Monthly Workshop for Extension Functionaries

Message for the month of June

Crop	*Operation/ Diseases/pests*	*Message/Impact points*
		Agronomy
Paddy	*Varieties*	**For lower belts of valley** • Shalimar Rice-1, Shalimar Rice-2, Shalimar Rice-3. Shalimar Rice-4 **For higher belts of the valley** • Kohsaar, K-332, Shalimar Rice-5
	Transplanting	- Transplant 30-days old, healthy seedlings (about 20 cm tall) grown in traditional nursery or 25 days' old grown under protected nursery conditions. - Transplant 2-3 seedlings per hill at a spacing of 15x15 cm. For better tillering shallow transplanting should be adopted. - Gap filling should be carried out within weeks' time. - For late transplanting, under unavoidable circumstances and under waterlogged conditions, number of seedlings per hill should be increased 4 to 6. - Transplanting should be completed by June 21. **Care in transplanting** - Avoid aged (> 35 days) seedlings. - Avoid deep transplanting and wider spacing (row to row and plant to plant) as both reduce yield. - Avoid root damage to seedlings during uprooting. - Avoid wilting of seedlings after uprooting by keeping them in water till they are transplanted. - Early transplanting (last week of May) is recommended for lower belts of Kashmir and for higher belt transplanting can be done up to 2nd week of June.
	Nutrient management	- For varieties planted in lower belts, urea @ 4 kg/kanal, DAP @ 6.5 kg/kanal, MOP 2.5 kg/kanal and zinc sulphate @ 0.75 - 1.00 kg/kanal should be applied as basal dose before transplanting of paddy. - For varieties planted in higher belts, urea @ 1.8 kg/kanal, DAP @ 6.5 kg/kanal, MOP 2.5 kg/kanal and zinc sulphate @ 0.5-0.75 kg/kanal should be applied as basal dose before transplanting of paddy. - For varieties planted in water logged areas, urea @ 2.35 kg/kanal, DAP @ 6.5 kg/kanal, MOP 2.5 kg/kanal and zinc sulphate @ 0.5-0.75 kg/kanal should be applied as basal dose before transplanting of seedlings.
	Weed management	- Maintain of 3-5 cm water level in rice fields to reduces weed growth. - Butachlor @ 1.5 kg a.i. per ha is recommended. The chemical should be applied within 2-4 days after transplanting. **OR** - Pyrazosulfuron ethyl+pertilachlor ; (30 g +450g a.i/ha) ; trade name Eros @ 0.5 kg /kanal should be applied 3-5 days after transplanting. **OR**

		- Bensulfuron methyl+pretilachlor, (30 g +450g a.i/ha); trade name Erase @ 0.5 kg /kanal should be applied 3-5 days after transplanting.
	Water management	- To minimize the seepage and deep percolation of water, proper puddling before transplanting of seedlings is a must.
Maize	*Varieties*	**Lower belts** • Composite-6 (C-6), Composite-8 (C-8), Shalimar Maize Composite-4, Shalimar Maize Hybrid -2, Shalimar Maize Composite-7, Shalimar Pop Corn-1 **Higher belts** • Composite-15 (C-15), Shalimar KG Maize -1, Shalimar KG Maize -2, Shalimar Maize Composite-3, Shalimar Maize Hybrid-1, Shalimar Maize Composite -5, Shalimar Maize Composite-6
	Late Sowing/ Hoeing	- Sowing with treated seeds should be done wherever not done so far. - Weeding, hoeing and earthing should be done wherever maize is at knee high stage.
	Nutrient management	**For irrigated maize (per hectare)** - For hybrids, N = 150 kg, P2O5 = 75 kg, K2O = 40kg and ZnSo4 = 20 kg + seed inoculation with Azotobactor @ 5-10 g/kg seed (if available). - For composites N = 120 kg, P2O5 = 60 kg, K2O = 30 kg and ZnSO4 = 20 kg + seed inoculation with Azotobactor @ 5-10 g/kg seed (if available). **For rainfed maize (per hectare)** - For hybrids: N = 90 kg, P2O5 = 45 kg, K2O = 20 kg and ZnSO4 = 10 kg - For composites : N = 75 kg, P2O5 = 40 kg, K2O = 20 kg and ZnSO4 = 10 kg
	Weed management	- Application of Atrazine (Atratraf 50 wp, Gesaprim 500 fw) @ of 1.0-1.5 kg a.i/ha in 600 litre water within two three days after sowing, followed by one hoeing 50 DAS.
	Water management	- Most of the maize area is rainfed. If possible give at least three irrigations at the most critical periods i.e. at knee high, silking and grain filling stages.
Baby corn	*Sowing and Management* *Picking*	- All practices similar to that of main crop. - Use baby corn varieties for good yield. - If sowing has been done in April, baby corn can be picked in June, 3-4 days after silk emergence.
Sweet corn	*Sowing and Management*	- All practices similar to that of main crop. - Use sweet corn varieties.
Kharif pulses	*Sowing*	- Sowing of moong/ beans/urd etc. should be done. - Seed should be treated with Rhizobium, PSB before sowing. - Apply urea @ 0.75 kg/kanal, DAP @ 6.5 kg/kanal, MOP 2.5 kg/kanal as basal. - Ensure proper moisture at the time of sowing. - First weeding should be done wherever crop is 25-30 days old

Entomology(Agriculture)

Crucifers	*Diamond back moth (Plutella xylostella)*	- Dimethoate 30 EC **Or** Quinalphos 25EC @ 1ml/lit of water when 2-3 larvae per plant if plant population is close to 100 plants per m^2
	Cabbage butterfly (Pieris brassicae)	- Hand picking of egg patches and larvae. - Chlorpyriphos 20EC @1ml/lit. of water
Paddy (nursery)	*Snails & Slugs*	- Chlorpyriphos 20EC @1ml/lit. of water - Install screens with 5mm mesh at water inlets to minimise the entry of snails and facilitate hand collection.

		- Herding ducks in the paddy fields can act as biological control - Draining the fields to expose snails to sun
Maize	*Maize stalk borer*	- Imidacloprid 17.8 SL @ 0.3ml/litr of water.
	Cut worm	- Drenching with chlorpyriphos 20 EC @ 1ml/lit of water OR *Metarhizium anisopliae* @ 10 gm/L of water - Flooding to expose larvae to birds (except in chilli).
All crops	Army worm	- Quinalphos 25EC @ 1ml/lit of water

Impact Points:

- ☞ Spray should be carried out during early morning or late evening hours to avoid any mortality of pollinators.

**Spray should be need based.

Entomology (Horticulture)

Apple	*San Jose scale/ Woolly apple aphid*	- Essential spray for the management of SJS/WAA be carried: - Chlorpyriphos 20EC **OR** Quinalphos 25EC @ 100 ml/100 litres of water.
	Apple Aphid	- Apply Thiacloprid 21.7 SC @ 40ml/100 litres of water. **OR** - Chlorpyriphos 20 EC OR-Quinalphos 25 EC @100 ml/100 litres of water. - **OR** Neem oil (1500ppm) @ 300 ml followed by *Lacanicillium lecani* 1.15% WP (1X108CFU/gm) @ 500gm after a gap of 4 days.
	Hairy caterpillar	- Burlapping may be adopted followed by mechanical killing of caterpillars. - If foliage damage is noticed, spray Chlorpyriphos 20 EC @ 100 ml/100 lit. of water
	Fruit fly	- Install traps made from used water bottles/plastic boxes baited with methyl eugenol ***How to make a methyl eugenol-baited trap:*** - Mix ethyl alcohol (60 ml), methyl eugenol (40 ml) & a contact insecticide (20 ml) in a glass container in the ratio of 6:4:2. - Add plywood blocks of size 5 × 5 × 1 cm (l × b × h) or cotton rope pieces (½ inch thick & about 2 inches long) to the prepared mixture. Soak the plywood or cotton rope pieces in the methyl eugenol solution for 24 hours. - Approximately 4 ml of the solution is required for the preparation of one lure. - The prepared lures should be wrapped in aluminium foil & stored until use. - This contact insecticide (in the ratio of 6: 4: 2) should be used @ 25 traps/ha, from the onset of flowering in April and May. - Yellow sticky traps @ 25/ha from the onset of flowering during April to September. - Apply need-based label claim insecticides, giving a sufficient waiting period.
	Stem borer	If adults are observed in the orchard, then spray trees with any one of the insecticide: - - Chlorpyriphos 20EC @ 100 ml/100 litres of water. **OR** - Quinalphos 25EC @ 100 ml/100 litres of water.
	Pin hole borer/shot hole borer	- The holes may be plastered with mixture of Chlorpyriphos 1.5% WP and soil in the ratio of 1:1 If adults are observed in the orchard, then spray trees with: - Chlorpyriphos 20EC @ 100 ml/100 litres of water. **OR** - Quinalphos 25EC @ 100 ml/100 litres of water.

	June Beetle / Bark Beetle	- When bark and June beetles are trapped under light spray Chlorpyriphos 20EC OR Quinalphos 25EC @ 100 ml/100 litres of water.
	Two-spotted spider mite	- Removal and destruction of weeds in and around orchards Spray with: - Propargite 42% + Hexythiazox 2% EC @100ml/100 litres of water - OR Etoxazole 10 % EC @ 110ml/100 litres of water. - OR Fenazaquin 10 EC @ 40ml/100 litres of water
	European Red Mite/ Two spotted mite	Essential spray for the management of ERM be carried: - Fenazaquin 10 EC @ 40 ml/ 100 litres of water - **OR** - Hexythiazox 5.45 EC @ 40 ml/ 100 litres of water - **OR -**Spiromesifen 22.9 SC @ 40 ml/ 100 litres of water - **OR**-Propargite 42%+Hexythiazox 2%EC @ 100 ml/ 100 litres of water - **OR**-Etoxazole 10%SC @ 110ml /100 litres of water - *Spray HMO @ 750ml/ 100 litres of water*
	Apple Blotch Leaf miner	- Survey, monitoring and mass awareness of the pest should be done among the farmers. - Proper sanitation in and around the orchard. - Monitor adult population through pheromone baited traps @ 8-10/ ha. - Installation of sticky traps (yellow sticky traps @ 1/10 m apart for monitoring of moth emergence of subsequent generations **If the population is above ETL (1.5 blotches/leaf):** - Spray Thiamethoxam 25 WG @ 50g/ 100 litres of water - OR-Flubendiamide 39.35SC @ 40ml/100 litres of water - OR-Lambda Cyhalothrin 5EC @ 50ml/100 litres of water - OR-Thiamethoxam12.6 + Lambda Cyhalothrin 9.5 ZC @ 50ml/100 litres of water - OR-Imidacloprid 6.0 + Lambda Cyhalothrin 4.0 SL @ 50ml/100 litres of water.
	Fruit borer	**1st fortnight of June:** - Survey monitoring and mass awareness of the pest should be done. - Monitor adult population through pheromone baited traps @ 5-10 traps/ha - If moths are trapped, go for mass trapping of adults through pheromone baited traps @ 20 traps/ha **2nd fortnight of June:** - Mass trapping of adults through pheromone baited traps @ 20 traps/ha - Spray Chlorpyrifos 50% EC + Cypermethrin 5% EC @ 100ml/ 100 litres of water *Change lures and liners for the already installed traps(after every 30 days)*
Pomegranate	*Fruit borer*	- Remove the fallen leaves and destroy them. - Spray Quinalphos 25 EC @ 100 ml/ 100 litres of water **OR** - Chlorpyriphos 20EC @ 100 ml/100 litres of water. - Repeat it after 20 days interval if infestation is high.
Plum	*Aphid*	- In case aphid population is high, spray Chlorpyriphos 20EC @ 100 ml/100 litres of water.

- **Note: In case of heavy rains (within 12 hours of spray) the spray is to be repeated immediately.**

Vegetables

Vegetable	*Cutworm, white grub etc.*	- Flood irrigation be given in the field so that the cutworm larvae come above the ground to be predated - Pit fall traps (10/ha)

		- Keeping heaps of grass to provide shelter for cut worm followed by mechanical destruction. - Drench the field with Chlorpyriphos 20 EC @ 300 ml/100 litres. of water during evening hours. - Install light traps for trapping of adult moths.
Cabbage	*Diamond Back Moth/ Cabbage butter fly* *Cabbage aphids*	Collect the egg masses, larvae and ensure their destruction if needed spray the foliage with: - Chlorpyriphos 20EC @ 100 ml/100 litres of water. OR - Quinalphos 25EC @ 100 ml/100 litres of water.
Flowers	*Tulip*	- When 2-3 grub/m2 in the soil is recorded. - Apply Carbofuran 3% CG @ 32.5 Kg/ha in between the rows of field. OR - Drench field either with Chlorpyriphos 20 EC @ 300 ml /100 litres of water.
	Sucking pests in open and polyhouse	- Apply Thiacloprid 21.7 SC @ 40ml/ 100 litres of water if infestation is noticed
	Mites in open and polyhouse	- When more than 5 mites/leaf or flower are observed - Spray Hexythiazox 5.45 EC (40ml) OR Spiromesifen 22.9 SC (40ml) in 100 litres of water.
Rodent management	*Horticulture*	**If weather is dry, follow the below mentioned practices:** **Field sanitation:** Removal of left over debris and grasses from orchards to discourage rodents from availability of food and shelter **Reduction in bund size:** Reduce the size of bunds or boundaries around the orchards up to 30cm to force the rodents to leave the burrows **Burrow Fumigation:** Smoking the burrow with cow dung +Maize straw/maize pith + weeds with the help of burrow fumigator **Chemical control (Rodent bait schedule):** ✓ **Day 1:** Plugging of rodent burrows ✓ **Day 2:** Identification of live burrows for pre-baiting prior to poison baiting; For pre baiting with plain bait (crushed rice (48 gm) + broken wheat grain (48 gm) + sugar (2.0 gm and 2.0 ml. mustard oil) and place 10-15gm/ live burrow. ✓ **Day 3:** 2.0% Zinc Phosphide* baiting during late evening with (crushed rice (48 gm) + broken wheat grain (48 gm) + Zinc Phosphide 2.0 gm and 2.0 ml. mustard oil, all mixed together) be placed inside the live burrow @ 6-10 g bait/ live burrow). ✓ Day 4: Collection and burying of dead rodents. Close all burrows at evening hours ✓ Day 5: Identification of live burrows. ✓ Day 6: Fumigate live reopened burrows with Aluminum Phosphide pellets @ 2 pellets/burrow or 5-10 g pouch/burrow and cover with wet mud. **Precautions**: Since residual rodent population develops bait shyness after one baiting with Zinc Phosphide, a minimum of 50-60 days' gap should be given before it is used again. *Since rodents are a serious constraint in horticulture their effective control is only possible, if farmers work together as a community. **Note:** If treatment has been carried out during May then do not repeat

		during June.
Apiculture		✓ Inspection of bee colony for pest and disease. ✓ Apply formic acid @5.0 ml/ day in small vials for 14 days. ✓ Weekly inspection of the colonies to check the status of brood and adult bees. ✓ Raising of new frames by providing comb foundation sheets to healthy colonies. ✓ Improve ventilation of colonies by widening the entrance of hive ✓ Provide super if all the brood frames are full. ✓ Observe the presence and performance of the queen. ✓ Check absconding of bees by providing store frames to bee colonies ✓ Avoid using drugs to treat colonies during honey flow season. ✓ Protect colonies from wasps by installing wasp traps by manual trapping. ✓ Provide clean running water channel in the apiary. ✓ Regulate the microclimate by using wet gunny bags over the colonies and sprinkle water around the colonies in the apiary during morning hours.

Plant Pathology

Apple	*Scab and other foliar diseases*	**Spray at Fruit Development-II stage** - Spray Difenaconazole 25 EC (@0.03%) or Flusilazole 40EC (@0.02%) or Penconazole 10 EC (@0.05%) or Trifloxystrobin 25% + Tebuconazole 50% 75WG (@0.04%) or Fluxapyroxad 250g/l + Pyraclostrobin 250g/l 500 SC (@0.02%) or Fluxapyroxad 75g/l + Difenaconazole 50g/l SC (@0.03%) or Chlorothalonil 40% + Difenaconazole 4% 44 SC (0.180%) or Mancozeb 63% + Carbendazim 12% 75 WP (@0.25%). **Spray at Fruit development-III stage** - Mancozeb 75 WP (0.3%) or Zineb 75WP (0.3%) or Ziram 80WP (0.2%) or Ziram 27 SC (0.6%) or Chlorothalonil 75 WP (0.15%).
	Root rot	- Drench tree basin of affected tree with Carbendazim 50 WP (0.1%) or Carbendazim 12% + Mancozeb 63% 75WP (0.5%). Apply fungicide suspension in 15-20 cm deep holes at a distance of 30 cm throughout the tree basin.
	Collar rot	- Clean the affected collar area and apply Chaubatia paste. - Drench the soil under tree canopy with Metalaxyl MZ 72WP (0.5%) or Mancozeb 75WP (0.6%) or Copper oxychloride 50 WP (0.6%)
	Cankers	- Scrap the affected bark and apply Bordeaux or Chaubatia paste on pruned/scarified area/ wound.
Almond, plum, peach, cherry and apricot	*Foliar fungal disease*	- Spray Carbendazim 50WP (0.05%) or Thiophanate Methyl 70WP (0.05%) or Captan 70% + Hexaconazole 5% 75WP (0.05%).
Pear	*Febrea leaf and fruit spot*	- Spray Thiophanate Methyl 70WP (0.05%) or Carbendazim 50WP (0.05%) or Mancozeb 75WP (0.3%) or chlorothalonil 75 WP (0.25%).
Grapes	*Anthracnose*	- Spray with Thiophanate Methyl 70 WP (0.05%) or Carbendazim 50WP (0.05%) or Carbendazim 12% + Mancozeb 63% 75WP (0.25%) or Captan 70% + Hexaconazole 5% 75WP (0.05%).
	Powdery mildew	- Spray with Hexaconazole 5 EC (0.05%) or Flusilazole 40EC (0.02%) immediately after disease appearance.
	Downy mildew	- Spray with Metalaxyl MZ-72 WP (0.25%)
	Impact Points:	✓ Improve orchard sanitation

- ✓ Ensure proper aeration and drainage in orchards.
- ✓ Maintain a gap of 3-4 days between insecticide and fungicide spray
- ✓ Do not conduct sprayings during high temperature. Conduct spray during evening or morning hours..

Vegetables

Tomato, chilli, brinjal & capsicum	*Post-emergence damping off/ seedling blight*	- Drench the nursery beds with Carbendazim 12% + Mancozeb 63% 75WP (0.5%). - Give light but frequent irrigation in the morning hours. - Avoid heavy irrigation / flooding.
	Wilt/root rot	- Use sufficient quantity of well decomposed FYM before transplanting preferably inoculated with Trichoderma or other effective bioagents. - Ensure restricted irrigation. - Transplant on raised beds. - Dip seedling in Carbendazim 50 WP (0.1%) for 30 minutes before transplanting. - Adopt proper crop rotation.
Onion (seed Crop)	*Downy mildew* *Stemphylium blight*	- Spray with Metalaxyl MZ 72 WP (0.25%) - Spray with Mancozeb 75 WP (0.3%) or Hexaconazole 5EC (0.05%).
Cucurbits	*Downy mildew* *Powdery mildew, Anthracnose, Alternaria leaf spot*	- Spray with Metalaxyl MZ 72 WP (0.25%) or Mancozeb 75WP (0.3%). - Spray with Hexaconazole 5 EC (0.05%) or Dinocap 48 EC (0.05%) or Flusilazole 40 EC (0.02%)
Potato	*Early blight* *Late blight*	- Spray with Mancozeb 75 WP (0.3%) or Hexaconazole 5 EC (0.05%) - Spray with Mancozeb 75 WP (0.3%) or Metalaxyl MZ 72 WP (0.25%)

Vegetable Science

Solanaceous crops	*Transplantation*	- Complete transplantation immediately where ever not done. - Irrigate transplanted seedlings immediately for better crop establishment.

Impact Points

- ☞ Avoid weak and lanky seedlings.
- ☞ Flood irrigation should be avoided at the time of transplantation.
- ☞ Transplanting should be done preferably in morning and evening.

Potato	Harvesting	- Harvesting of potato may be done at 120 days after planting of the crop. - To improve the keeping quality in potato withheld the irrigation at least two weeks before harvest. - Dehaulm the crop when the aerial parts turn yellow. - Harvest the crop after 10-15 days of haulm cutting.

Impact Points:

- ☞ Cut haulms should not be left as such in field.
- ☞ Stopping the irrigation hastens and enhances skin set.
- ☞ Always harvest the potato in dry weather.
- ☞ Avoid bruising to tubers during harvesting otherwise tubers become susceptible to rot diseases.
- ☞ Do not harvest immature potatoes as they have thin skin that rub off easily during

harvesting/handling.

- ☞ Cure the harvested tubers immediately to remove access moisture from the skin and to improve the keeping quality.
- ☞ Curing should be done in shady areas (sheds), as exposure to sun causes greening in potato.

Cole crops Solanaceous, crops, cucurbits

Top dose of fertilizers - 2nd dose of urea is to be provided to the crops transplanted in April/ May.

Crop	Top dose of urea/kanal
Kale	4.75 kg
Cabbage	8.0 kg
Cauliflower	5.5 kg
Solonaceous crops	6.5 kg each
Bottle Gourd, cucumber, Squash	3.75 kg
Sponge/Ridge Gourd	2.75 kg
Bitter Gourd	3.25 kg

Bhindi

Sowing of seed Sowing can be continued till 1st week of June (Pusa Sawni, Perkins Long Green)

Beans

Sowing of seed Sowing of beans may be continued.

Bush Type: Master, contender, F. yellow, Shalimar French bean.

Pole-type: Wonder, painted lady.

Impact Points:

- ✓ Presoaking of seeds in hot water (50^0C) for 30 minutes enhances germination in Bhindi.

Cucurbits

Pollination

- To ensure proper fruit set in crops like cucumber and bottle gourd, hand pollination may be done where movement of pollinators is not sufficient.
- For large land holdings bee hives must be kept in the field to facilitate pollination.
- For commercial cultivation 2 hives/acre are recommended for improving the pollination.

Impact Points:

- ✓ To improve the movement of pollinators in the field, some flowering plants may be planted in the vicinity.
- ✓ Pollination of cucumber must be done in morning hours and in bottle gourd in evening hours..

Bulbous Crops Garlic, Onion Pran

Irrigation - Withheld irrigation twenty days prior to harvest for increasing shelf life of produce.

Impact Points:

- ☞ Moist bulbs have low keeping quality and are liable to rotting.

Root and Cole crops (Seed crop)

Irrigation - Withheld irrigation 15-20 days prior to harvest crop when 75% of pods show straw yellow colour.

Fruit Science

Orchard Management

Harvesting of Fruits

Pear: China pear

Cherry: Double, Misri, Regina, Kordia.

Peach: Saharanpuri and World's Earliest.

Plum: Sharps early, Mariposa, Formosa.

Apricot: Charmagaz, Kaisha, New Castle

Strawberry: Chandler, Gorella Brighton, Senga Sengana

	Fruits are to be harvested after ensuring that it has attained desirable characteristics - size, colour, texture and flavour. Fruits must be harvested carefully to avoid bruising.
Mulching of Fruit Trees	- Mulching of fruit trees with grass or polyethylene must be done to conserve soil moisture.
White washing	White washing of main trunk of fruit plants to avoid sunburn and gummosis with the following formulations: - Hydrated lime = 5 kg - Copper Sulphate = 310 gram - Water = 100 litre - Sticker =250g/20 liters of water.
Stalking of Fruit Trees	- Fruit trees which bear profusely require support of limbs to avoid limb breakage.
Grapes	- Second dosage of fertilizers comprising 1/3 of urea and ½ MOP may be applied about 3 weeks after fruit set.
Apple and pear	- 3rd dosage of fertilizers comprising 1/3 of urea may be applied
Irrigation	- Ensure Proper irrigation in the orchards.
Nursery operations	- Deshooting of nursery stock. - Irrigation of beds after hoeing and weeding. - Conserve moisture especially under dry conditions. - Softwood cuttings from new growth of many plants will root if propagated in a moist shady spot. - Broadcast urea @ 2-3 Kgs per kanal for fruit nursery in which budding is to be carried during this season.

Floriculture and landscape Architecture

Spring flowering Annuals/ bulbous crops	*Weeding/ top dressing and intercultural operation*	- Weeding/top dressing of Spring flowering annuals like Pansy, Calfornia poppy, Candy tuft, Verbena, Sweet pea, Sweet Foliar etc. - Tulip, Hyacinth, oxalis, freesia, fritillaria, Dutch Iris etc - Foliar application of micronutrients/growth retardants after flowering is over which will enhance propagation ratio.
Cut flowers Gerbera Carnation, Lilium, Gladiolus	*Planting/ Inter cultural operations*	- Planting of plants/bulbs/corms. - Regular weeding, application of proper fertilizer doses, irrigation, right method of harvesting and post-harvest management should be ensured.
Turf grasses	*Raising*	- Raising through different methods like seeds, dibbling, turfing etc
Shrubs Edges	*Intercultural operations*	- Pruning of shrubs which have completed flowering phase. - Hedges/edges should be trimmed regularly.
summer annuals	*Nursery raising*	- Nursery raising of marigold, zinnia salvia etc.

Food Science and Technology

Apple

- ✓ Apples removed from CA storage should be disposed-off within a week to retain optimal quality and avoid storage disorders.
- ✓ Fruits should be washed, properly graded, and packed in clean, ventilated cartons before dispatch.
- ✓ Avoid exposure to high temperatures during handling and transportation.

- ✓ CA store owners must maintain detailed records of storage conditions and fruit quality parameters such as firmness, colour, and incidence of disorders(e.g. scald, internalbrowning)

Strawberry

Postharvest Management:

- ✓ Timely harvesting at full ripeness is essential, as strawberries do not ripen postharvest.
- ✓ Use trained workers to hand-pick fruits during cooler morning hours.
- ✓ Sort and grade to remove bruised, diseased, or underdeveloped fruits.
- ✓ Immediate pre-cooling to 0–1°C is necessary to reduce respiration rate and microbial activity.
- ✓ Ventilated packaging (e.g.,clam shells or trays)should be used; packaging innovations like Freshmama and Keep It Fresh have shown extended shelf life.
- ✓ Store at 0–2°C and 90–95%RH, use refrigerated transport for long-distance marketing.

Value-Added Products:

Strawberries are used to prepare several value-added products to extend shelf life and improve marketability:

- ✓ Strawberry Jam
- ✓ Strawberry Candy& Dried Slices
- ✓ Strawberry Pulp & Puree
- ✓ Strawberry Juice & Syrup

Cherry

Postharvest handling:

- ✓ All the three commercial varieties viz. Makhmali, Double and Misri are being harvested in the month of June. The following majors should be taken into consideration.
- ✓ Out of these Double cherry is processed. No delay should be made for supplying them to a nearby processing unit.
- ✓ Harvest the crop at ripe stage of maturity with full colour development.
- ✓ Harvest the crop during early hours by trained harvesting crew.
- ✓ Plastic crates with soft cushion instead of vicker baskets should be used to avoid mechanical damage to the crop.
- ✓ Do not heap or cover to the harvested cherries with polythene sheets or tarpaulin. Sort the cherries so as to segregate bird damaged, bruised, under coloured and under sized ones from the harvested lot
- ✓ Pack the graded cherries in card board boxesof½to1kg capacity for domestic market and in 2-5 kgs for dispatch to distinct markets. The packaging should be perfectly perforated so as to allow exchange of gases.
- ✓ While loading the packed cherries in load carriers do not make heavy stacks, which otherwise lead to bruising and mechanical damages.
- ✓ Dispatch the packed cherries immediately to nearby *mandies* without any delay.
- ✓ Double cherry should be harvested at greenish yellow colour stage if to be used for canning purpose.
- ✓ Culled, mechanically damaged and undersized cherries should not be used as fresh but should be utilized for value addition by converting into jams, squashes, candies and nectars.

Value-Added Utilization:

- ✓ Cherry Squash
- ✓ Dried Cherry
- ✓ Canned Cherry

Improved packagings: Freshmama^{TM}and Keep it fresh

❖ Ethylene gas drops sharply after 3 hours of using the Freshmama and almost to zero after 6 to 24 hrs.

Garlic Scapes:

Garlic stems, also known as garlic scapes or flower stalks, are the tender green shoots that grow from the bulb. Often overlooked or discarded, the stems are edible and possess a mild garlic flavor.They are rich in bioactive compounds, including antioxidants, vitamins (A and C), and sulphur containing compounds, making them a valuable by product of garlic cultivation.

They can be processed into **Garlic stem pickles.**

Livestock Production Management

Sheep and Goat

- Migration to high land pasture, after 1st wk.
- Take weather precautions seriously.
- Make proper documents as per authorities for smooth migration.
- Preparation of temporary tarpaulin sheet roofing with chain link fencing paddock at HLP to protect livestock from snow, rainfall and wild predators.
- PPR vaccination to lambs/kids after 15-21 days of sheep/goat pox vaccination.
- Weaning of lambs attaining 90 days' age.
- Recording of monthly livestock body weight at HLP.
- Cleaning and disinfection of paddock at HLP at regular intervals

Cattle

- Maintain cleanliness in and around farms and ensure availability of clean water.
- Ensure that the sheds receive enough sunlight during the day to prevent dampness and to complement the cleaning process.
- Ensure 6-8 hrs of daily grazing to animals if community pastures are available. In the absence of such facilities, green fodder and concentrate should be fed as per the body weight and Stage of production.
- Avoid too much of rice during marriage season to prevent acidosis

Ration Table

❖ Animal	Concentrates	greens
Cow (15l)	6 Kg	50-60 Kg daily
Pregnant cow	6 kg +0.5 kg	do

**If quality green fodder is available, 7-8 kg can replace 1 kg of concentrate*

Homemade Concentrate

- Maize 35%, Mustard oil cake 22%, Wheat bran 20%, Rice bran 15%, Molasses/Gur 5%, Mineral mix. 2% iodized Salts 1 %.

Note: Concentrate feeds for different types of livestock are from sources as recommended by SKUAST-K. (kashVet feeds) without bothering of preparing them at home.

Horses should be checked for lameness. Halters must be kept ready. Horses should be given access to free grazing and concentrate may be given to compensate HLP work load.

Forestry

Summary: June is a crucial month in temperate regions for timely management of forestry, agroforestry, and medicinal & aromatic plant systems. Newly planted saplings should be provided with irrigation, mulching, and staking for better establishment. Weeding, hoeing, and basin preparation around young trees help conserve soil moisture and promote healthy growth. In agroforestry systems, proper irrigation, application of bio-fertilizers, and regular crop management are essential, while orchard-based systems require monitoring of flowering and fruit setting along with recommended nutrient and plant protection measures. Medicinal and aromatic plants also need proper irrigation and weed management for healthy growth. Timely field management during June ensures better productivity and higher income.

Strategies, Operations, and Field Management of Forest, Agroforestry, and Medicinal & Aromatic Plant Nurseries	Provide partial shade to tender seedlings and protect nursery plants from heat stress, strong winds, and grazing animals. Ensure regular morning or evening irrigation to maintain optimum soil moisture and proper drainage to prevent root diseases. Carry out timely weeding, hoeing, and soil loosening to improve aeration and reduce weed competition. Apply organic manures or recommended fertilizers in light doses and regularly monitor nurseries for pests, diseases, and nutrient deficiencies. Maintain records of seedling survival and stock for future plantation programmes. Proper nursery management during June ensures healthy planting material and successful plantations.
Capacity Building in Forest, Agroforestry and Medicinal & Aromatic Plant Nurseries	June is a suitable month in temperate regions for capacity building in forest, agroforestry, and medicinal & aromatic plant nurseries. Farmers and rural youth should be trained through demonstrations and awareness programmes on nursery management, propagation techniques, nutrient management, and eco-friendly pest and disease control. Formation of farmer groups and nursery enterprises, along with training in record keeping and market linkages, can improve quality plant production, generate employment, and promote sustainable land-use systems.

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