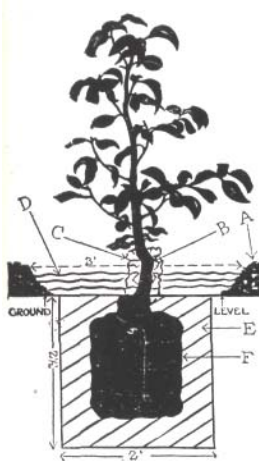


## THE HOME GARDEN WHAT TO PLANT, HOW TO CARE FOR IT

J. Eliot Coit

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*Read Dr. Coit's article then study this diagram if you're bothered about how to plant your avocado tree. On the drawing A, is the rim of the basin; B, the bud union; C, crumpled paper wrap; D, mulch in basin; E, top soil filled in; F, the ball. Do not remove the burlap.*

In Southern California, where environmental conditions are so favorable to home gardening, increasing thousands are finding healthy activity and satisfaction in giving free rein to mankind's primal urge, the desire to dig in the soil and make things grow. It is a fine thing from every viewpoint. The values to be gained when measured in terms of interest, pride of achievement and healthy outdoor exercise are vastly worth while. They may be attained and enjoyed just as much by the person of moderate means, the office worker, on a small plot of ground between the cottage and garage, as by the owner of a large estate. Under our mild climate the range in variety of plant material, vegetable, flower and fruit, is vast indeed. But there is very little fun in doing things which are too easy. To flavor the zest of accomplishment, every game must have its handicap. Insect pests and puzzling diseases often block progress until circumvented.

Within recent years there has been a great increase in interest in avocado growing. In my experience the avocado is particularly well suited to home grounds. It is an aristocratic fruit of high quality and almost universal appeal and, incidentally, rather expensive to buy. In most locations, proper selection of three or four varieties will provide ripe fruit throughout the year. It is relatively free from pests, and so far seldom

requires fumigating or spraying. Being a broad-leaved evergreen, it is ornamental and when fully grown provides welcome shade for children's playhouses or backyard cozy nooks. The avocado family includes three races, Guatemalan, Mexican and West Indian, comprising a total of over 400 varieties. In California we grow the Guatemalan and Mexican only. The alligator pears which predominate in Florida, Cuba, and Hawaii belong to the West Indian race, a tropical form requiring moist heat. They have been tried, but do not thrive anywhere in California. Avocados grown in California vary widely in hardiness to frost. On the foothill slopes near the sea, any and all kinds may be grown. On level lands further in the interior where sharp frosts occur, only the hardy Mexican varieties can be depended on. Some good variety of avocado may be grown successfully practically anywhere within the Los Angeles metropolitan area.

If given reasonable care, avocados will grow well on a variety of soil types from sandy loam to heavy adobe, provided the subdrainage is good. The water must be able to pass down through the subsoil. There is no surer way to kill an avocado tree than to plant it in a pot hole dug in stiff water-tight clay. A deep rich loam is fine and produces a large tree which grows first and fruits later. A poor shallow soil, if properly fertilized, produces a small tree which fruits early and often heavily, sometimes stunting itself by premature crops.

### **Budded Tree Safest**

Avocado seeds sprouted in cans and set out in the back yard grow into seedling trees, good for shade, but very seldom bearing good fruit. They are entirely unreliable and no one can foretell the color, shape, season, size or quality of fruit until it is produced. Many large seedlings, beautiful shade trees, never produce any fruit. It is very rare for a seedling to produce good fruit in quantity. The large estate owner has room to "play with" seedlings if he so desires, but the modest home gardener cannot afford to. He should plant only budded trees of tested varieties. It is possible, of course, to have a small seedling budded, but the average home owner seldom has the necessary knowledge and skill. Placing the bud is the first step in a process which requires careful nursing for six to ten months. A professional budder may be employed, but he should guarantee that he will return from time to time and do the nursing required to establish the new top. The cost of this will usually amount to much more than the price of a good budded tree. Also, the percentage of failures in budding under back-yard conditions is very high. Top-grafting large old seedlings is a different matter and, if properly done by qualified operators, often pays in time saved.

In selecting budded trees, choose the strong, stocky tree with many short side branches on the main trunk and good caliper at the bud union, rather than the tall slender tree which requires the support of a stake. Personally I am strongly in favor of cutting the top back to a few good strong buds on the main stem at time of planting, but the average home gardener is disinclined to this because he feels that he is throwing away something he has just paid for, and fails to visualize the great benefit of the resulting more stocky growth.

Avocado trees, if balled or boxed, and well seasoned, may be planted at any time of the year. In frosty locations, the best months are March, April and May. In sheltered

locations, late fall planting is almost as good. Along the coast, planting continues through the summer, but in the heat of the interior it is advisable to provide lath shelters for summer-planted trees. Burlap shades are seldom advisable, and when used should not be placed around the tree, but at some distance on the southwest side so that the shadow will fall on the trunk and bud union during the afternoon.

In commercial plantings, avocado trees are spaced twenty-four feet apart, which means that when growing in the open and fully developed they will utilize 676 square feet of space. However, they will get along very well with 400 square feet and when planted close to a building or fence, they will adjust themselves to the conditions and bear very well in spite of cramped quarters. They submit to pruning well and may be cut back, or trained in any direction desired.

### **The Critical Time**

The most critical time in the life of the avocado tree is the first two months after planting. It is vital that active growth should start promptly. Dig a large hole and fill in the bottom with rich top soil, well packed down. Do not put manure or anything but top soil under the tree. Handle the tree carefully so as not to loosen the soil in the ball. Set it at exactly the same depth that it grew in the nursery, regardless of the position of the bud union. Fill in with good soil around the ball almost to the top and firm it down. Cut the cord and turn corners of burlap down and cover all with soil. Make soil around the tree perfectly level. Then pull up outside top soil into a circular ridge six or eight inches high, forming a flat-bottomed basin. Tie loosely a single sheet of newspaper around the trunk from soil to lowest branch, being careful to cover the bud union and prevent sunburn. Put in a mulch three inches deep, using coarse manure or previously dried lawn clippings.

Then fill the basin with water two or three times so as to soak the ball to the center. As the mulch rots away during the year, add more. Enlarge the basin each year and never dig up the soil close to the tree. Where the soil is, steeply sloping, it is better to dig the basin into the hillside rather than to build up too high a bank on the lower side. In very steep places the basins may be half circles or even crescent shaped. If any large trees are near by, particularly pepper or eucalyptus, it is necessary to dig a trench and cut the roots to prevent them from developing under the avocado basin and robbing it. This is important. Do not start with too large a basin. It is much better to begin with a small basin and enlarge it each year in the spring. Do not depend on sprinkled water, but fill the basin with the hose or from a furrow each time for the first year. After the first year sprinkled water may be satisfactory, but I prefer the hose in the basin for three years. The proper interval between irrigations varies with the soil and conditions. Water every ten days or two weeks on sandy or gravel soil, and every three or four weeks on heavy adobe. In watering, be « guided by the condition of the soil and tree rather than by the calendar.

The mulch mentioned above will supply rotting vegetable matter or humus. After the first four months other fertilizer is needed on all but the richest soils. One tablespoonful of sulphate of ammonia for each year of age of the tree, given in the water at each irrigation, will give excellent results. It is easy to injure a small tree by giving too much fertilizer at once.

If suckers arise from the seedling stock below the bud union, they should be promptly removed. Do not stake the tree unless absolutely necessary, and do away with the stake as soon as possible. Better to cut the tree back and force it to grow stocky enough to stand alone. If in a frosty location, protect the main trunk from the ground up with a wrapping of excelsior and newspapers, from November 15 till March 1, the first two winters.

### The Variety Question

Many home owners who have avocado trees complain of lack of bearing. The question of varieties is most important. The Fuerte is the best shipping sort and is also of very high quality, but is not a very regular bearer under average yard conditions. Much has been written about planting several varieties together for cross-pollenization. The most experienced avocado growers in California have come to the conclusion that this is of very minor importance and is seldom necessary.

Taking into consideration the bearing habits, quality for home consumption, and availability of stock, I have prepared two lists: One for flat lands or frosty places and another for sheltered or comparatively frost-free places, such as slopes and hillsides within influence of the sea. If there is room but for one tree, select No. 1, in either list; if two trees are wanted, take the first two and so on in order. An effort has been made to select varieties which will yield mature fruit through as large a part of the year as possible. Picking seasons are given for each variety. In list No. 2, the three last cover the Fuerte season and can be depended upon to bear if the Fuerte should prove disappointing. The appreciation of avocado varieties is so largely a personal matter that no doubt some amateurs will disagree with me, but these are my present recommendations.

For Frosty Places			
1. Duke	..... (Aug.-Sept.)	3. Puebla	..... (Nov.-Jan.)
2. Fuerte	..... (Dec.-June)	4. Blake	..... (October)
For Sheltered Places			
1. Nabal	..... (July-Sept.)	5. Itzamna	(Oct.-Nov. of 2nd year)
2. Mayapan	..... (June-Aug.)	6. Worsham	..... (Jan.-Feb.)
3. Fuerte	..... (Dec.-June)	7. Thompson	..... (March-May)
4. Puebla	..... (Nov.-Jan.)	8. Dutton	..... (March-May)

### Best Time to Plant

November 22, 1930

**Question:** What is the best time to plant avocado seed?

**Dr. Coit:** From the standpoint of germination of the seed, just as soon after the seed has been gathered as possible. Otherwise, I would say plant according to the time when the budded trees are to be needed. Plant at such a time that your budded trees will be

ready to plant in the field, which would be preferably in the Spring of the year.

**Question:** Should avocado seeds be planted outside or under shelter?

**Dr. Coit:** My experience is that they will do perfectly well outside and you can set them directly in the field where they will remain if you plan to irrigate by sprinkling. If you irrigate by furrows, plant in a seed bed and transplant into the nursery later as it is difficult with the furrow system to keep the seeds as satisfactorily moist at all times as it is with the sprinkler system.

**Question:** What is the best time of the year to plant trees?

**Mr. France:** From December to June.