No	Crop	Variety	Production Technology / Recommendations
1	Mango	Alphonso	✓ 75 g N + 20g P_2O_5 + 70 g K_2O/tree/year of age from 1st to 10th orchard years and continuation of the 10th year dose in subsequent years recommended for maximum fruit yield. ✓ Seedlings of nucellar origin from the varieties 'Vellaikulamban' for dwarfing effect and 'Olour' for medium vigour as rootstocks recommended. ✓ Paclobutrazol (0.25g / tree / year of age) as soil drench during October-November for enhanced fruit yield, suppressed vegetative vigour and early crop by a fortnight for trees of 10 -20 years age. ✓ Continued annual application of Paclobutrazol for 3 years found to build up residual influence; hence dose can be tapered down or discontinued for 1 or 2 years without compromising the beneficial effects. ✓ Pruning the trees at 5m height followed by application of 800g N + 300g P_2O_5 + 1000g K_2O + 50 Kg FYM + 3ml (25% EC) Paclobutrazol / m canopy spread recommended for rejuvenation of old, unproductive trees. ✓ HDP of 'Alphonso' at 1000 trees per hectare (4.0m x 2.5m) on 'Olour' rootstock with annual paclobutrazol application @ 0.125 g / tree / year of age from fourth year and stabilized by 10th year for five-fold increase, while at 500 trees per hectare (5m x 4m) on 'Vellaikulamban' rootstock without use of paclobutrazol for 3.5 times increase in productivity during the initial fifteen orchard years over the conventional planting at 100 trees per hectare on random rootstock.
		Totapuri	✓ Nitrogen @ 50g along with 8.6g P_2O_5 and 58.1g K_2O / tree/ year of age, stabilized by the 10thyear recommended for good growth and fruit yield under rainfed conditions. ➢ Olour identified as the best polyembryonic rootstock

<table>
<tr><td></td><td colspan="3"> 
High density planting in mango</td></tr>
<tr><td rowspan="4">2</td><td rowspan="3">Banana</td><td>Robusta</td><td>4400 plants /ha (1.5 m x 1.5 m spacing) --120t/ha</td></tr>
<tr><td>Dwarf Cavendish</td><td>4400 plants (1.5 m x 1.5 m spacing) --100t/ha</td></tr>
<tr><td>Ney Poovan</td><td>5120 plants/ha (1.5 m x 1.5 m- triangle planting) recommended, which is 16% more than 4440 plants/ha (1.5 m x 1.5 m planting).</td></tr>
<tr><td colspan="3"> 
High density planting in Banana</td></tr>
<tr><td rowspan="2">3</td><td rowspan="2">Papaya</td><td>Coorg Honey Dew</td><td>A spacing of 1.2 m x 1.8 m (4629 plants/ha) is optimum for maximum fruit yield (146 t/ha over 3 year period) and 250 g N, 250 g P_2O_5 and 500 g K_2O/plant/year to be applied in 6 equal splits at bi-monthly intervals.
Petiole of 6thleaf from the tip recommended for nutritional diagnosis.</td></tr>
<tr><td>Arka Surya</td><td>Cultivation through organic nutrition increased the carotenoid content by 1.4 times and shelf life by 3-4 days compared to 100% recommended dosage of fertilizers.</td></tr>
</table>

4	**Grapes**	**Dogridge rootstock**	 ✓ Dogridge identified as the best rootstock for drought and salinity conditions ✓ Bud dormancy during October pruning can be overcome by the use of Hydrogen Cynamide swabbing to the terminal three buds ✓ Package of practices for growing Sharad Seedless and Flame Seedless under 'Y' trellis system standardized ✓ Application of GA (25 ppm) and BA (10 ppm) as post bloom dipping at 4 mm berry stage and GA (25 ppm) at 8 mm berry stage ensures desired berry size and quality in seedless grape varieties. ✓ Halting of canes to 4thand 5thnode and developing single sub-cane per cane recommended for good quality bunch and fruit attributes in Flame Seedless and Sharad Seedless. ✓ Spraying CCC 1000-1500 ppm during back pruning for enhancement of fruit bud differentiation. ➢ The problem of delayed graft compatibility of Red Globe grapes on Dogridge rootstock solved through removal leaf lamina for five days combined with treating cut end of scion with 100 ppm BAP for 30 seconds before grafting. ➢ Quality improvement practices in coloured seedless grapes viz., Crimson Seedless and Red Globe standardized wherein spraying of 5ppm GA_3 at pre bloom stage for Crimson Seedless and spraying of 2% Copper Hydroxide at full bloom stage in Red Globe reduced cluster compactness. In both the

<table>
<tr><td></td><td></td><td></td><td></td><td>varieties, berry thinning at 8 mm stage and dipping bunches with 200 ppm ethrel could produce good quality grapes measured in terms of berry diameter, berry weight, cluster compactness and anthocyanin content.</td></tr>
<tr><td>5</td><td>Pine apple</td><td colspan="3">
<table>
<tr><td colspan="2">Plant population</td><td colspan="3">Spacing (cm)</td><td></td></tr>
<tr><td>Per hectare</td><td>Per acre</td><td>Plant to Plant within row</td><td>Row to Row</td><td>Trench to Trench</td><td>Yield(t/ha)</td></tr>
<tr><td>43,500</td><td>16,500</td><td>30</td><td>60</td><td>90</td><td rowspan="3">85 to 105</td></tr>
<tr><td>53,000</td><td>21,450</td><td>25</td><td>60</td><td>90</td></tr>
<tr><td>63,500</td><td>25,700</td><td>22.58 or 22.5</td><td>45 or 60</td><td>90 or 75</td></tr>
</table>
✓ Suckers of 450g weight and slips of about 350g weight ideal for propagation
Plant crop
✓ About 12g N / plant recommended under irrigated conditions; 16g N / plant recommended under rainfed conditions
✓ K_2O at 12g / plant recommended for irrigated as well as rain fed crop
Ratoon crop
✓ About 10g N/ plant for irrigated and 12g / plant recommended for rain fed crop. Nitrogen to be applied in six split doses between 2 and 12 months after planting
✓ Potash to be applied in two splits 2 and 6 months after planting
✓ Induction of synchronized flowering with application of 25ppm ethephon in combination with 2% urea and 0.04% calcium carbonate in Kew Pineapple.</td></tr>
<tr><td>6</td><td>Fig</td><td colspan="3">✓ High density planting of fig varieties Poona and Deanna at 1000 plants per hectare with initial training of trees to open centre frame work and annual pruning of previous season's shoots to the basal six nodes during August - September is promising for considerable enhancement in fruit productivity during the initial six orchard years by 2.5 times in case of Poona and twice in case of Deanna over conventional 500 trees per hectare.</td></tr>
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7	**Annona**	✓ A four year field study conclusively ascertained that 25% replacement of RDF with chemical fertilizers is possible with the application of Bio-fertilizer Consortium (AMC) in 10 Kg FYM per plant in Arka Sahan annona.
8	**Guava**	✓ Rain-fed guava production technology standardised with 225m^3 runoff water harvested per ha of guava orchard with average annual rainfall of 850 mm which could be used for post flowering irrigation replenishment of 50% evaporation coupled with polythene mulching of raised soil around the root zone.
9	**Dragon fruit**	✓ **Canopy Management:** Among four different trellis systems of single post of 6 feet height and 5 inch thickness erected at 2 feet depth with cement concrete or iron ring at the top end of the pole, continuous pyramid stands and 'T' stands evaluated, single post system showed better performance in growth and yield than other systems. Fabrication cost of cement concrete post of above dimension with 2 feet diameter cement concrete ring of 2 inch thickness is around Rs. 550/-, while that with 8-10 mm tmt rod or tyre ring costs around Rs. 450/-. Cement concrete single post with cement ring are most durable followed by single stone post with iron / tyre ring. In single post system, planting is done at 3m x 3 m distance. The Dragon fruit plant may be planted near the poles to enable them to climb easily. Number of plants per pole may be 2 to 4 depending on the climatic condition. Pruning right from the first year after planting is important to force the plant to climb over the entire support. All lateral growth and parts of the plant facing the ground should be removed, while the main stems and branch stems are kept. Whatever the support used, the stem must be attached to it with a twine. Further pruning consists of removing all the damaged stems from the plant in addition to those that are entangled with one another. Once vines reach to the top of the stands, tip of main stem can be removed to allow the branches to grow laterally at the ring to form an umbrella like structure of vines. A well grown vine may produce 30 to 50 branches in a year and more than 100 branches in four years.