

Growing tropical fruits

The cultivation of bananas, pineapples and citrus under glass in the days when fuel was cheap.

Horace Parsons

Shortly before my twenty second birthday, two well known head gardeners under whom I had trained and recommended me for the position of glasshouse foreman at **Mabledon Park, Tonbridge, Kent**: the large country estate owned by J.F. W. Deacon Esq., a bachelor, being with his two elderly maiden sisters, the last of the banking family of that name. The glasshouses were extensive, containing a moderate orchid collection, a comprehensive range of stove and greenhouse plants, but what aroused any enthusiasm most of all was the exceptionally large and well grown collection of tropical and other glasshouse fruiting plants. In one great house, a number of fine specimens of citrus fruit trees in No.1 size clay pots, sunk to their rims in a bed of shingle, were carrying good crops of oranges, citrons and lemons, while on wires under the eaves were trained granadillas (*Passiflora edulis*). In another house, were fruiting bananas both in pots and planted in a border, also in this same house planted out, were two almost treelike plants of *Carica papaya*, the South American paw paw. Then came a great surprise, the pine-stove: I had never seen one before, but under gardeners with whom I had been associated in previous gardens, had accurately described them as specially constructed glasshouses for the year round production of pineapples, which they said had all finished with the 1914-18 war. But here was one that had survived, and indeed, was then in full production. - More about this later.

Mr F. Clement, the head gardener, next introduced me to the glasshouse staff, and if my confidence, had been a little shaken by what I had previously seen was contemplating taking charge of meeting the members of the staff, did nothing to minimize this with one exception, they were all my senior. In his office with preliminary cover Mr Clement wound up the interview by saying, "you are far the youngest of the several applicants, but in view of these strong recommendations by two head-gardeners of such standing, with whom I have been acquainted for many years. I am offering you the post". Thus began the happiest three years of my single life.

Many years later, when he was retired and an elderly man. Mr Clement and his wife came to see my wife and me on the Norfolk Estate where I was then employed as head gardener. While we were walking round the gardens we passed through a glasshouse in which there were fruiting bananas in pots and he was highly amused when I told him that one of my former glasshouse foremen had been so inspired by growing bananas in pots that he expressed a wish to take up banana growing as a career. Fyffes were contacted and agreed to take him on for a probation period in the Cameroons, from which he made rapid progress, eventually being promoted to the position of Agricultural Superintendent in charge of some thousands of acres of bananas. It pleased him also to hear that at the then, recent Royal Agricultural Society's Show, we had featured two well fruiting banana plants in our 40 feet (12 in) frontal exhibit of miscellaneous glasshouse plants.

Bananas

The banana is botanically interesting in that it is possibly the major monocotyledonous fruiting plant, unless one includes sweet corn, wheat and other grasses. The banana is not a difficult plant to grow and fruit, if one has a suitably heated glasshouse of sufficient height and width, the problem today, is getting the. right stock, which is *Musa cavendishii* (syn. *M. chinensis*) the Chinese banana, It is propagated vegetatively from suckers taken off with a good portion of rootstock, and potted into a compost of 2 parts turfy fibrous loam and 1 part manure, to which has been added some crushed brick, charcoal, sand, bone meal. Plants well established in 10 in. or 12 in. pots (25 or 30 cm) can be potted into their final cast No. 1 clay pots or in tubs. April or June being perhaps, the best time for the final potting. The leaves which look deceivingly tough and leathery, are in fact, somewhat fragile and. so are easily torn. The blade can be a yard or more long (1 m) and 12 in. or more wide (30 cm) There is no leaf stalk, each leaf having a sheath at its base, the sheaths wrapping round each other very tightly from a main stem or trunk. Given the right growing conditions, three-year-old plants will push their flowering shoot in an arching curve to display the "hands", each "finger" terminating in a yellow flower.

The flowers wither and die without setting, bananas being seedless. Whilst the plants will survive in a minimum night temperature of 10°C (50°F), for fruit bearing, a winter night temperature of 18.5°C (65°F), rising in spring, summer and autumn to a minimum of 21°C (70°F) is desirable. Weak, frequent liquid feeding together with careful dry feeding with a reliable compound fertilizer is essential in the development of the finest bunches of fruit. As soon as the first formed fruit on the bunch starts to colour yellow, the bunch should be cut from the plant and either left hanging securely tied to a rafter or wires from the roof of the glasshouse to finish ripening in winter, or hung up in cool fruit room in summer. One can expect bunches of from 80 to 150 fingers from a well grown pot-plant, but much larger bunches from border grown plants. One or two suckers from the rootstock are encouraged to develop as (he plant begins to show signs of fruiting, as the old plant should be cut down to soil level as soon as the bunch of fruit has been cut. The suckers are potted up to provide the next generation of plants. Some light shading is / necessary in sunny weather from April until October.

Pineapples

Whilst these are easily grown in a well heated, light glasshouse such as those often used for growing melons, their regular year round production of ripe fruit, requires considerable skill even with a purpose-built structure known as a pine-stove. I must confess that I have only seen one fully operative pine-stove and this one I had charge of for over three years. Many years later, while judging at The Great Yorkshire Show, with that grand old gardener, the late Frank Jordan, he assured me that there was no other garden in the country than **Mabledon Park, Tonbridge**, that maintained a fully operative pine-stove after the end of the 1914-18 war.

Some brief particulars of this pine-stove may be of some interest: a span-roof ground with three bricked steps leading down into it. Within it around the outer perimeter was a 2 ft wide (60 cm) shingle covered staging beneath which was double flow and return 4 in. hot-water pipes (10 cm). This staging was on the level of the glazed part of the glasshouse side and ends and it was used to accommodate pine suckers and crowns being rooted in 3½ in. clay pots (9 cm) and those potted on into 6 in. and 8 in. pots (15 and 20 cm). In the centre of this pine stove was a rectangular compartment surrounded by a 3 ft high (1 m), 9 in. wall (23 cm), 8 ft wide (2.5 m) and 32 ft long (9.5 m). originally built to accommodate a tan bark and tree-leaf hot bed, but this was found to be too cool and damp for winter fruiting pineapples and in my time, this compartment had several rows of hot-water pipes near the bottom and well above these was a bench constructed of 2 in. thick (5 cm) oak planking, the planks being about an inch apart (2.5 cm). On this a double row of fruiting plants in 12 in. pots (30 cm) each stood on an inverted empty pot down the centre with plants in 10 in. and 8 in. pots (25 and 20 cm) on either side. No difficulty at all was experienced in winter ripening even when the temperature occasionally dropped below 2°C (70°F).

The best all round variety is the smooth-leaved 'Cayenne'. It will produce a pineapple of 8 to 10 lbs (3.5 to 4.5 kg) and when really well grown, its barrel shaped fruit will weigh almost a pound for every "pip" in height (- A pip is a segment of the fruit) The smooth leaves make for comfortable handling but they are large and brittle and easily broken. 'Charlotte Rothschild' is somewhat like it, a little more conical and taller with scattered spines but not nearly as spiny as 'The Queen' which is the variety most frequently met with. Leather gloves and arms wrapped with strips of hessian are best worn when potting or handling this variety. The pineapples in many fruiterer's shops look very similar to 'The Queen', their crowns are easily rooted. If the thin skin at the top of the fruit is pulled off and the first few leaflets pulled away, embryo roots are visible which will quickly root into small pots of soil. Unlike most fruiting plants in pots, the pineapple requires plenty of open loam as a base, sifted bonfire ashes with charcoal, mortar rubble, bone meal and dried blood in the final potting. Over-potting and over-watering must be avoided at all costs. Freshly potted plants will go a surprisingly long time between waterings during the dull months of the year. In the best growing conditions, a minimum of three years is required from rooting a sucker or a crown to the production of a ripe pineapple.

Citrus fruits

Many of these can be grown and fruited in much cooler conditions than the preceding fruits, but against this, some of them especially seedlings of some oranges, develop into far larger plants than can be accommodated in the available pots, tubs and glasshouses.

Oranges and other citrus fruit trees and bushes are very sensitive to root disturbance and as their roots invariably adhere to the porous sides of clay pots, it was always found advantageous to soak the pots containing these plants intended for potting on in a pail or tank of water for an hour or so before lapping them from their pots, to minimize root damage. The compost as detailed for bananas, is also quite suitable for the citrus fruits, but for the smaller pots, it should, of course, be rubbed through a coarse sieve. *Citrus sinensis*, the sweet orange, is a vigorous evergreen and armed with spines it was often grafted on to seedlings of *C. limonia* (the lemon) as a dwarfing rootstock.

Such trees in No. 1 clay pots were trained into compact pyramids of about 8 ft or 9 ft in height (2.5 or 3 m). Firm potting is most important, and when well rooted in their final pots with developing fruit, liquid feeding and topdressing is essential. A 3 in. wide (7.5 cm) metal collar is first fixed around the inside rim of the pot for support for the topdressing which consisted of sifted final potting compost fortified with approved fertilizers. This was removed after the fruit was gathered and a fresh top dressing applied to nourish the trees while bearing their next crop. Under average growing conditions with a minimum winter night temperature of 10°C (50°F), the trees came into flower from late February to April and where the citrus collection varieties I had the pleasure of tasting, the blood orange and 'St. Michael's' were the juiciest and sweetest. The head gardener would halve one and share it with me occasionally, often amused to see the juice run on to my boots, which he himself had acquired the knack of avoiding. The tangerine deserves to be more often grown, it makes a compact round headed bush in an 8 in. or 10 in. pot (20 or 25 cm), in which it will usually flower and fruit freely. It can be accommodated in the modern, small, moderately heated light greenhouse and when space is limited during June, July and August, it can be sunk to its pot rim in a border under a warm wall out of doors.

One of the very interesting features of the orange grown under glass in England, is that the trees come into flower while the fruit developed from the previous year's flowers, are ripening, and what an ornamental attraction this is. Under glass, citrus fruit trees are very susceptible to attacks of insect pests, especially mussel scale (*Lepidosaphes ulmi*), ovstershell scale (*Aspidiotus astreaciformis*), and mealy bug (*Dactvlopius adonidum*). The great difficulty arises because the plants are so easily damaged by certain insecticides which are capable of controlling these pests. As a young foreman 50 odd years ago, I was appalled by the time involved by the staff in sponging and spraying a large collection of these plants with Bentley's Liquid Nicotine Soap, and Bentley's Soluble Paraffin Oil, the only effective materials I was permitted to use.

Passion fruit

My last 'tropical fruit' is the granadilla *Passiflora edulis*, not so much for its importance as for the confusion which exists between it and the hardy ornamental *Passiflora caerulea*, often referred to as the passion flower which, although it will sometimes ripen its orange, egg shaped fruit in a sunny summer, is not the passion fruit: the real passion fruit is the granadilla. Cuttings of the granadilla are easily rooted in a warm propagator in spring. In my opinion, it is best restricted to pot culture as it is somewhat invasive if planted in the glasshouse border. The growths are usually trained up to wires under the roof of a warm glasshouse, the laterals hanging down bearing the flowers and fruit.

courtesy Fiona Woodfield

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