

JANUARY

General :-

- (1) Dig / refill the pits (1m x 1m x 1m) in the already laid out areas for Spring Plantation.
- (2) Prepare tree basins and apply/mix the full dose of FYM and DAP in the orchards.

MANGO

- (1) Heading back of limbs of old plants for rejuvenation.
- (2) Irrigate the new orchards to reduce the effect of Frost.
- (3) For control of Mealy Bug, treat basins with 2% Methyl Parathion dust @ 250gm/basin. Use alkathene or sticky osticogreese bands 15-20 cm wide by tying around trunks 0.5 m above ground level.
- (4) Spray Dinocap @ 0.5ml/litre of water against Powdery Mildew.
- (5) For control of Mango Malformation, spray Carbendazim @ 0.2% (one spray) followed by spray of Potassium Metabisulphite @ 60gms /100 ltrs of water.

CITRUS

- (1) Spray Copper Oxychloride @ 3gm/ litre of water or Bordeaux mixture 1:1:100 against Dieback, Gummosis & Citrus Canker.
- (2) Prune diseased, dead and ground touching branches after harvesting of fruit. Spray Copper Oxychloride @ 3gm/litre of water after pruning. Burn the pruned wood.

GUAVA

- (1) Sterilize the pits with Formalin in the Wilt affected areas before plantation.
- (2) Drench the plants with Carbendazim @ 1gm/litre of water against Guava Wilt.

GRAPES

- (1) Complete the pruning of Grape plants.
- (2) Prepare the Grape cuttings & dump them in trench for callousing.
- (3) Apply half dose of Urea & MOP after pruning.
- (4) Spray Copper Oxychloride @ 3gm/litre or Bordeaux mixture 1:1:100 after pruning.

BER

- (1) Head back desi/inferior Ber plants for top working with superior cultivars.
- (2) Apply Bordeaux paste to the cut surface to protect against diseases.

AONLA

- (1) Apply half dose of Urea & MOP as per the age of the plants.
- (2) Harvest fruit of late varieties.

PEACH (UNDER SUB-TROPICAL CONDITIONS)

- (1) Complete the pruning operation during this month.
- (2) Spray the plants with Copper Oxychloride @ 3gm/litre after pruning against Fungal diseases.
- (3) Spray Mancozeb @ 2gm/litre or Carbendazim 0.5gm/litre at bud swell.

LITCHI

- (1) Apply Litchi culture medium at the time of refilling of pits.
- (2) Apply full dose of MOP & half dose of Urea during this month.
- (3) Irrigate the orchard to reduce the effect of Frost.
- (4) Head back limbs of old plantation for rejuvenation.

APPLE, PEAR, PEACH, PLUM, APRICOT AND ALMOND

- (1) Prune Apple trees, if not done earlier followed by application of White Lead paint to all pruned cuts during first fortnight of January.
- (2) Application of full dose of Phosphorous and Potash, if not applied during December month as per age of the tree during 1st week of January.
- (3) Spray of Diesel oil emulsion as dormant spray, if not accomplished during December, for control of Sanjose Scale in the ratio of 1:7.
- (4) If required i.e. under heavy snow fall, remove snow from tree canopy to avoid splitting of branches.

WALNUT AND PECAN-NUT

- (1) Light pruning as per need be completed within 1st week of January. Light pruning is required for removal of dried / diseased twigs besides pruning of such branches which grow within tree canopy in order to ensure penetration of sunlight.
- (2) Apply White Lead paint to all pruned ends.
- (3) Apply full dose of Phosphorous and Potash, if not applied during December as per age of the tree during 1st week of January.

FRUIT PLANT NURSERIES

- (1) Stratification of Walnut seeds for sowing purpose be got completed, if seeds are not sown in the month of December.
- (2) Sowing of Pecan Nut seed in well prepared seed beds be completed, if not done earlier.
- (3) Heading back of mother plants of Mango and Litchi to encourage bud wood availability.

FEBRUARY

GENERAL : Complete Spring Season Plantation.

MANGO

- (1) Prune frost damaged twigs.
- (2) Remove thatch material from young plants if temperature rises.
- (3) Provide irrigation to young plants.
- (4) Provide staking to young plants.
- (5) Spray Dimethoate @ 1ml/litre of water or Carbaryl 50 WP @ 2gm/lit of water against Mango Hopper at panicle emergence stage & against nymphs of Mealy Bugs.
- (6) Tie alkathene bands 15-20 cm wide around tree trunk at a height of 0.5 m above ground level against Mealy Bug.
- (7) Spray Dinocap @ 0.5ml or Carbendazim @ 0.5gm/litre of water at 10 days interval against Powdery Mildew.
- (8) Apply whole MOP & half Urea before flowering.
- (9) Spray Copper Oxychloride @ 0.3% plus Zineb (0.2%) twice at flowering stage at 15 days interval for control of Mango Anthracnose.

CITRUS

- (1) Replace the dried/damaged plants by replanting same kind / variety.
- (2) Spray Dimethoate 30EC @ 1ml/litre of water against Leaf Miner, Citrus Psylla and Lemon Butterfly.
- (3) Spray Copper Oxychloride @ 3gm/ litre or Captan 2gm/litre of water against Dieback, Anthracnose, Citrus Canker.

GRAPES

- (1) Spray Copper Oxychloride @ 3gm/litre after pruning for the control of Anthracnose & Dead arm.

LITCHI

- (1) Replace the dried/ damaged plants by replanting same kind & variety.
- (2) Apply half dose of Urea in the middle of Feb.
- (3) Apply frequent irrigation if required.
- (4) Spray Dimethoate @ 1ml/litre against Litchi Leaf roller.

AONLA

- (1) Complete plantation in the new orchards with more than one cultivars.

PEACH (UNDER SUB-TROPICAL CONDITIONS)

- (1) Apply half of the Urea at full bloom stage after fruit set.
- (2) Repeat spray against Leaf Curl with Carbendazim @0.5 gm/litre or Mancozeb 2 gm/litre of water.

- (3) Spray Dimethoate 30 E.C @ 1ml/litre of water against Peach Leaf Curl Aphids.
- (4) Treat the plants against Gummosis by scraping the diseased portion along with some healthy part with knife & then washing with Mercuric Chloride (1 gm/litre) & applying Bordeaux paste 2:2:30.

APPLE AND PEAR

- (1) Pruning operation, if not done earlier be got completed followed by application of White Lead paint to all pruned surfaces.
- (2) Scrub lichens grown on Apple tree trunks and branches followed by spray of Caustic soda 1 % (10 gm/lit) solution.
- (3) Dormant spray of Diesel oil emulsion or TSO can be done, if not completed earlier in the ratio of 1:7 or 1:30 respectively.
- (4) Plantation in case of Apple be started, in already laid out areas and dug out plantation pits for establishing new Apple orchards.
- (5) Freshly planted Apple plants be watered immediately after plantation to ensure root system to fix with soil.
- (6) Zinc deficiency be corrected by application of Zinc Sulphate @ 0.5 to 1 Kg. per tree (ground application) depending upon age of the tree.

STONE FRUITS (PEACH, PLUM, APRICOT)

- (1) Plantation of stone fruit plants be started in already dug out plantation pits.
- (2) Top working of stone fruit trees be started by second week of February.
- (3) Pre-Bloom spray of stone fruit trees particularly against Leaf Curl disease be got done by spraying Copper Fungicide @ 3gm/lit of water.
- (4) Apply Nitrogenous fertilizer 1/2 dose to such cultivars of stone fruits which come to flowering earlier.

WALNUT

- (1) Plantation of Walnut plants be started in already dug out plantation pits.

ALMOND

- (1) Spray Copper Compound @ 3gm/litre during 1st week as pre bloom spray.
- (2) Plantation of Almond plants be started in already dug plantation pits.
- (3) Care should be taken for planting polinizers in the newly established orchards in the ratio of 3:1.
- (4) Application of Urea and Potash be ensured during 2nd week of the month in rings as per age of the tree.

PECAN NUT

- (1) For establishing new orchards, plantation of Pecan Nut plants be started in well prepared/ dug out plantation pits.

FRUIT PLANT NURSERY

- (1) Grafting of nursery stocks in case of Apple, Pear and Walnut be started during last week of February. In case there is rise in temperature, the said operation can be started by middle of the month.
- (2) Sowing of the stratified seeds of Walnut be started from mid of the month.
- (3) The fruit plants budded earlier be Headed back and un-tying of Alkathene be completed. The Headed back material be collected and destroyed.
- (4) Sowing of Guava seeds in the nursery.

MARCH

GENERAL : Continue Spring Plantation in Irrigated Areas

MANGO

- (1) Remove the thatching material if not done earlier.
- (2) Provide irrigation to the young plants.'
- (3) Pinch off water/stocks sprouts from the plants.
- (4) Remove tying material from graft union.
- (5) White wash exposed trunks/ stems with mixture of Slaked Lime & Copper Sulphate against Sunburn/ Fungal diseases.
- (6) Apply half dose of Urea if not applied in previous months.
- (7) Repeat spray schedule of Feb. against Mango Hopper at pea size fruit formation stage with alternative insecticide.
- (8) Spray Methyl Parathion 50 EC @ 1ml/litre of water against Mango Scales and Shoot Borer.
- (9) Spray Dinocap @ 0.5ml/litre of water or Carbendazim 0.5 gm/ litre of water against Powdery Mildew.
- (10) Spray Carbendazim @ 1gm/litre against Mango Malformation & Anthracnose.

CITRUS

- (1) Irrigate the Citrus orchards at weekly intervals to promote the spring flush.
- (2) Give half dose of Urea to Citrus plants as per the age.
- (3) Spray Zinc Sulphate @ 3gm/litre if Zinc deficiency symptoms are observed.
- (4) Repeat operation from Sr. No 3 to 6 as in Mango.
- (5) Spray the plants with Dimethoate @ 1ml/litre or Methyl Parathion @ 1 ml/ litre of water against Citrus Psylla & Leaf Miner.
- (6) Spray Copper Oxychloride @ 3gm/litre of water against Anthracnose, Canker, melanose and Dieback in Citrus. Repeat spray at fortnightly interval.

GUAVA

- (1) Give half dose of Urea.
- (2) Repeat operation of Sr. No. 4 & 5 as in Mango.

- (3) To avoid rainy season crop spray Urea @ 10gm/litre of water at full bloom stage.
- (4) Prune dried / diseased branches and drench with Carbendazim @ 1gm/litre of water in the basins against Guava Wilt.

BER

- (1) Complete Heading back operation.
- (2) Harvest the mature fruits.
- (3) Spray Dimethoate 30 E.C @ 1.5 ml/litre against Ber Fruit Fly.
- (4) Stop spraying atleast 15 days before fruit harvesting.
- (5) Clean cultivation / sanitation of orchards by picking and destroying the infested fruits.

PEACH (UNDER SUB-TROPICAL CONDITIONS)

- (1) Apply remaining half dose of Urea.
- (2) Repeat operations from Sr. No.3 to 6 as in Mango.
- (3) Repeat spray against Peach Leaf Curl Aphids as in February.
- (4) Repeat treatment against Gummosis as in Feb.

LITCHI

- (1) Spray Methyl Parathion 50 EC @ 1ml/litre of water at fruit set stage against Nut Borer.
- (2) Provide irrigation as per requirement after fruit set.

ANAR

- (1) For control of Anar Butterfly, spray Cypermethrin 10EC or 25EC @ 7ml / 10 litres of water or 3ml / 10 litres of water respectively when flowering starts i.e. end of March to 1st week of April depending upon the location.

AONLA

- (1) Attempt Chip budding from 15th of March.

APPLE AND PEAR

- (1) Dormant spray with Diesel oil emulsion in the ratio of 1:7 be completed by 1st week, if not done earlier.
- (2) Spray Dinocap @ 50ml/100 litres of water or Carbendazim @ 50gm/ 100 litres of water or Triadimefon 25WP @ 50gm/ 100 litres of water against Powdery Mildew.
- (3) Complete top working of inferior cultivars of Apple and Pear, if existing in the orchard.
- (4) Pruning be completed at higher altitudes.
- (5) Prepare basins up to canopy of the tree during last fortnight.

STONE FRUITS (PEACH, PLUM, APRICOT)

- (1) Second spray of Copper Fungicide @ 3gm/litre of water against Leaf Curl / Blight be sprayed when 80% petal fall occurs (15th March to end of March).
- (2) Prepare basins up to canopy of the tree.

WALNUT

- (1) Complete sowing of stratified seeds.
- (2) New Walnut plants be transplanted completely in 1st fortnight.
- (3) Prepare basins during last fortnight.
- (4) Apply Urea and MOP as per age of the tree in two separate rings dug out in the basin.

ALMOND

- (1) Spray Copper Compound as pre-bloom spray @ 3gm/ litre of water as prophylactic measure for control of Die back and Almond Blight when 80% petal fall occurs.
- (2) Prepare basins during last fortnight.

PECAN NUT

- (1) Plantation of Pecan Nut be got completed in 1st fortnight.
- (2) Prepare basins during last fortnight.

FRUIT PLANT NURSERIES

- (1) Complete grafting of Apple and Pear.
- (2) Head back last years budded plants, if not done earlier. Care should be taken that it should be done in 1st week of the month.
- (3) Complete sowing of stratified Walnut seeds in 1st week of the month.
- (4) Start removal of weeds from nursery beds in order to keep them neat and clean to avoid nutrient competition by plants and weeds.
- (5) Budding of Citrus plants.
- (6) Sowing of seeds of Citrus fruits.
- (7) Grafting of Mango seedlings/root stock.
- (8) Sow seed in the nursery after giving soaking treatment with water for 48 hours or with concentrated Sulphuric acid for 6 hours or with Gibberalic acid @ 200mg/ litre of water for 6 hours.

APRIL

MANGO

- (1) Repeat spray schedule against Mango Hopper as in February and March.
- (2) Spray Dinocap @ 0.5ml/litre or Wettable Sulphur 2 gm/ litre against Powdery Mildew.
- (3) For control of Mango Anthracnose, spray Carbendazim 0.1% @ 1gm/lit of water at 15 days interval.

CITRUS

- (1) Frequency of irrigation be increased to weekly intervals.
- (2) Apply half of Urea in April after fruit set if not applied in March.
- (3) Provide thatches /covers to the young Citrus plants but ensuring free circulation of air.
- (4) Spray 2, 4D @ 10mg/litre of water against Fruit drop.

- (5) Spray Zinc Sulphate @ 3gm/litre against Zinc deficiency, if observed.

GRAPES

- (1) Remaining half dose of Urea and MOP be applied after fruit set.
- (2) Thinning of crop be carried out if the crop load is heavy.
- (3) Spray Carbendazim @ 0.5gm/ litre of water against Anthracnose in last week of April at 10-15 days interval.

BER

- (1) Sowing of Ber seed in April after giving treatment as mentioned in March.
- (2) Repeat the spray against Fruit Fly as in March.
- (3) Harvesting of mature fruits.

LITCHI

- (1) Apply remaining half of Urea during last week of April to improve the fruit quality.
- (2) Give irrigation at weekly intervals.
- (3) Spray Zinc Sulphate @ 1.5gm/litre or Gibberalic acid @ 40mg/ litre of water at weekly interval against fruit cracking.
- (4) Spray N.A.A. @ 30-40mg/litre or Gibberalic acid 20-50 mg/litre of water against fruit drop.
- (5) Repeat spray against Nut Borer as done in March.

GUAVA

- (1) Spray NAA @ 600ppm when maximum flowers have opened for eliminating rainy season crop to get heavy & superior quality of winter crop.

ANAR

- (1) For control of Anar Butterfly , spray of Cypermethrin 10EC or 25EC @ 7 ml / 10 litres of water or 3ml / @ 10litres of water respectively should be carried out after 15 days of 1st spray.

PEACH (UNDER SUB-TROPICAL CONDITIONS)

- (1) Budding on wild root stock be done.
- (2) Harvest early cultivars of sub-tropical Peach.
- (3) Wrapping of stem or trunk of plants with old gunny bags, news papers, grass, etc to protect the plants against hot weather.
- (4) Irrigate the orchards regularly.
- (5) Keep basins free from weeds.
- (6) Remove stock/water sprouts from the young plants as and when they emerge.

APPLE AND PEAR

- (1) 1st spray against Scab at Pinkbud stage (Mid April to ending April) with Dodine 65WP @ 60gm/100 litres of water or Fenarimol 12 EC @ 40 ml/ 100 litres or Bittertanol 25 WP @ 50gms/100 litres of water.
- (2) Spray Chloropyriphos 20 EC @ 100ml/100 litres of water 3 to 4 days after 1st spray against Scab as a prophylactic measure against Blossom Thrip.
- (3) Staking of new plantation.
- (4) Removal of off shoots/water sprouts of fruit trees/nursery stocks.
- (5) Ensure proper drainage.

STONE FRUITS (PEACH, PLUM, APRICOT)

- (1) Spray Copper Fungicide @ 3gm/litre of water at post bloom/fruit set stage during 1st fortnight to 2nd fortnight.
- (2) Spray Chloropyriphos 20 EC @ 100ml/100 litres of water or Malathion 50 ml/ 100 litres of water for control of Aphid/Mite attack, 3 to 4 days after Copper Compound spray.
- (3) Staking of new plantation.
- (4) Removal of off shoots/water sprouts of stone fruit trees.
- (5) Ensure proper drainage.

ALMOND

- (1) Stake the new plantation.
- (2) Ensure proper drainage.
- (3) Remove off shoots/ water sprouts of fruit trees.
- (4) Post bloom spray of Copper Fungicide be given @ 3gm/ litre of water against advanced Blight Leaf Curl .
- (5) 3-4 days after post harvest spray of Copper Fungicide, spray Malathion @ 50ml/100 litres of water against attack of Aphids.

WALNUT

- (1) Stake the young new plantation.
- (2) Defoliation at stem level leaving behind top foliage.
- (3) Ensure proper drainage.
- (4) If growth of phanerogamic parasite is observed on the Walnut plantation, the same should be removed and in case of severe infestation, the entire branch or twig should be removed and then burnt.

PECAN NUT

- (1) Staking of young/new plantation.
- (2) Ensure proper drainage.
- (3) Removal of off shoots/ water sprouts of mother trees.

FRUIT PLANT NURSERIES

- (1) Removal of off shoots from nursery stocks.

- (2) Drenching of young nursery stocks of Apple and Pear with Carbendazim group of Fungicide as prophylactic measures against Damping off/ Root rot.
- (3) Defoliation at stem level leaving behind 3-4 leaves at the top of nursery saplings in case of Walnut to ensure vegetative growth..
- (4) Drenching of young nursery stocks/ seedlings with Carbendazim @ 1gm / litre of water.
- (5) Removal of off shoots.
- (6) Hoeing of nursery stocks.
- (7) Application of Nitrogenous fertilizers to nursery stocks. Removal of weeds and their destruction.
- (8) Sowing of Aonla seeds in nursery.
- (9) Grafting of Mango seedling/root stock.
- (10) Budding of Citrus root stock.

MAY

GENERAL

- (1) Prepare layout plan for Rainy Season Plantation.
- (2) Budded/Grafted plants which will be ready for sale in Rainy Season must be given light dose of Nitrogen.

MANGO

- (1) Provide thatch/ cover to the young Mango plants made of karkana, maize or sugarcane trash or any other farm waste material with free circulation of air.
- (2) Plants planted during February- March may be looked after carefully and stake properly for their upright growth.
- (3) Remove stock/water sprouts, off shoots from newly planted young plants.
- (4) Give frequent irrigation to young plants.
- (5) Spray Dimethoate @ 1ml/litre of water or Monocrotophos @ 1ml/litre against Hopper, if necessary.
- (6) Spray Copper Oxychloride @ 3gm/litre or Bordeaux mixture 1:1:100 against Fruit Rotting fungi, Leaf Blight and Twig Dieback.
- (7) Spray of Copper Oxychloride @ 0.3% should be carried out before stone maturation stage and repeat the spray of Carbendazim @ 0.1% after 15 days to control Mango Anthracnose.

CITRUS

- (1) Repeat operations from Sr. No.1 to 4 as in Mango.
- (2) Spray Dimethoate @ 1ml/litre against Citrus Psylla, Leaf Miner and Lemon Butterfly.
- (3) To control Citrus Decline spray Zinc Sulphite (1kg) + Lime (500gm) dissolved in 200 ltrs of water.

GRAPES

- (1) To avoid damage by Wasps, cover the Grape bunches with muslin cloth.
- (2) Burn or smoke the wasp nests on hedges/trees at sunset.

GUAVA

- (1) Apply half dose of chemical fertilizers for rainy season crop during the month as per age of the plants.

BER

- (1) Prune the Ber plants after harvest.

LITCHI

- (1) Repeat Zinc Sulphate spray against fruit cracking as done in April along with frequent irrigation.
- (2) Repeat spray against pre-harvest Fruit drop as done in April.
- (3) Spray Methyl Parathion @ 1ml / litre of water against Litchi Nut Borer.

PEACH (UNDER SUB-TROPICAL CONDITIONS)

- (1) Harvest early cultivars of sub-tropical Peach (Floridasun) when fruit has attained proper maturity.

APPLE AND PEAR

- (1) Second spray against Scab with Hexaconazole 5 EC @ 30ml/100 litres of water or Triadimefon 25 WP @ 50gms/100 litres at the stage when 80% petal fall occurs.
- (2) After 3-4 days of spray against Scab, ensure second spray of insecticides viz Phosalalone 35 EC @ 140ml/100 litres of water or Dicofol 18.5 EC @ 108ml/100 litres of water.
- (3) White washing of tree trunks with solution of Lime and Copper Sulphate in the ratio 10:2 to avoid effect of Sun burn of tree trunks.
- (4) Mulching of mother trees with mulching material viz. mulch film or dried paddy straw.
- (5) Irrigation be provided to newly planted fruit plants.
- (6) Removal of water sprouts/ off shoots from mother trees.

STONE FRUITS (PEAR, PLUM, APRICOT)

- (1) Spray Copper Compound @ 3gm/litre of water at pea size/fruit let stage.
- (2) 7 days after Copper spray, insecticidal spray viz. Chloropyriphos 20 EC @ 100ml/100 litres of water against Caterpillar and Woolly Aphids.
- (3) Mulching to be done wherever needed.
- (4) Selective harvest of ripened fruit of stone fruits viz, Apricot. Irrigate newly planted fruit plants.
- (5) White washing of tree trunks with solution of Lime and Copper Sulphate in the ratio of 10:2.

WALNUT

- (1) Burlap skirts around tree trunks of Walnut trees infested with Hairy Caterpillar and collection of larva, pupae and their destruction.
- (2) Spray Walnut trees wherever possible with Chloropyriphos @ 200ml in 100 ltrs of water against Aphids, Mites, Hairy Caterpillar.
- (3) Irrigate newly transplanted plants.

ALMOND

- (1) Spray Copper Compound @ 3gms/litre of water against Leaf Curl , Blight, Blotch and Die back.
- (2) After 7 days interval of Copper Compound spray against Mites, Aphids be ensured with Chloropyriphos @ 1ml/litre of water.
- (3) Irrigate new plantation.
- (4) White washing of tree trunks with solution of Lime and Copper Sulphate in the ratio of 10:2.

PECAN NUT

- (1) Spray of Copper Oxychloride or Mencozeb @ 3gm/ litre of water against Leaf Blotch.
- (2) Irrigate newly planted plants.

NURSERY STOCKS

- (1) 2nd hoeing to be ensured to ensure proper soil aeration, Nitrification and destruction of weeds.
- (2) Apply Nitrogenous fertilizer to nursery stocks.
- (3) Removal of off shoots of nursery stocks.
- (4) Sowing of seeds of leguminous crops in vacant nursery areas for Green manuring.
- (5) Spray with Dinocap @ 50ml/100 litres of water or Tridimefon 25 WP @ 50gm/100 litres of water to check the infection of Powery Mildew in case of Apple and Pear plants.
- (6) In case of Walnut plants defoliate leaves at stem level while retaining top foliage to promote healthy growth of nursery stocks.
- (7) Irrigate the nursery areas.

JUNE

GENERAL : Complete digging & refilling of pits for Rainy Season Plantation.

MANGO

- (1) Spray Dimethoate @ 1ml/litre of water against Hopper if necessary.
- (2) Remove the vegetative and floral mals from Mango trees alongwith 20-25 cm healthy portion and then spray Carbendazim @ 0.5gm/litre.
- (3) Spray Borax @ 6gm/litre of water at marble fruit stage against Black tip of Mango if problem is observed.
- (4) Apply remaining half of Urea after fruit set in June.

CITRUS

- (1) Repeat spray against Citrus Psylla, Leaf Miner, if required.
- (2) To control Citrus Decline:-
 - (a) Proper drainage should be maintained.
 - (b) Spray Copper Oxychloride (0.3%) at 15 days interval.
 - (c) Control of insects like Aphids and Psylla should be maintained through spray of Dimethoate (0.3%) as they spread the diseases associated with Citrus Decline.

To check fruit drop in Kinnow:-

- (a) Maintain proper drainage around the plants.
- (b) Drench the plants with Copper Oxychloride @ 60gm per 10 litres of water, repeat after 15 days.
- (c) Or if possible drench the affected plants with Ridomil MZ (0.2%) and foliar spray with same at 15 days interval.
- (d) Thinning of fruits to maintain optimum number of fruits per tree i.e. 200-250 nos for (13-15 yrs) old plants.

GUAVA

- (1) Spray the plants with 1 kg Zinc Sulphate + 1/2 kg of unslaked Lime in 100 litres of water against Zinc deficiency at fortnight interval.

GRAPES

- (1) Treat plants against Wasps as done in May.
- (2) Spray Copper Oxychloride @ 3gm/litre against Anthracnose.
- (3) Spray Carbendazim @ 0.5gm/litre against Powdery Mildew at appearance of disease & repeat at 7-10 days interval.
- (4) Spray Ziram @ 2gm/litre against Rotting of Berries.
- (5) Harvest mature bunches of Grapes.

BER

- (1) Start budding with improved cultivars if sap flow is available.
- (2) Continue pruning of Ber up to first week of June, if not completed in previous month.

PEACH (UNDER SUB-TROPICAL CONDITIONS)

- (1) Budding of wild Peach root stock be done.

ANAR

- (1) Destroy Anar Butterfly infested fruits.
- (2) Give spray of Dimethoate @ 1ml/litre, or Chloropyriphos @ 1.5 ml/litre against Anar Butterfly.

LITCHI

- (1) Harvest Litchi fruits.
- (2) Repeat spray against Litchi Nut Borer.
- (3) Spray Zinc Sulphate @ 3gm/litre of water and provide frequent irrigations to avoid fruit cracking.

APPLE/PEAR

- (1) Spray against Scab with Mencozeb 75 WP @ 300gms/100 ltrs of water or Ziram 80WP @ 200gms/100 litres of water at Peanut stage of fruit development.
- (2) After 3-4 days of spray against Scab, spray Dicofol 18.5 EC @ 108ml in 100 litres of water or Methyl Dimeton 25EC @ 80ml/100 litres of water or Chloropyriphos 20 EC @ 100ml/100 litres of water against Mite, Leaf Miner, Aphids, Orchips.
- (3) Irrigate new plantation.
- (4) Mulching of mother trees, if required.
- (5) Spray Dinocap @ 50ml/100 litres of water or Triadimefon @ 50gms/100 litres of water 7 days after insecticidal spray against Powdery Mildew.
- (6) Staking of fruit ladden branches to avoid limb cracking due to heavy weight of the fruit .
- (7) Un-tying of tying material from top worked fruit mother trees.
- (8) Removal of water sprouts to be continued.

STONE FRUITS (PEACH, PLUM, APRICOT)

- (1) Staking of fruit ladden branches to avoid cracking of branches.
- (2) Harvesting of stone fruits viz. Apricots.
- (3) Irrigate new plants.
- (4) Post harvest spray of Copper Compound @ 300gms/100 litres of water to be ensured.

ALMOND

- (1) Spray Copper Compound @ 300gms/100 litres of water against Dieback, Leaf Blotch and Blight. Care should be taken that spray should be conducted either in morning or evening hours.
- (2) 7 days after spray of Copper Compound , spray with Chloropyriphos @ 100ml/100 litres of water to control attack of Mites/Aphids.
- (3) Irrigate new plantation in morning / evening hours.

WALNUT / PECAN NUT

- (1) Burlaping of mother trees of Walnut to be continued to check the attack of Walnut Weevil.
- (2) Spray Walnut trees wherever possible with Chloropyriphos @ 200ml/ 100 litres of water against Aphids and Walnut Weevils.

FRUIT PLANT NURSERY

- (1) Irrigate nursery stocks.
- (2) To check attack of Powdery Mildew, spray Dinocap @ 50ml/100 litres of water.
- (3) Un-tying of tying material in case of grafted plants.
- (4) Anti Scab spray should be conducted.
- (5) Removal of water sprouts and off shoots to be continued.

- (6) Stone extraction of wild Apricot and Peach to preserve it for seed sowing.
- (7) Weeds should be removed from nursery beds.
- (8) Budding of stone fruits should be started from last week of the month.

JULY

GENERAL : Start Rainy Season Plantation for new orchards & gap filling in old orchards.

MANGO

- (1) Deep ploughing of the orchards immediately after harvest to expose the eggs of Mealy Bugs.
- (2) Harvest Mango at proper maturity.
- (3) Spray Mancozeb or Copper Oxychloride to manage Anthracnose and repeat spray at 8-10 days interval.

CITRUS

- (1) Spray Dimethoate @ 1.5ml/litre against Citrus Psylla, Leaf Miner, White Fly and Lemon cater pillar.
- (2) Proper drainage should be maintained.
- (3) To control Citrus Decline:-
 - (a) Proper drainage should be maintained.
 - (b) Spray Copper Oxychloride (0.3%) at 15 days interval.
 - (c) Control of insects like Aphids and Psylla should be maintained through spray of Dimethoate (0.3%) as they spread the diseases associated with Citrus Decline.

GUAVA

- (1) Remaining half dose of chemical fertilizers be applied in first week of July for winter crop.
- (2) Air layering operation be conducted.
- (3) Shallow ploughing of orchard area with cultivator after crop harvest is effective in exposing and killing the pupating larvae/pupae which are present at 4-6 cm depth.
- (4) Apply Bait spray at 10-15 days interval with Malathion 200 ml + Gur 1 kg. in 100 litre of water against Fruit Fly.
- (5) Drenching the basins with Carbendazim @ 1gm/litre in the Wilt affected areas.

GRAPES

- (1) Spray Carbaryl @ 2gm/litre against Chaffer Beetle at weekly interval during evening.
- (2) Spray Copper Oxychloride @ 3gm/litre against Anthracnose before bud swelling and repeat as per disease severity.

BER

- (1) Continue budding operation during the month.

- (2) Transplant the Ber seedlings.
- (3) Whole quantity of required fertilizer/ manures be applied in monsoon in rainfed areas, while in irrigated areas, half of the fertilizer can be applied in the month of July.

LITCHI

- (1) Continue air layering.
- (2) Maintain humidity in the orchards.
- (3) Spray Zinc Sulphate @ 3gm/ litre against fruit cracking till harvest of crop.

APPLE / PEAR

- (1) 14- 18 days after fourth spray against Scab, spray Penconazole 10 EC @ 50ml/100 litres of water or Fenarimol 12 EC @ 40 ml/100 litres of water or Bittertanol 25 WP @ 5 gm/100 litres of water against Alternaria.
- (2) 3-4 days after spray against Alternaria, spray Phosalone 25 EC @ 140 ml/100 litres of water or Methyl Dimeton 25 EC @ 80ml/100 litres of water against Mite.
- (3) 7 days after insecticidal spray of Apple, spray Dinocap @ 50ml/100 litres of water or Triadimefon @ 50ml/100 litres of water against Powdery Mildew on need basis.
- (4) Staking of heavy fruit laden branches to be continued.
- (5) Harvesting of early varieties of Pome fruits to be started.
- (6) Irrigate new plantation.

STONE FRUITS (PEACH, PLUM, APRICOT)

- (1) Stone extraction of wild Apricots and Peaches.
- (2) Harvesting late varieties of stone fruits.
- (3) Irrigate new plantation.

WALNUT

- (1) Burlaping to be continued to control infestation of Weevils.
- (2) Spray with Chloropyriphos @ 100ml/100 litres of water to control attack of Blister Mite and Walnut Weevil.

PECAN NUT

- (1) New plantation to be irrigated.

FRUIT PLANT NURSERIES

- (1) Ensure spray of Dinocap @ 50 ml/100 litres of water on nursery stocks to check attack of Powdery Mildew.
- (2) Budding of stone fruits to be completed.
- (3) Start arrangements for procurement of bud wood for budding of Apple, Pear and Walnut.
- (4) Apply Nitrogenous fertilizers to nursery stocks followed by irrigation to ensure proper sap flow in case of Apple, Pear and Walnut stocks.
- (5) In case of Walnut, procurement of bud wood sticks with plump vegetative buds to be started.

AUGUST

GENERAL : Continue plantation of new orchards and gap filling in old orchards.

MANGO

- (1) Continue harvesting of fruits.
- (2) Keep the orchards weed free.
- (3) Prune the over crowded and dried branches and spray Copper Oxychloride @ 3gm/ litre to control Die back, Blight and Anthracnose.
- (4) Spray the new growth once or twice with Methyl Parathion 50EC @ 600 ml/500 litre of water against Mango Shoot Borer.
- (5) Diseased twigs, leaves and fruits fallen on grounds should be collected and burned besides infected twigs on tree should be pruned and disposed off.

CITRUS

- (1) Drain out excess of water from the orchard.
- (2) Harvest Lemon fruit .
- (3) Repeat the spray schedule against insects/ pests as done in July.
- (4) Spray Streptomycin @ 500mg/litre or Copper Oxychloride @ 3gm/litre against Citrus Canker after pruning/destroying the infected shoots. Repeat spray at 10-15 days interval.
- (5) Spray Zinc Sulphate @ 3gm/litre against Zinc deficiency if observed

in summer flush of Citrus.

- (6) To control Citrus Decline, use compatible and disease free root stock and disease free bud wood from healthy plants.

GUAVA

- (1) Continue air layering.
- (2) For the control of Fruit Fly, destroy the fallen fruits and repeat Bait spray. Harvest the fruit when still hard.

GRAPES

- (1) Repeat spray against Chaffer Beetle.
- (2) Spray Mancozeb @ 2.5gm/litre or Carbendazim @ 0.5gm/litre against Anthracnose.

BER

- (1) Continue budding operation.
- (2) Transplanting of Ber seedlings in the field be continued.

LITCHI

- (1) Air layering be continued.

AONLA

- (1) Half dose of Urea and MOP be applied.

APPLE

- (1) Spray against Scab during fruit formation with Hexaconazole 5 EC @ 30ml/100 litres of water or Triadimefon 25 WP @ 50gm/100 litres of water or Myclobutanil 10 WP @ 30gm/100 litres of water. The spray should be conducted during morning /evening hours.
- (2) 3-5 days after spray against Scab/Alternaria, spray with Phosalone 35 EC @ 140ml/100 litres of water or Methyl Dimeton 25 EC @ 80ml/100 litres of water or Decofol 18.5 EC @ 108ml/100 litres against Mite. This spray should also be given during morning/evening hours.
- (3) 10 days after insecticidal spray, Apple fruit trees be sprayed with mencozeb @ 300gms/100 litres of water against Sooty Blotch and Fly Speck. Care should be taken that the spray be done either in the morning or evening hours.
- (4) Commencement of harvesting of mid season cultivars of Apple.

PEAR

- (1) Spray mencozeb @ 300gms/100 litres of water in the morning or evening hours against Fly Speck/ Sooty Blotch during 1st week of the month.
- (2) Commencement of harvesting of mid season cultivar.

STONE FRUITS (PEACH, PLUM, APRICOT)

- (1) Harvesting of late cultivars to be completed.
- (2) Post harvest spray of Copper Compound @ 300gms/100 litres of water be conducted to control future inoculum of Leaf Curl and Blight.

ALMOND

- (1) Harvesting of crop to be completed.
- (2) Post harvest spray of Copper Compound @ 300gms/100 litres of water be conducted to control the residual Inoculum of Leaf Curl and Blight.

WALNUT

- (1) Stem/Pin Borer attacks become evident as saw dust is observed coming out of the holes. For controlling the attack, clean the holes by a thin wire, then inject Chloropyrihos @ 2ml/litre of water followed by plugging with cotton soaked in Petrol, covering the infested area with mud plaster.

FRUIT PLANT NURSERIES

- (1) Budding of nursery stock of Apple and Pear to be continued.
- (2) Burying of green manuring crops in vacant nursery areas to be completed.

- (3) Start budding of Walnut nursery root stocks.
- (4) Use compatible and disease free root stock.
- (5) Disease free bud wood from healthy plants should be used.

SEPTEMBER

GENERAL: Continue Rainy Season Plantation till mid September

MANGO

- (1) Stake plants for their upright growth.
- (2) Weak & pale plants (leaves) should be given light dose of Nitrogen.
- (3) Basins should be kept free from weeds.
- (4) Water sprouts/suckers emerged from the root stock be removed immediately.
- (5) (i) For the control of Shoot Borer & Mango Scale, remove the dried shoots & destroy them.
(ii) For the control of Anthracnose/Dieback, spray the plants with Copper Oxychloride @ 3gm/litre at 15 days interval.

CITRUS

- (1) Repeat technical operations from Sr. No 3 to 6.as done in Mango.
- (2) Repeat spray against Leaf Miner/Butterfly if required. Spray Terramycin 100mg/litre against Citrus Canker. Spray 2,4-D @ 10mg/litre against Citrus Fruit drop.
- (3) Spray Zinc Sulphate @ 3gm/litre against Zinc deficiency. Spray Carbaryl 50 WP @ 2gm/litre against Fruit Sucking Moth in Citrus.
- (4) Creating smoke in the orchard after sunset keeps the Fruit Sucking Moth at bay.

GRAPES

- (1) Spray Bordeaux mixture 1: 1: 100 against Downy Mildew.
- (2) Spray Copper Oxychloride @ 3gm/litre against Anthracnose.

BER

- (1) Spray Dinocap @ 0.5 ml/litre or Wettable Sulphur @ 2.5gms/litre against Powdery Mildew.

LITCHI

- (1) Continue plantation in the new orchards by mid of Sept.
- (2) Air layering be completed by 15th of Sept.

PEACH (UNDER SUB-TROPICAL CONDITIONS)

- (1) Budding of Peach on wild root stock be completed by 1st week of September.

APPLE AND PEAR

- (1) 15-18 days after fifth fungicidal spray against Scab and Alternaria, spray with Penconazole 10 EC @ 50ml/100 litres of water or Dodine 65 WP @ 60gms/100 litres of water or Dithionone 75 WP @ 75gms/100 litres of water to be done.

- (2) 3-4 days after anti Scab and anti Alternaria spray, spray with Methyl Dimethon 25EC @80ml/100 litres or Dimethone @ 100ml/100 litres of water to control Mite attack.
- (3) Harvesting of mid season varieties to be continued.
- (4) Complete budding of nursery stock during 1st fortnight.

STONE FRUITS (PEACH, PLUM, APRICOT)

- (1) Post harvest spray of Copper Compound @ 300gms/100 litres of water be given, if not done during last week of August.

ALMOND

- (1) Post harvest spray of Copper Compound@ 300gms/100 litres of water be given, if not done during last week of August.

WALNUT

- (1) Harvesting of crop to be completed.

FRUIT PLANT NURSERIES

- (1) Complete budding of nursery stock during 1st fortnight.
- (2) Irrigate nursery stocks wherever required.

OCTOBER

General :- Layout for establishing new orchards to be started for Spring Plantation.

MANGO

- (1) Remove stock sprouts/ water sprouts/suckers.
- (2) Examine wooden stakes provided to young plants for upright growth and breakage of budlings.
- (3) Remove the tying material (Alkathene) from bud/ graft union to avoid constriction.
- (4) Irrigate the fruit plants depending upon soil and water conditions as and when required.
- (5) Cultivate the land between the rows of fruit plants. It will loose the soil, provide aeration, kill grubs and various insect pests and give clean look of orchards.
- (6) Repeat spray against Mango Shoot Borer.
- (7) Go for flooding of orchards to kill the eggs of Mealy Bugs.
- (8) Spray NAA @ 200mg/litre against Mango Malformation at bud differentiation stage.
- (9) For control of Mango Malformation, remove all malformed parts from the Mango plants and spray NAA @ 200ppm i.e. 200 mg / lit of water which is followed by spray of Bavistin (0.2%) at 15 days interval or spray Potassium Matabisulpaite @ 60gms per 100 ltrs of water.

CITRUS

- (1) Repeat operation from Sr. No.1 to 5 as done in Mango.
- (2) Repeat spray against Leaf Miner/Fruit Sucking moth if required.

GUAVA

- (1) Go for drenching of basins in Wilt effected areas with Carbendazim @ 1gm/litre of water.

BER

- (1) Remaining half of fertilizers be applied during the month.
- (2) Repeat spray against Powdery Mildew with Dinocap @ 0.5ml/litre or Wettable Sulphur @ 2 gm/litre.

PEACH (UNDER SUB-TROPICAL CONDITIONS)

- (1) For the control of Peach Leaf Curl /Stigmia Blight spray Copper Oxychloride @ 3gm/litre of water.

APPLE

- (1) Harvesting of Delicious cultivars be completed.
- (2) Collection of props and their storage.
- (3) Collection of diseased fallen fruits and their destruction.
- (4) Control of Rodents with application of anti- rodents like Zinc Phosphide.

PEAR

- (1) Harvesting of late cultivars to be completed.
- (2) Collection of props and their storage.
- (3) Collection of diseased fallen fruit and their destruction.

STONE FRUITS (PEACH, PLUM, APRICOT)

- (1) Ensure clean cut cultivation of fruit orchards through ploughing/ tractorization.
- (2) Start slight pruning of stone fruit trees in last fortnight followed by application of White Lead paint to cut surfaces.

FRUIT PLANT NURSERIES

- (1) Preparation of nursery land and application of FYM @ 60-100cft. per kanal.
- (2) Arrangement of root stocks/suckers and seeds for transplantation/sowing in the nursery area.
- (3) Arrangement for procurement of Walnut and Almond seed.

NOVEMBER

General :- Pit digging and filling with mixture of Top soil and FYM for Apple, Pear, Stone fruits and Dry fruits. New plantation in case of snowbound areas.

MANGO

- (1) Repeat operations from Sr. No. 1 to 5 as done in Month of Oct.
- (2) Thatching material for young plants be procured.
- (3) Rake the soil around the tree trunks and mix Methyl Parathion 2% dust @ 250gm/tree for controlling the nymphs of Mealy Bugs.
- (4) Spray the plants with Copper Oxychloride @ 3gms/litre against Anthracnose/ Dieback.

(5) For control of Mango Malformation, remove all malformed parts from the Mango plants and spray NAA @ 200ppm i.e. 200 mg / lit of water which is followed by spray of Bavistin (0.2%) at 15 days interval or spray Potassium Matabisulpaite @ 60gms per 100 ltrs of water.

CITRUS

- (1) Follow operations from Sr. No. 1 to 5 as in Mango during Oct.
- (2) Repeat spray against Leaf Miner/Fruit Sucking moth if required.
- (3) Spray 2, 4-D @ 20mg/litre against pre-harvest fruit drop.
- (4) Harvest the early varieties of Sweet Oranges.

BER

- (1) Repeat spray against Powdery Mildew with Dinocap @ 0.5ml/litre or Wettable Sulphure @ 2gm/litre.

PEACH

- (1) For the control of Leaf Curl /Stigmia Blight spray Copper Oxychloride @ 3gm/litre.

AONLA

- (1) Harvest the mature fruits.

APPLE AND PEAR

- (1) Harvesting of late cultivars of Apple to be completed.
- (2) Collection of leaves/ other host herbs and burning of the same as advance measure for control of Scab and other diseases.
- (3) Early dormant spray with Diesel oil emulsion 1:7 after complete leaf fall.
- (4) Completion of filling-up of pits with top soil and FYM.
- (5) Clean cut cultivation of orchards of Apple through ploughing/tractorization.
- (6) Application of basal dose of soil insecticides against Mealy Bugs and Woolly Aphids.
- (7) Start pruning of Apple trees in last fortnight followed by application of White Lead paint to cut surfaces.
- (8) Treatment of Collar rot diseases by drenching with Carbendazim @ 1gm/litre.

ALMOND

- (1) Ploughing/ tractorization of orchards for clean cut cultivation.
- (2) Start pruning fruit trees during last fortnight followed by application of White Lead paint on cut surfaces.
- (3) Collection/destruction of pruned material.

WALNUT

- (1) Collection and destruction of fallen leaves.

PECAN NUT

- (1) Collection of fallen leaves and burning of the same, as advanced measure for control of Leaf Born diseases.

FRUIT PLANT NURSERIES

- (1) Sowing of Apple/Kainth seed for raising of root stocks in well prepared seed beds during last fortnight.

- (2) Decapitate the last year's budded stocks.
- (3) Commence sowing of Almond seed in already well prepared seed beds.
- (4) Un-tying of budded stocks of the current year.

DECEMBER

GENERAL: Protect young plants especially Mango, Litchi, Papaya & Aonla against Frost by covering them with suitable thatching material. Burn dry leaves/grasses in the young orchards during evening to create smoke. Regular irrigation also helps to ward off ill effects of Frost.

MANGO

- (1) Digging of pits for spring plantation.
- (2) Heading back of limbs of old plants for rejuvenation.
- (3) Heading back of progeny plants in the nurseries.
- (4) Irrigate the orchards to reduce the effect of Frost.
- (5) Thatching of young plants against Frost to be completed by first week.
- (6) For the control of Mealy Bug treat basins with 2% Methyl Parathion dust @ 250gm/basin. Use alkathene or sticky greese bands 15-20 cm wide by tying around trunks 0.5 m above the ground level.
- (7) Keep orchards clean by regular ploughing, removal of weeds and prune the over crowded and over lapping branches in Dec. for the control of Hoppers.
- (8) For control of Mango Malformation, spray Carbendazim @ 0.2% (one spray).

CITRUS

- (1) Stop irrigation to avoid decline in sugar contents & increase in the juice acidity.

BER

- (1) Repeat spray against Powdery Mildew.

LITCHI

- (1) Apply whole of FYM, DAP & MOP during the month.
- (2) Thatching of young plants be completed by first week of Dec. to protect the plants from Frost.

PEACH (UNDER SUB-TROPICAL CONDITIONS)

- (1) Refilling of pits for new plantation be completed during the month with FYM (1cft/pit).
- (2) Full dose of DAP/MOP be applied during Dec.
- (3) Grafting of wild root stock be done.
- (4) Treat the plants against Gummosis by scrapping the infected portion, washing with Mercuric Chloride @ 1gm/litre of water & then applying Bordeaux paste.

APPLE AND PEAR

- (1) Pruning/ training of fruit trees to be continued.

- (2) Continue dormant spray of Diesel oil emulsion, if weather permits.
- (3) Apply FYM to orchard area as per age group.

STONE FRUITS (PEACH, PLUM, APRICOT)

- (1) Pruning/ training of fruit trees to be completed.
- (2) Apply FYM full dose to orchard area as per age group.
- (3) If required stratify the stones.

ALMOND

- (1) Collection and destruction of leaves/ pruned material from orchard area.

FRUIT PLANT NURSERIES

- (1) Sowing of seeds to be continued for raising of fresh root stocks in case of Apple, Pear and Almond.
- (2) Sowing of stones to be completed.
- (3) Sowing of Walnut seeds in well prepared nursery beds followed by proper drainage.