



INTEGRATED MANAGEMENT GUIDE FOR APPLE ORCHARDS IN KASHMIR

2025



Sher-e-Kashmir
University of Agricultural Sciences
& Technology of Kashmir
Main Campus, Shalimar, Srinagar Kashmir (J&K) India-190025

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DIFFERENT PHENOLOGICAL STAGES



LATE DORMANCY



GREEN TIP



TIGHT CLUSTER



PINK BUD



FLOWERING STAGE
(7-10 days after pink bud)



PETAL FALL STAGE
(60-70 % petal fall)



FRUIT LET STAGE
(10-14 days after fruit let stage)



FRUIT DEVELOPMENT-I STAGE
(10-14 days after fruit set stage)



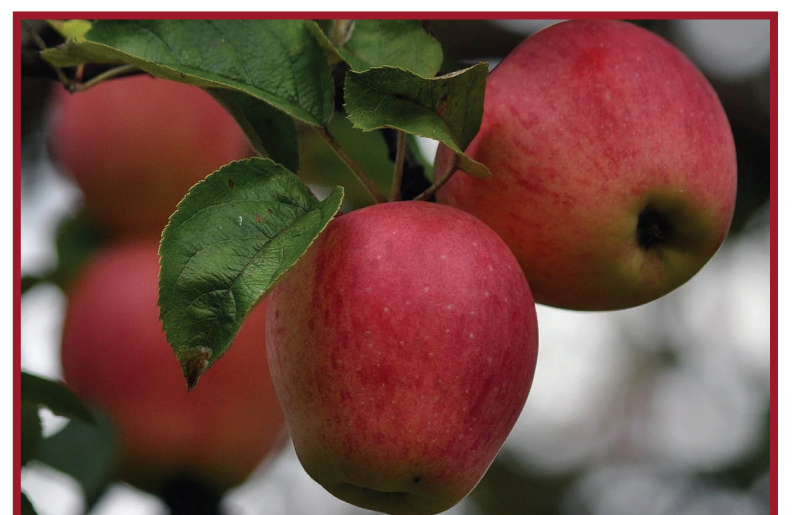
FRUIT DEVELOPMENT-II STAGE
(12-15 days after Fruit Dev. I)



FRUIT DEVELOPMENT-3 III
(12-15 days after Fruit Dev. II)



FRUIT DEVELOPMENT- IV
(12-15 days after Fruit Dev. III)



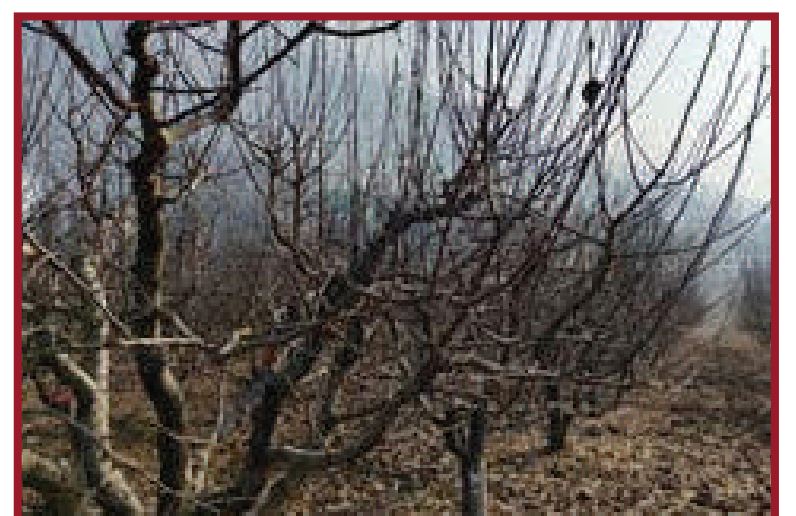
PRE-HARVEST



HARVESTING STAGE



POST-HARVEST



DORMANCY



STAGE 1 **LATE DORMANCY**

Spray No.	1 st
Phenological stage	Late Dormancy
Fertilizer dosage	X
Cultural/ Management practices	<ul style="list-style-type: none">• Ensure Proper Training & pruning.• Ensure orchard sanitation.• Ensure proper drainage in orchards.• Staking of newly planted fruit trees.• Spray urea @ 5% on orchard floor for early decomposition of over wintered fallen leaves.
Insecticide/ Acaricide/ Oil per 100 litres of water	Horticulture Mineral oil (2 lit.)
Fungicide per 100 litres of water	X



STAGE 2 GREEN TIP

Spray No.	2 nd
Phenological stage	Green Tip
Fertilizer dosage	<ul style="list-style-type: none">· Apply recommended dose of well decomposed FYM and fertilizers (1/3rd dose of Urea, full dose of DAP & ½ dose of MOP) as per age of tree.
Cultural/ Management practices	<ul style="list-style-type: none">· Monitor plant growth. If any tree fails to produce new leaves, immediately inspect the roots for any disease issues.· Use Trichoderma harzianum/viride, multiplied on FYM at the time of new plantation and Trichoderma harzianum/ viride as drench treatment for established orchards in root rot prone soil.· Keep the graft union a 4-5 inch above the soil surface.· Avoid injury to collar region of the tree during cultural operations.· Staking of newly planted fruit trees· Ensure proper drainage & sanitation in orchards
Insecticide/ Acaricide/ Oil per 100 litres of water	X
Fungicide per 100 litres of water	<p>Avoid spraying any fungicide if weather remains dry for next 7 days at green tip stage.</p> <p>Spray any of the following fungicides before the onset of rains:</p> <p>Mancozeb75WP (300g) or Captan 50 WP (300g) or Propineb 70 WP (300g) or Zineb75 WP (300g) or Metiram 70 WG (300)</p>



STAGE 3 TIGHT CLUSTER

Spray No.	3 rd
Phenological stage	Tight cluster
Fertilizer dosage	X
Cultural/ Management practices	Regular inspection of tree trunks/ branches for canker symptoms.
Insecticide/ Acaricide/ Oil per 100 litres of water	X
Fungicide per 100 litres of water	Avoid spraying of any fungicides, if weather remains dry for next 7 days In case of rain forecast spray any of the following fungicide: Mancozeb75WP (300g) or Captan 50 WP (300g) or Propineb 70 WP (300g) or Zineb75 WP (300g) or Metiram 70 WG (300g)



STAGE 4 PINK BUD

Spray No.	4 th
Phenological stage	Pink Bud
Fertilizer dosage	Foliar application of Boron (1-1.5g/ litre)
Cultural/ Management practices	<ul style="list-style-type: none"> • Don't allow water stagnation in the orchards. • Keep orchards clean and free from any crop debris/residue. • If the weather remains dry then spray fungicide when majority of fruit buds are at pink stage to avoid spraying in early flowering. • Introduce 3-4 bee hives per hectare for effective pollination at 5-10 percent bloom. • Irrigate orchards, if necessary. • De-weed tree basins & mow orchard floor.
Insecticide/ Acaricide/ Oil per 100 litres of water	<p>Need Based for Insects:</p> <p>a. If HMO spray is missed: Spray Chlorpyriphos 20 EC (100 ml)</p> <p>b. For Blossom Thrips: When 2 or more thrips per flower are observed, spray Thiaclopid 21.7 SC (40 ml)</p> <p>c. For Leaf Roller: In areas, where leaf roller infestation is observed, spray Thiaclopid 21.7 SC (40 ml)</p>
Fungicide per 100 litres of water	<p>If the weather remains dry then spray fungicide when majority of fruit buds are at pink stage to avoid spraying in early flowering.</p> <p>Spray any fungicide from the following before flowering or before severe rainfall:</p> <p>Zineb (68%) + Hexaconazole (5%) (125g) or Metiram (55%)+Pyraclostrobin (5%) 60 WG (100g) or Dodine 65 WP (60g) or Dodine 40 SC (90 ml) or Tebuconazole (6.7%) + Captan (26.9%) 33.6 SC(250 ml) or Tebuconazole 38.9% SC (40ml) or Chlorothalonil 40%+ Difenaconazole 4% 44 SC (180ml) or Mancozeb 63% + Carbendazim 12% WP (250g)</p>



STAGE 5 FLOWERING STAGE (7-10 DAYS AFTER PINK BUD)

Spray No.	5 th
Phenological stage	Flowering stage (7-10 days after Pink Bud)
Fertilizer dosage	X
Cultural/ Management practices	<ul style="list-style-type: none">• Avoid washing of trees with sprays.• Apply sprays in mist form.
Insecticide/ Acaricide/ Oil per 100 litres of water	X
Fungicide per 100 litres of water	<p>Spraying not advisable during flowering, however If there is 10 days fungicidal gap and heavy rain forecast, then spray any of the following fungicides before rains:</p> <p>Mancozeb75WP (300g) or Captan 50 WP (300g) or Propineb 70 WP (300g) or Zineb 75 WP (300 g) or Metiram 70 WG (300 g)</p>



STAGE 6 PETAL FALL STAGE (60-70 % PETAL FALL)

Spray No.	6 th
Phenological stage	Petal fall stage (60-70 % Petal fall)
Fertilizer dosage	Foliar application of Boron(1-1.5g/ litre) if not done at pink budstage
Cultural/ Management practices	<ul style="list-style-type: none"> Scout orchards, especially HDP and check lower side of leaves. It is highly beneficial to remove all the scabbed leaves before any rains. Mulching be done, wherever needed.
Insecticide/ Acaricide/ Oil per 100 litres of water	<p>Need Based for Insects: Chlorpyriphos 20 EC (100 ml) Or Quinalphos 25 EC (100 ml) Or Neem oil (1500 ppm) @ 300ml</p> <p>Need Based for Mites: Spray any of the acaricide when 4-5 mites per leaf are observed Etoxazole 10 SC (110ml) Or Hexythiazox 5.45 EC (40 ml) Or Spiromesifen 22.9 SC (40 ml) Or Cyenopyrafen 30 SC (30 ml)</p>
Fungicide per 100 litres of water	<p>Spray any of the following fungicide before rains: Difenaconazole 25EC (30ml) or Flusilazole 40EC (20ml) or Penconazole 10EC (50ml) or Fluxapyroxad 75g/l+ Difenaconazole 50g/l SC (30 ml) or Trifloxystrobin(25%) + Tebuconazole (50%) 75 WG (40g) or Fluopyram 17.7% + Tebuconazole 17.7% 400SC (50ml)</p>



STAGE 7 FRUIT LET STAGE (10-14 DAYS AFTER PETAL FALL)

Spray No.	7 th
Phenological stage	Fruit let stage (10-14 days after petal fall)
Fertilizer dosage	X
Cultural/ Management practices	<ul style="list-style-type: none"> • Thinning of fruit in case of heavy fruit set either manually or by use of chemicals (NAA @5-10 ppm at 10-12 mm fruit size). • White wash fruit tree trunks (1kg Lime + 300 g Copper sulphate + 250g Glue in 10 liters of water). • Remove young shoots affected with powdery mildew. • Apply Ampelomyces quisqualis @500ml or gram/100 litre water if powdery mildew appears in susceptible varieties. • Remove scabbed fruits. • Cut orchard grass to reduce humidity in the orchard. • Mulch tree basins for weed/ moisture management. • Irrigate orchards as per requirement.
Insecticide/ Acaricide/ Oil per 100 litres of water	<p>For Insects: Spray Quinalphos 25 EC (100 ml) Or Chlorpyriphos 20 EC (100 ml) Or Thiacloprid 21.7 SC (40 ml)</p> <p>Need Based for Mites: Spray acaricide when more than 5 mites per leaf are observed Hexythiazox 5.45 EC (40 ml) Or Spiromesifen 22.9 SC (40 ml)</p>
Fungicide per 100 litres of water	<p>Spray any fungicide from the following before rains: Zineb (68%) + Hexaconazole (5%) (125g) or Dodine 65 WP (60 g) or Dodine 40 SC (90 ml) or Fluxapyroxad 250g/l + Pyraclostrobin 250g/l 500 SC (20ml) or Tebuconazole (6.7%) + Captan (26.9%) 33.6 SC (250 ml) or Pyraclostrobin 12.8% + Boscalid 25.2% WG (30g) or Tebuconazole 38.9% SC (40 ml) or Mancozeb 63% + Carbendazim 12% WP (250g)</p>



STAGE 8 FRUIT DEV- I STAGE (10-14 DAYS AFTER FRUIT LET STAGE)

Spray No.	8 th
Phenological stage	Fruit Development I stage (10-14 days after fruit let stage)
Fertilizer dosage	<ul style="list-style-type: none"> • Apply second dose of fertilizers (1/3 of Urea and remaining 1/2 dose of MOP) as per age of tree. • Foliar spray calcium chloride 3-4g/litre.
Cultural/ Management practices	<ul style="list-style-type: none"> • Remove young shoots affected with powdery mildew. • Apply Ampelomyces quisqualis @500ml or gram/100 litre water if powdery mildew appears in susceptible varieties. • Maintain optimum soil moisture. • If dry & hot conditions prevail, apply organic mulches such as straw or residues to retain soil moisture • White wash tree trunks to protect them sun burn. • De-weed of tree basins & mow orchard floor.
Insecticide/ Acaricide/ Oil per 100 litres of water	<p>Need Based for Insects: Spray Chlorpyriphos 20 EC (100 ml) Or Quinalphos 25 EC (100 ml) Or Neem oil (1500 ppm) @ 300ml followed by Lecanicillium lecanii 1.15% WP (1x10⁸ CFU/gm) @ 500 gm after a gap of 4 days *</p> <p>Need Based for Mites: When population is more than 10 mites per leaf, spray Hexythiazox 5.45 EC (40 ml) Or Spiromesifen 22.9 SC (40 ml)</p>
Fungicide per 100 litres of water	<p>If there is any rain forecasting, spray any fungicide among the following list : Mancozeb 75WP (300g) or Captan 50 WP (300g) or Propineb 70 WP (300g) or Zineb 75 WP (300g) or Ziram 80 WP (200g) or</p>



STAGE 9 FRUIT DEVELOPMENT –II STAGE (12-15 DAYS AFTER F.D. I)

Spray No.	9 th
Phenological stage	Fruit Development –II stage (12-15 days after F.D. I)
Fertilizer dosage	Second spray of calcium chloride (3-4)g /litre
Cultural/ Management practices	<ul style="list-style-type: none"> • Monitor plant growth. If the colour of leaves of any particular tree fades or is different from other similar variety then immediately check the roots. • If root rot/collar is infected, scrap the infected area and follow package & practices regarding roo Root/collar rot. • Keep mite population under check to avoid outbreak of Alternaria leaf blotch. • Irrigate orchards as per requirement • De-weeding tree basins & mowing of orchard floor.
Insecticide/ Acaricide/ Oil per 100 litres of water	<p>For Insects: Spray Chlorpyriphos 20 EC (100 ml) Or Quinalphos 25 EC (100 ml) Or Thiacloprid 21.7 SC (40 ml) Or Summer Spray Oil (750 ml)</p> <p>For Mites: Spray Hexythiazox 5.45 EC (40 ml) Or Fenazaquin 10 EC (40 ml) Or Spiromesifen 22.9 SC (40 ml) Or Propargite 42%+ Hexythiazox 2%EC (100 ml) Or Etoxazole 10% SC (110ml) Or Summer Spray Oil (750 ml)</p>
Fungicide per 100 litres of water	<p>If there is any rain forecasting, Spray any of the following fungicides: Difenaconazole 25EC (30ml) or Flusilazole - 40EC (20ml) or Penconazole 10EC (50ml) or Trifloxystrobin + Tebuconazole 75 WG (40g) or Fluopyram 17.7% + Tebuconazole 17.7% 400SC (50ml) or Fluxapyroxad 250g/l + Pyraclostrobin 250g/l 500 SC (20ml) or Fluxapyroxad 75g/l+ Difenaconazole 50g/l SC (30 ml) or Chlorothalonil 40%+ Difenaconazole 4% 44 SC (180ml) or Mancozeb 63% + Carbendazim 12% WP) @250g</p>



STAGE 10 FRUIT DEVELOPMENT III (12-15 DAYS AFTER F.D. II SPRAY)

Spray No.	10 th
Phenological stage	Fruit Development III (12-15 days after F.D. II spray)
Fertilizer dosage	<ul style="list-style-type: none"> • Apply remaining 1/3 of Urea. • Third spray of calcium chloride (3-4) g /litre Need Based: • Ist Foliar spray of Potassium sulphate (4-5 g/ litre for colour dev.)
Cultural/ Management practices	<ul style="list-style-type: none"> • Keep mite population under check to avoid outbreak of Alternaria leaf blotch. • Avoid spraying under humid conditions to prevent leaf burn. • Remove water sprouts. • Maintain optimum soil moisture. • Keep aphids below threshold level to avoid sooty mould problem. • Leaf tissue testing may be carried for next year fertilizer management. • De- weed tree basin. • Stake of heavy fruit laden branches.
Insecticide/ Acaricide/ Oil per 100 litres of water	<p>Need Based for Insects: Chlorpyriphos 20 EC (100 ml) Or Quinalphos 25 EC (100 ml) Or Thiacloprid 21.7 SC (40 ml) Or Neem oil (1500 ppm) @ 300ml followed by *Lecanicillium lecanii 1.15% WP (1x108 CFU/gm) @ 500 gm Or *Metarhizium anisopliae 1.0% WP (1x108 CFU/gm) @ 500 gm after a gap of 4 days</p> <p>Need Based for Mites: If Population is more than 10 mites per leaf, spray Fenazaquin 10 EC (40 ml) Or Cyenopyrafen 30 SC (30 ml) Or Etoxazole 10% SC (110ml) *The bio insecticide should not be sprayed in areas where sericulture is practised by the farmers.</p>
Fungicide per 100 litres of water	12-15 days after F. D II spray Mancozeb 75 W 300g or Zineb 75 WP 300g or Ziram 80 WP200g or Ziram 27SC 600ml or Chlorothalonil 75WP 150g



STAGE 11 FRUIT DEVELOPMENT IV (12-15 DAYS AFTER F.D. III SPRAY)

Spray No.	11 th
Phenological stage	Fruit Development IV (12-15 days after F.D. III spray)
Fertilizer dosage	X
Cultural/ Management practices	<ul style="list-style-type: none"> • Cut the orchard grass to reduce humidity in the orchard. • Avoid spraying immediately after heavy rains especially in low altitude areas. • De- weed tree basin. • Maintain orchard sanitation. • Maintain optimum soil moisture. • Harvest early maturing varieties. • Stake heavy fruit laden branches.
Insecticide/ Acaricide/ Oil per 100 litres of water	X
Fungicide per 100 litres of water	<p>If there is incidence of Alternaria Leaf Blotch or Scab, spray any of the following fungicide before rains:</p> <p>Zineb (68%) + Hexaconazole (4%) 72 WP] (100g) or Hexaconazole 5EC (50ml) or Myclobutanil 10 WP (70g) or Metiram (55%) + Pyraclostrobin (5%) 60 WG (100g) or Pyraclostrobin 12.8% + Boscalid 25.2% WG (30g)</p> <p>For the orchards with Sooty blotch or Fly speck issues, spray any of the following fungicides:</p> <p>Mancozeb 75WP (300g) or Ziram 27 SC (600ml) or Propineb 70 WP (300g) or Ziram 80 WP (200g)</p>



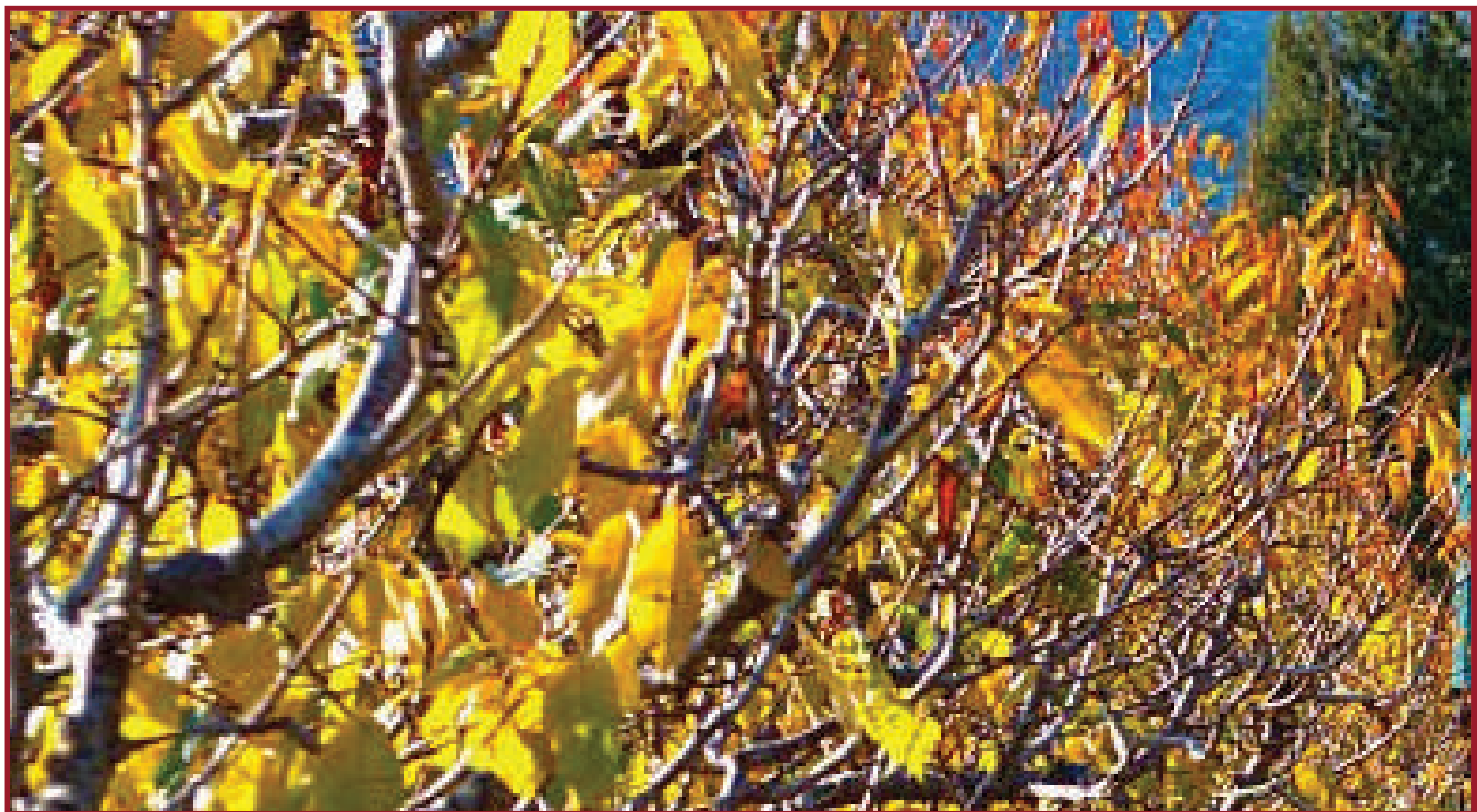
STAGE 12 PRE-HARVEST

Spray No.	12 th
Phenological stage	Pre-harvest
Fertilizer dosage	Need Based: <ul style="list-style-type: none">• Naphthalene acetic acid (10ppm) for controlling pre harvest fruit drop• 2nd foliar spray of potassium sulphate for colour development (4-5g /litre)• Spray calcium chloride (3-4 g/litre), for increasing storage life
Cultural/ Management practices	<ul style="list-style-type: none">• Avoid root/collar rot or canker management near fruit harvesting stage.• Cut the orchard grass to reduce humidity in the orchard.• Remove Water-shoots to reduce humidity.
Insecticide/ Acaricide/ Oil per 100 litres of water	X
Fungicide per 100 litres of water	For long term storage, spray any of the following fungicide 15-20 days before harvesting: Captan 50 WP (300g) or Propineb70 WP (300g) or Ziram 80 WP (200g) or Zineb 75 WP (300g)



STAGE 13 HARVESTING STAGE

Spray No.	13 th
Phenological stage	Harvesting stage
Fertilizer dosage	X
Cultural/ Management practices	Follow maturity indices: <ul style="list-style-type: none">• Starch index test (0–6.0 scale)<ul style="list-style-type: none">• 2.5 for CA Storage & 3.5 for table purpose• Ease of separation of the fruit from spur• Fruit skin colour >75% Red (variety specific)• TSS: 12 to 14 °Brix• Pressure: 16–18 lb/square inch• Seed colour: >75% dark brown
Insecticide/ Acaricide/ Oil per 100 litres of water	X
Fungicide per 100 litres	X



STAGE 14 POST- HARVEST

Spray No.	14 th
Phenological stage	Post- harvest
Fertilizer dosage	<ul style="list-style-type: none"> • Foliar application of Zinc@3g/litre (Need based) • Foliar application of Urea @2-3 % 2 weeks after harvest
Cultural/ Management practices	<ul style="list-style-type: none"> • Ensure collection and destruction of fallen leaves, mummified fruits pruned snag & dead wood. • To ensure infection free graft and bud wood, label the virus infected plants. • Spray 4% urea when 50% leaves turn yellow naturally. • Carry out soil testing for nutrient management. • Stake/tie branches to prevent snow damage. • Tighten the trellis in HDP. • Close anti-hail net.
Insecticide/ Acaricide/ Oil per 100 litres of water	<p>Need Based for Insects: Spray Chlorpyrifos 20 EC (100 ml)</p> <p>Need Based for Mites: If Population is more than 20 mites per leaf, spray Fenazaquin 10 EC (40 ml) Or Etoxazole 10% SC (110 ml)</p> <p>Essential Spray Quinalphos 25 EC (100 ml) in areas where apple blotch leaf miner is a problem</p>
Fungicide per 100 litres of water	X



STAGE 15 DORMANCY

Spray No.	15 th
Phenological stage	Dormancy
Fertilizer dosage	X
Cultural/ Management practices	<ul style="list-style-type: none"> • Prune virus infected plants in the end followed by proper sterilization of pruning equipments. • Rough infected plants. • Do not use graft/bud wood from virus infected plants for propagation. • Avoid mechanical injuries to make trees less vulnerable to canker causing pathogens. • Apply fungicidal paint/ paste to Pruning wounds or other mechanical injuries. • Follow Sheep grazing in traditional orchards, as it will reduce disease load. • If Urea spray was missed during fall, then spray urea @ 5% on orchard floor for early decomposition of fallen leaves. • Add organic matter in sandy soils for canker management. • Scarp the dead wood from cankered areas & apply paste on the wound as per package & practices <p>Canopy management:</p> <ul style="list-style-type: none"> • Training & pruning of orchards as per recommendations <p>Orchard sanitation:</p> <ul style="list-style-type: none"> • Ensure orchard sanitation for effective disease & pest management.
Insecticide/ Acaricide/ Oil per 100 litres of water	X
Fungicide per 100 litres of water	X

IMPORTANT INSTRUCTIONS:

1. Avoid mixing of fungicides, insecticides and spray suspensions.
2. Maintain gap of 3–4 days between insecticide and fungicide spray unless advised otherwise.
3. Adjuvant/stickers may be added for better efficacy of fungicides especially during rainy days Stickers should not be used with Dodine.
4. In case of heavy rains within 12 hours of spray, the spray is to be repeated immediately (when adjuvant /stickers are not used).
5. Before conducting the spray, inform the beekeepers in the vicinity of the orchard about spraying time; bee colonies should be kept preferably away from spraying area.
6. Same pesticide should not be repeated in two consecutive sprays.
7. Avoid spraying during high temperatures/rainy weather. All sprays should be conducted during early morning or evening hours to avoid phytotoxicity.
8. No spray should be done during full bloom period unless otherwise advised by genuine experts.
9. Spray of the insecticides/fungicides should be stopped 3–4 weeks before harvesting of fruit.
10. Keep 1–2 feet of soil around the tree trunks undisturbed.
11. Close monitoring of pests and diseases is important for effective management.
12. Apply fertilizers 1–2 feet away from tree trunk
13. In alkaline or acidic soils, phosphorous dose should be increased by 20 per cent
14. Always try to spray before rains at any stage.
15. *Avoid spraying immediately after severe rains (after 15th of June) especially in low altitude areas

DO'S & DON'TS OF PESTICIDE APPLICATION:

Do's:

1. Purchase pesticides only from registered dealer(s) having valid license.
2. Check Batch No., Registration No., Manufacture /Expiry Date on the labels.
3. Always purchase with proper bill or invoice.
4. Storage place should be well protected from direct sunlight or rain.
5. Read instructions on pesticide container label carefully before use.
6. Always use clean water for making pesticide suspension as per requirement.
7. Use protective clothing viz., hand gloves, face masks, aprons, etc. to cover whole body.
8. Always protect your nose, eyes, ears, hands etc. from spill of spray suspension.
9. Use recommended dose of pesticides.
10. Select right kind of equipment for spraying.
11. Spray pesticide during morning or evening hours.
12. Agitate spray suspension continuously while spraying.

Don'ts:

1. Don't use muddy or stagnant water for preparing pesticide suspension.
2. Don't prepare or spray pesticides without wearing protective clothing.
3. Avoid spilling of pesticide suspensions while filling or spraying.
4. Don't use over or sub lethal dose of pesticide.
5. Don't spray pesticides during full bloom period unless advised otherwise.
6. Don't spray during day time when temperature is high.
7. Don't mix various pesticides.
8. Don't eat, drink, chew or smoke during spraying or preparing pesticide suspension.
9. Don't transfer pesticide from original to other container.
10. Don't use leaky or defective equipment.
11. Don't blow / clean clogged nozzles with mouth.

ANNEXURE-I
PESTICIDE FORMULATIONS EVALUATED & RECOMMENDED (2025)

(A) FUNGICIDE

S.NO	FUNGICIDES	FORMULATIONS	NAME OF THE COMPANY
1	CAPTAN	Captaf (50 WP)	M/s Rallis India Ltd.
		Deltan (50 WP)	M/s Coromandel Agrico Pvt. Ltd.
		Kohicap (50 WP)	M/s FIL Industries Ltd.
		Captax (50 WP)	M/s India Pesticide Ltd.
		Merimain (50 WP)	M/s Adama India Pvt. Ltd
		Captra (50 WP)	M/s Indofil Industries Ltd.
		Kri-Captan (50 WP)	M/s Krishi Rasayan Exports Pvt. Ltd
		Panther (50 WP)	M/s HPM Chemicals & Fertilizers Ltd.
2	Chlorothalonil	Tata Ishaan (75 WP)	M/s Rallis India Ltd.
3	Chlorothalonil 40%+ Difenaconazole 4% 44 SC	Kavach Flo	M/s Syngenta India Ltd.
4	Difenoconazole	Score (25 EC)	M/s Syngenta India Ltd.
		Rubigan-D (25 EC)	M/s FIL Industries Ltd.
		Casper (25 EC)	M/s Godrej Agrovet Ltd.
		Karara (25 EC)	M/s Agro Life Science Corporation
		Wilcore (25 EC)	M/s Willowood Crop Sciences Pvt. Ltd
5	Dodine	Noor (65 WP)	M/s Indofil Industries Ltd.
		Dodino FIL (40 SC)	M/s FIL Industries Ltd.
		FIL Super Star (65 WP)	M/s FIL Industries Ltd.
6	Flusilazole Fluxapyroxad 75g/l + Difenaconazole 50g/l SC (30 ml)	Cursor (40 EC)	M/s Dhanuka Agritech Ltd.
		Governor (40 EC)	M/s FIL Industries Ltd.
		Sercadis Plus	M/s BASF India Limited
7	Flupyram 17.7% +Tebuconazole 17.7%	Luna Experience	M/s Bayer Crop Sciences Limited
8	Hexaconazole	Contaf (5 EC)	M/s Rallis India Ltd.
		Mainex (5 EC)	M/s Adama India Pvt. Ltd.
		Krizole (5 EC)	M/s Krishi Rasayan Exports Pvt. Ltd.
		Sitara (5 EC)	M/s Indofil Industries Ltd.
		Hexahit (5 EC)	M/s Hindustan Pulverizing Mills
		Titan (5 EC)	M/s Sudarshan Chemical Ltd.
		Envil (5 EC)	M/s FIL Industries Ltd.

S.NO	FUNGICIDES	FORMULATIONS	NAME OF THE COMPANY
9	Mancozeb	Indofil M-45 (75 WP)	M/s Indofil Industries Ltd.
		Dithane M-45 (75 WP)	M/s Dow Agro Science Mumbai Ltd
		Hindustan M-45 (75 WP)	M/s Hindustan Pulverizing Mills Ltd
		Macoban (75 WP)	M/s Adama India Pvt. Ltd.
		Luzem – 45 (75 WP)	M/s Cheminova India Ltd.
		Kohinoor M-45 (75 WP)	M/s FIL Industries Ltd.
		Mount (75 WP)	M/s Bharat Insecticides Ltd.
		Tata M-45	M/s Rallis India Limited
10	Metiram	Polyram (70 WG)	M/s BASF India Ltd.
11	Metiram 55% + Pyraclostrobin 5%	Cabrio Top (60 WG)	M/s BASF India Ltd.
		Clutch (60 WG)	M/s P.I Industries
12	Myclobutanil	Grapple (10 WP)	M/s FIL Industries Ltd.
		Boon (10 WP)	M/s Indofil Industries Ltd.
		Nagarjuna Index (10 WP)	M/s NACL Ind. Ltd.
		Systhane (10 WP)	M/s Dow Agro Science Mumbai Ltd.
		Myclomain (10 WP)	M/s Adama India Pvt. Ltd.
		Insyst (10 WP)	M/s Biostadt India Ltd.
		Revolve (10 WP)	M/s Bharat Insecticides Ltd.
13	Penconazole 10EC	TOPAS 10EC	M/s Syngenta India Ltd.
14	Propineb	Antracol (70 WP)	M/s Bayer Crop Science Ltd.
		Proximan (70WP)	M/s Adama India Pvt. Ltd
		Scale (70 WP)	M/s Krishi Rasayan Exports Pvt. Ltd.
		Filprostar (70WP)	M/s FIL Industries Ltd.
		Sway (70 WP)	M/s Cheminova India Ltd.
		Jannat (70 WP)	M/s Indo Gulf Cropsciences Ltd.
		Aaroosh (70 WP)	M/s Coromandel International Ltd.
15	Pyraclostrobin 12.8% + Boscalid 25.2% WG	Sanipeb (70WP)	M/s P.I Industries
		Visma	M/s P.I Industries
16	Tebuconazole 38.9% SC	Buonos	M/s Bayer Crop Science Ltd.

S.NO	FUNGICIDES	FORMULATIONS	NAME OF THE COMPANY
17	Trifloxystrobin 25% + Tebuconcazole 50%	Nativo (75 WG)	M/s Bayer Crop Science Ltd.
18	Tebuconcazole 6.7% + Captan (26.9%)	Shamir (33.6SC)	M/s Adama India Pvt. Ltd.
		Kohicap plus	M/s FIL Industries Ltd.
19	Ziram	Cuman-L (27 W/V)	M/s Syngenta India Ltd.
		Zed-78 (80 WP)	M/s FIL Industries Ltd.
		IPL Ziram -80 (80WP)	M/s India Pesticide Ltd.
		Zirex-L (27 SC)	M/s FIL Industries Ltd.
		IPL Ziram -27 (27 SC)	M/s India Pesticide Ltd.
20	Zineb	Indofil Z-78 (75 WP)	M/s Indofil Industries Ltd.
		Neutec (75WP)	M/s UPL & Marketed by M/s Swal Corporation Ltd.
		Fil Kanji (75 WP)	M/s FIL Industries Ltd.
21	Zineb 68% + Hexaconazole 4%	Avtar (72WP)	M/s Indofil Industries Ltd.
22	Fluxapyroxad 250g/l + Pyraclostrobin 250g/l	Merivon (500 SC)	M/s BASF India Limited
23	Carbendazim 12% + Mancozeb 63% WG	SAAF	M/s UPL Ltd.

DISCLAIMER:

- The molecules have been evaluated by SKUAST-K for bio-efficacy against apple diseases & pests, & the advisory/ information has been compiled for guidance & not for legal purposes.
- Use and sale of the products recommended in the schedule are subject to production of registration and label claim from CIB & RC, Govt. of India to be ascertained by Plant Protection officer / Directorate of Law Enforcement Department of Jammu & Kashmir.
- The advisory has been formulated in consultation with subject matter faculties & inputs received from Department of Horticulture Kashmir & Directorate of Enforcement Go J&K.

OILS/ INSECTICIDES/ ACARICIDES EVALUATED & RECOMMENDED (2025)

A	OILS	TRADE NAME	NAME OF THE COMPANY
1	Horticulture Mineral Oils for Delayed Dormant Spray	MAK All season HMO	M/s Bharat Petroleum Corp India Ltd
		HP Tree Spray Oil	M/s Hindustan Petroleum Corp Ltd
		Arbofine Extra	M/s Total Energies MKT India
		Petro Star	M/s Petro Stars
		Servo	M/s Indian Oil Corporation Ltd.
		Orchol	M/s R G Industries
		Specol-OSO	M/s Sarabi Petroleum & Chemicals Pvt. Ltd
		Balmero Balspray	M/s Balmer Lawrie & Co Ltd.
		Duratek Agri Spray Oil	M/s Raj Petro specialties Pvt. Ltd.
2	Horticulture Mineral Oils for Delayed Summer Spray	MAK All season HMO	M/s Bharat Petroleum Corp India Ltd
		HP Tree Spray Oil	M/s Hindustan Petroleum Corp Ltd
		Arbofine Extra	M/s Total Energies MKT India
		Petro Star	M/s Petro Stars
		Servo	M/s Indian Oil Corporation Ltd.
		Orchol	M/s R G Industries
		Specol-OSO	M/s Sarabi Petroleum & Chemicals Pvt. Ltd
		Balmero Balspray	M/s Balmer Lawrie & Co Ltd.
		Duratek Agri Spray Oil	M/s Raj Petro specialties Pvt. Ltd.
B	INSECTICIDES	TRADE NAME	NAME OF THE COMPANY
1	Chlorpyriphos	Coroban (20 EC)	M/s Coromandel Agrico Pvt. Ltd.
		Kohiban (20 EC)	M/s FIL Industries Ltd.
		Dursban (20 EC)	M/s Dow Agro Science Mumbai Ltd.
		Tafaban (20 EC)	M/s Rallis India Ltd.
2	Dimethoate	Rogor (30 EC)	Manufactured by Lupin & Marketed by
		Tafgor (30 EC)	M/s Rallis India Ltd.
3	Quinalphos	Ekalux (25 EC)	M/s Syngenta India Ltd.
4	Thioclopid	Alanto 240 SC (21.7%)	M/s Bayer Crop Science Ltd.
C	ACARICIDES	TRADE NAME	NAME OF THE COMPANY
1	Fenazaquin (10% EC)	Majestic (10 EC)	M/s FIL Industries Ltd.
2	Hexythiazox (5.45% EC)	Maiden (5.45 EC)	M/s Biostadt India Ltd.
3	Spiromesifen 240 SC (22.9%)	Oberon 240 SC (22.9%)	M/s Bayer Crop Science India Ltd.
4	Cyenopyrafen (30 %SC)	NC-512 30 SC (Kunoichi)	M/s Insecticides India Ltd.
5	Propargite 42 % + Hexythiazox 2% EC	Ceasmite (42% +2 % EC)	M/s Indofil Industries
6	Etoxazole (10% SC)	Borneo (10 SC)	M/S Sumitomo Chemical India Ltd.

Edited & compiled by:

Prof. A.H. Mughal (Associate Director Research)

Dr. Irfan A. Bisati (SES, DoE)

Dr. Baby Summuna (Asstt. Professor, DoR)

CONTRIBUTORS

DIV. OF PLANT PATHOLOGY & ASSOC. UNITS

Dr. Mehraj u Din Shah (Prof. & Head FoH)
Dr. T.A. Wani (Prof. & Head)
Dr. Ali Anwar (Professor)
Dr Tariq Rasool Rather (Professor)
Dr. M.N. Mughal (Professor)
Dr. Zafar A. Badri (Associate Professor)
Dr. Farooq Ahmad Ahanger (SMS)
Dr. Farooq A. Bhat (Assistant Professor)
Dr. Asha Nabi (Assistant Professor)

DIV. OF ENTOMOLOGY & ASSOC. UNITS

Dr.M.A.Parray (Prof & Head FoH)
Dr. Abu Manzar (Professor)
Dr.Sajad Mohiu d Din (Professor)
Dr. Munazah Yaqoob (Professor)
Dr.Zakir Hussain Khan (Professor)
Dr.Shafeeq Hakeen (Associate Professor)
Dr. Zewar Hussain (Assistant Professor)

DIV. OF FRUIT SCIENCES

Dr. ASHAQ H. PANDIT (Prof. & Head)
Dr. KHALID MUSHTAQ BHAT (Professor)
Dr. M.K. SHARMA (Professor)
Dr. M.A. Mir (Professor)

RCRQA

Dr. Malik Mukhtar (Professor & Head)
Dr. Alamgir A. Dar (Asstt. Residue Analyst)

ISSUED THROUGH

Directorate of Horticulture, Kashmir

IMPLEMENTING & EXECUTING AGENCIES

Directorate of Research, SKUAST-K
Directorate of Extension, SKUAST-K
Krishi Vigyan Kendras, SKUAST-K
Department of Horticulture, Kashmir

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