy to grow fine nuts as poor ones, and certainly more profitable.



JUGLANS RACEMOSA, OR CLUSTER WALNUT.

Representing a cluster of 15 nuts, from original tree (natural size).

Our trees are grown from nuts borne on the very tree from which the above cluster was picked.

Hints on the Planting, Cultivating and Propagating of the Walnut.

Whatever may be the size of the trees to be planted, large and deep holes should be dug, say four feet in diameter, and from two to three feet in depth.

Never cut a walnut back, if you can help it; and if the trees are tall and slender and rather exposed to winds, a stake should be planted with the tree, to which it should be tied, but far enough from the stake to avoid chafing.

Walnuts stand pruning as well as any other class of trees, but seldom require it. But whenever the body of a young walnut is injured in any manner, and a strong shoot is growing from below the ground, cut back the tree down to where that shoot starts.

No walnut trees ought to be allowed to branch out before having attained a height of seven to eight feet; and no Proëparturiens allowed to go to fruit before having grown to such a standard size.

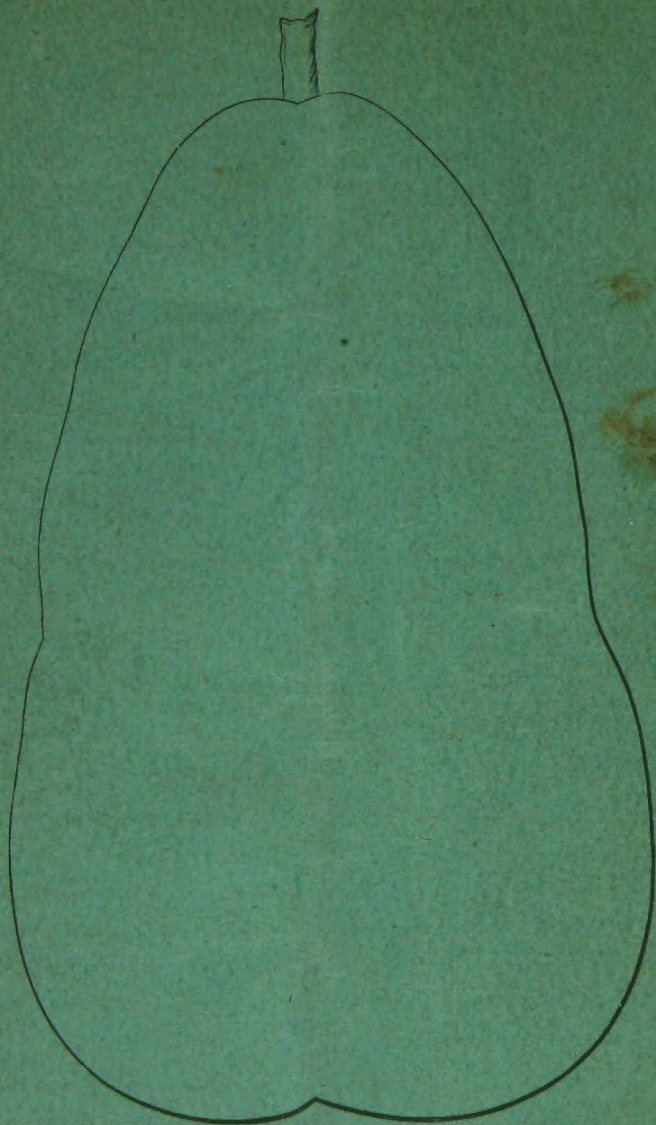
The walnut does better when planted avenue-like, or alongside fences and roads, or in cordons around large fields, orchards and vineyards, than orchard-like.

The walnut must not be pruned at all; only dead wood, or branches in each other's way, being taken off; also branches spreading out too much.

What should encourage the planting of walnut trees, and be a strong inducement for the raising of that valuable and so well marketable nut, is that very few trees are so little particular on the nature of the soil, as the walnut is; for it thrives in any kind of soil and at any exposure; it does not dread drought or moisture, unless either be in excess; of course, the walnut will grow much more rapidly in good and rich soil with plenty of moisture, than on poor and barren land, and bear quicker and larger crops.

In planting nuts of any kind, always plant the suture or seam perpendicular to the horizon, that is up and down, and never the small end down; planted that way the nuts will sprout better, and the tree have a straight body.

Remember that there is no "overstocked" or "glutted" market, no necessity for organizing "co-operative associations" to hunt up a market for nuts of all kinds; so go to work and plant nut trees.



ASSUMPTION PEAR.

[CALIFORNIA GROWN.]

Two weeks earlier than Bartlett.