GRAMIN KRISHI MAUSAM SEWA

ICAR RESEARCH COMPLEX FOR NEH REGION

Mizoram Centre, Kolasib- 796081, MIZORAM

(Prepared based on District wise Weather Forecast received from IMD, Guwahati)

District: Aizawl **Period: 16 - 20 May, 2015**

Bulletin No: -518/2015/ Bulletin/English **Date of issue: 15th May, 2015**

Parameters	16.05.2015	17.05.2015	18.05.2015	19.05.2015	20.05.2015
Rainfall (mm)	0	0	33	0	20
Max Temp (oC)	32	33	33	32	33
Min Temp (oC)	19	19	19	18	19
Cloud Coverage	Mainly clear	Mainly clear	Partially clear	Clear sky	Clear sky
Max RH (%)	94	95	99	95	98
Min RH (%)	51	44	46	48	43
Wind Speed (KmpH)	4	4	3	3	2
*Wind Direction	S-E	S-E	S-E	S-E	E

Northerly- N, North-Easterly- N-E, Easterly- E, South-Easterly- S-E, Southerly- S, South-Westerly- S-W, Westerly-W, North-westerly- N-W.

STATUS OF PREMONSOON- April 1-30, 2015 (*Percent of deviation from normal in parenthesis*)

Aizawl- 185.66mm (112.8mm) **Champhai- 119.48mm (68.9mm)** **Saiha- 109.52 mm (40.2mm)** **Kolasib- 213.61mm (158.9mm)**

Lawngtlai-101.62mm (18.5mm) **Lunglei-117.82mm (33.8mm)** **Mamit-236.61mm (75.6mm)** **Serchhip-110.96mm (25.9mm)**

Weather summary of the past three days	Weather forecast valid from 16th May, 2015 To 20th May, 2015.
	There are chances of moderate rainfall during the next 2 day. The maximum and minimum temperatures for the next 5 days may range for 32-33^{0}C and 18-19^{0}C. Maximum relative humidity is expected in the range of 94-99% and minimum may from 43-51%. Wind direction would be southeasterly with the wind speed of 2-4 km per hour. Partially cloudy sky will prevail during the next five days. ***Weekly cumulative rainfall:*** **53.0 mm**

Main Crop/ Animal /Fisheries	Stage	Cultural practices/ Pest/ Diseases	Agricultural / Horticultural/ animal husbandry advisories
Khasi Mandarin and acid lime	**Nursery stage**		**By seeds:** Seed should be sown in the nursery immediately after extraction in to a depth 1.5 to 2 cm extraction at 10x5 cm distance. Seedlings are planted in secondary bed or polythene bags at 4-6 leaf stages.

Phone: +91 3837 220041, Fax: +91 3837 220560,
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		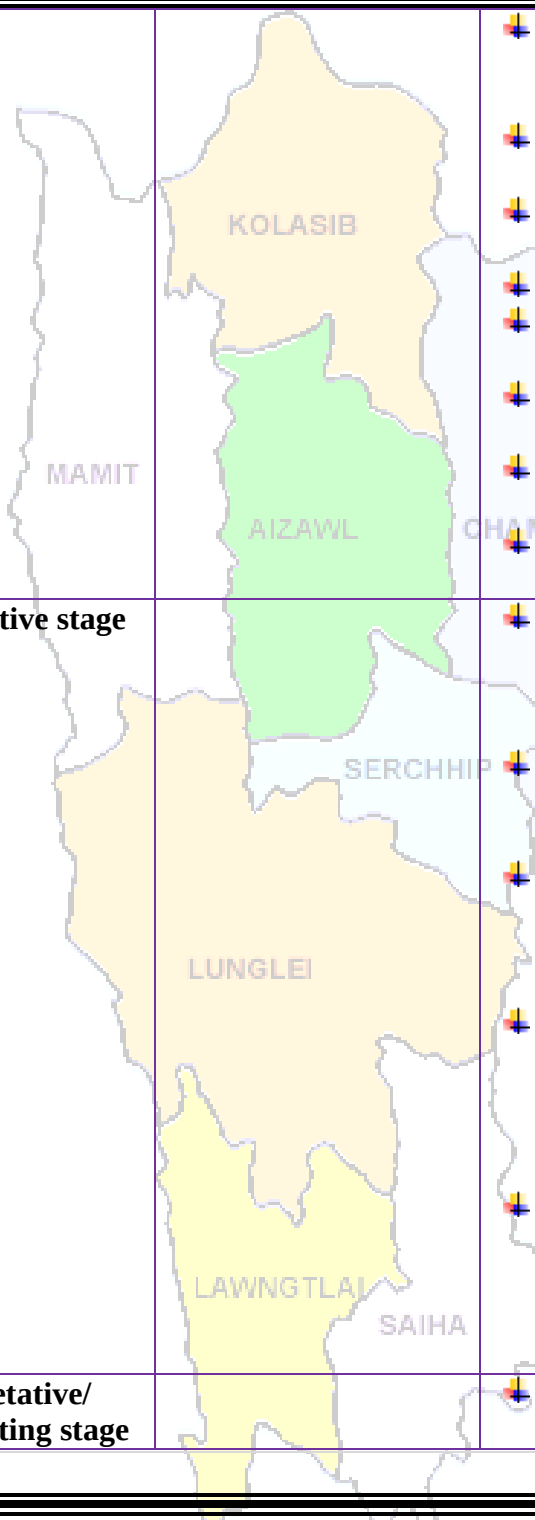	✦ Nursery should be located at least 500 meters away from the orchards to minimize the incidence of insects and diseases. ✦ Potting mixture of soil, sand and FYM or compost should be in proper ratio. ✦ Application of split dose of fertilizer 600: 200:100 (g/pt). ✦ Only certified seed should be used. ✦ Stagnation of water in beds should be avoided. ✦ Seedling of uniform height should be selected for planting. ✦ Hooked or bench rooted plants should be discarded. ✦ Plant protection measures should be followed.
Khasi Mandarin and acid lime	**Vegetative stage**		✦ Spray (10 ppm) of Gibberellic acid should be done at colour break stage to delay colour development, maintain firmness, extend harvesting period. ✦ Drip irrigation system should be preferred to provide proper water at the feeder root system. ✦ Fruit drops, which occur at least twice in each crop, should be controlled with the recommended doses of GA3, urea, benomyl and carbendazim at right time. ✦ Insect pests like Blackfly (Kolshi), Citrus Psylla, Leaf miner, Bark eating caterpillar, Fruit sucking Moth, Mites, Twing Blight, Gummosis, Root rot and Collar rot should be controlled. ✦ Recommended fungicide (Carbendazium) and proper doses (0.1% or 1000 ppm) should be sprayed at proper time (One month and 15 days before harvest i.e. two sprays).
Oil plam	**Vegetative/ Harvesting stage**		✦ Cleaning near base of the plant and cut unwanted branches.

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		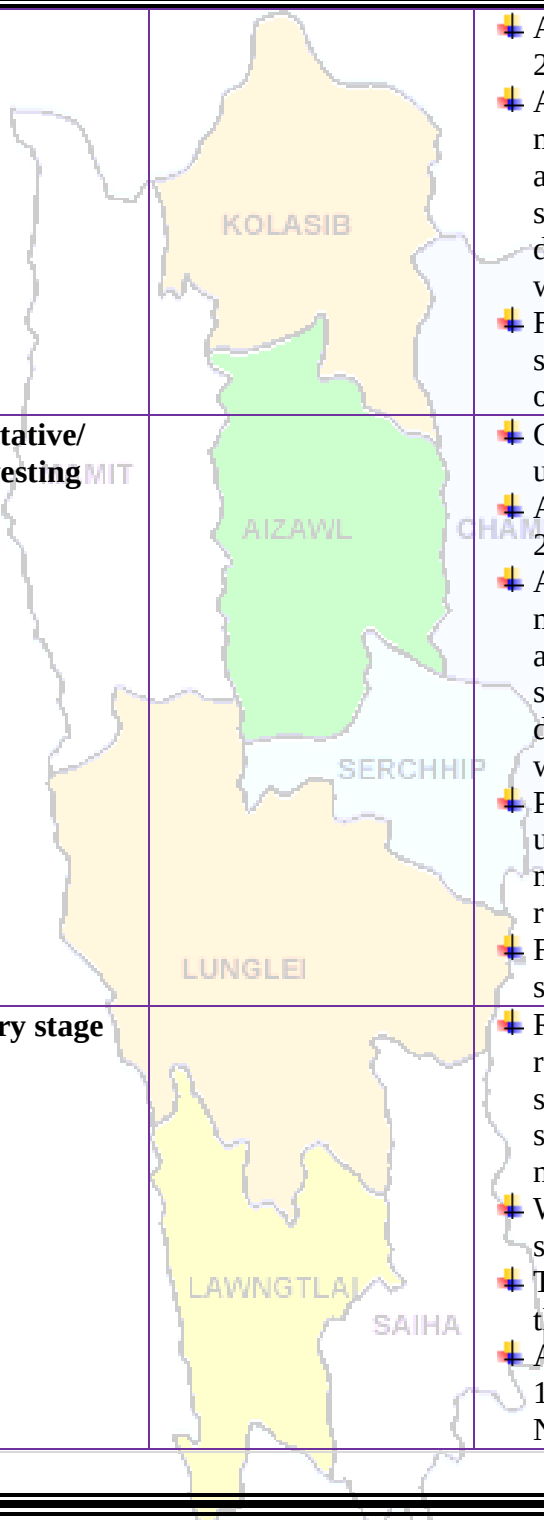	✚ Application of split dose of fertilizer 600: 200:100 (g/pt). ✚ Apply micro-nutrients viz. zinc, copper, manganese, iron, boron and molybdenum are required in ample quantities for supplying nutrients and also reduce serious disorders which may lead to decline of the whole orchard. ✚ Fruits are harvested when they attain full size, develop attractive colour with optimum sugar and acid blend.
Banana	**Vegetative/ harvesting**		✚ Cleaning near base of the plant and cut unwanted branches. ✚ Application of split dose of fertilizer 600: 200:100 (g/pt). ✚ Apply micro-nutrients viz. zinc, copper, manganese, iron, boron and molybdenum are required in ample quantities for supplying nutrients and also reduce serious disorders which may lead to decline of the whole orchard. ✚ Pruning on a regular basis removes unwanted or a sucker, keep production mats in optimum condition, saves fertilizer, reduces pest and disease. ✚ Fruits are harvested when they attain full size, develop attractive yellow colour.
Passion Fruit	**Nursery stage**		✚ Raising planting materials through seeds, ripe fruits from vines yielding quality fruits should be collected and extract the seeds should be sown after 15-20 days in raised nursery beds. ✚ When two to three leaves delop, seedling should be transplanted in polythene bags. ✚ The seedlings are planted in field when they become 3-4 months old. ✚ Apply well decompose FYM @ 15kg/pit/year along with 100.50.100 g NPK per pit.

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Pineapple	**Flowering stage**		✦ Apply flowering inducing chemical (Ethrel 10 PPM+2% urea+0.04% Sodium Carbonate) should be applied in the heart of the plant. In evening and only when plants have at least 32 leaves. ✦ The flowering emergence will come out after 55-60 days after chemical spraying. ✦ Apply split doses of fertilizer @ 60: 50:60 g per plant. ✦ Remove all unwanted leaves, branches and weed near to the plant.
Colocasia	**Sowing stage**		✦ Planting is done well prepared land or pits filled up with FYM (12-15) t/ha ✦ Sprouted corms or cormels are planted 5-7 deep at a spacing of 40-50 cm between and within rows in the pits. ✦ Inorganic fertilizer like Urea, SSP and MOP @ 220: 375: 134 kg.
		Corm borer	✦ Carbofuran 3G @1.5 kg a.i./ha applied in root zone when egg laying ooze is observed at plant base.
Cucurbitaceous crop	**Fruiting stage**		✦ Provide irrigation every 7 days interval which will give better yield. ✦ In large gardens apply carbaryl 0.2 per cent or malathion 0.15 per cent suspension containing sugar or jeggery at 10 g/l at fortnightly intervals at flowering and fruit initiation against fruit fly and pumpkin beetle. ✦ Provide split doses of urea (70g/pt) at the time of full blooming.
Okra	**Sowing stage**	**1. Weeding and light irrigation in nursery bed.** **2. Provide irrigation in transplanted okra field.**	✦ Mulching (if dry spell is there) ✦ Give irrigation at regular interval ✦ Provide banana shading to transplanted seedling.
		1. Aphid (*Aphis*	• Spray surf water solution to the plat

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		***gossypii*)**	• Spray any one of the insecticides Imidacloprid 200 SL @ 0.25ml/lt of water (Sucking pest) or Dimethoate 30 % EC 7ml/10lt of water.
		2. Flea beetle (*Phylliodes balyi*)	• Shake plants to dislodge grubs, pupae and adults and destroy. • Spray any one of the insecticides Imidacloprid 200 SL @ 0.25ml/lt or Dimethoate 30 % EC 7ml/10lt of water.
		3. Epilachna beetle. (*Epilachna viginctioctopancta ta*)	• Collect damaged leaves with grubs and egg masses and destroy them. • Spray with methyl parathion 0.5% or dimethoate 0.3% is effective.
		4. Leafhopper (*Empoasca devastans)*	• Spray any one of the insecticides Imidacloprid 200 SL @ 0.25ml/lt of water (Sucking pest) or Dimethoate 30 % EC 7ml/10lt of water.
		✓ **Bacterial Wilt (*Pseudomonas solanacearum)***	• Fields should be kept clean and effected plants are to be uprooted and burnt. • Spray Copper fungicides to control the disease (2% Bordeaux mixture.) • The disease is more prevalent in the presence of root knot Nematodes, so control of these nematodes will suppress the disease spread. • Soil drenching (Streptocycline sulphate 0.3 gm/lt of water) and Blitox 50 @ 5gm/ 15lt water.
		Damping off	✓ Seed treatment with thiram 3g/kg seed or Trichoderma viride 4g+ metalaxyl 4g (Apron)/ kg seed ✓ Drenching 1% Bordeaux mixture or 2 g captan or 3 copper oxychloride/ lt of water at 10-15 DAS are effective.
		Leaf spot and leaf blotch	○ Spraying Dithane M-45 @ 2.5g/litre of water or Bavistin @ 1g/litre of water, 2-3 sprayings should be given forthnightly intervals.

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			○ Spraying of Blitox @ 3 g/l of water was found effective against leaf spot.
French bean	**Flowering stage**		○ Remove all unwanted leaves, branches and weed near to the plant. ○ Earthing up the soil for better aeration. ○ Plant should be supported by bamboo or woods 20-25 days after sowing.
		Blister beetle	○ Manual collection of insect and destroy it immediately. ○ Apply cypermethrin 2 gm/lt of water.
Brinjal	**Sowing stage**		○ Equal quantity of sand and well decomposed FYM are mixed with soil and raised beds of 75-100 cm width and convenient length are prepared and these beds are treated with a solution of 100g of blue copper dissolved in 40 litres of water or formaldehyde. ○ The seeds can be sown in lines drawn at a spacing of 5 cm across the beds and cover with top soil.
Tomato	**Sowing stage**		○ Soils of nursery area brought into fine tilth and raised beds (0.8 m wide and 15 cm height of convenient length). ○ Apply 10 kg well decompose FYM along with 15:15:15 complex fertilizer along with 2.5 g carbofuran/2m^2. ○ The seeds can be sown in lines drawn at a spacing of 5 cm across the beds and cover with top soil.
		1. Aphid(*Aphis gossypii*)	• Spray surf water solution to the plat. • Spray any one of the insecticides Imidacloprid 200 SL @ 0.25ml/lt of water (Sucking pest) or Dimethoate 30 % EC 7ml/10lt of water.
		2. Epilachna beetle. (*Epilachna viginctioctopancta ta*)	• Spray with methyl parathion 0.5% or dimethoate 0.3% is effective against flea beetle.

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Rice	**Nursery stage**	**Pre Kharif Rice**	✓ Use only Well filled and healthy seeds. ✓ Put the seed in 2.5% salt solution i.e 250 g of common salt in 10 lts of water. ✓ Seed treated with Bavistin 50 WP @ 0.1% (2 g/lt) solution.
		Raised bed method	▪ The size of each bed should be 10 m in length in length and 1.25 m in width with 20-30 cm wide channel for irrigation, drainage and easy movement, it takes care of the seedlings without trampling them. ▪ Treated seed should be evenly broadcasted in each bed after applying manure.
Maize	**Sowing stage**		✚ Two to three plough are necessary to get the soil well pulverized and weed free. ✚ Seed is being placed in furrows. ✚ Seed should be treated with Thiram @4 g/kg seed. ✚ Use optimum seed rate (20-25 kg/ha) for desire plant population. ✚ Apply well decomposed FYM @ 5-10 t/ha along with 80:60:40 kg N, P_2O_5 and K_2O/ha incorporate with soil before sowing. Half nitrogen dose will use at the time of sowing and remaining 25% after one month and 25% at flowering stage.
Ginger and turmeric	**Land preparation**		✚ Remove all unwanted leaves, branches and weed near to the plant. ✚ Earthing up the soil for better aeration. ✚ Apply split dose of nitrogen fertilizer.
		Thrips	✚ Spray Roger or Monocrotophos (2.5 ml/lt) for controlling thrips.
		Scales	✚ Spray Quinalphos or Monocrotophos (2.5 ml/lt) for controlling scales.
Pig	**All stages**	**Porcine Reproductive Respiratory Syndrome (PRRS).**	1. Culling of positive pigs or piglets.
	Adult stage	**Swine fever.**	2. Vaccination of pigs with SF vaccines at 2

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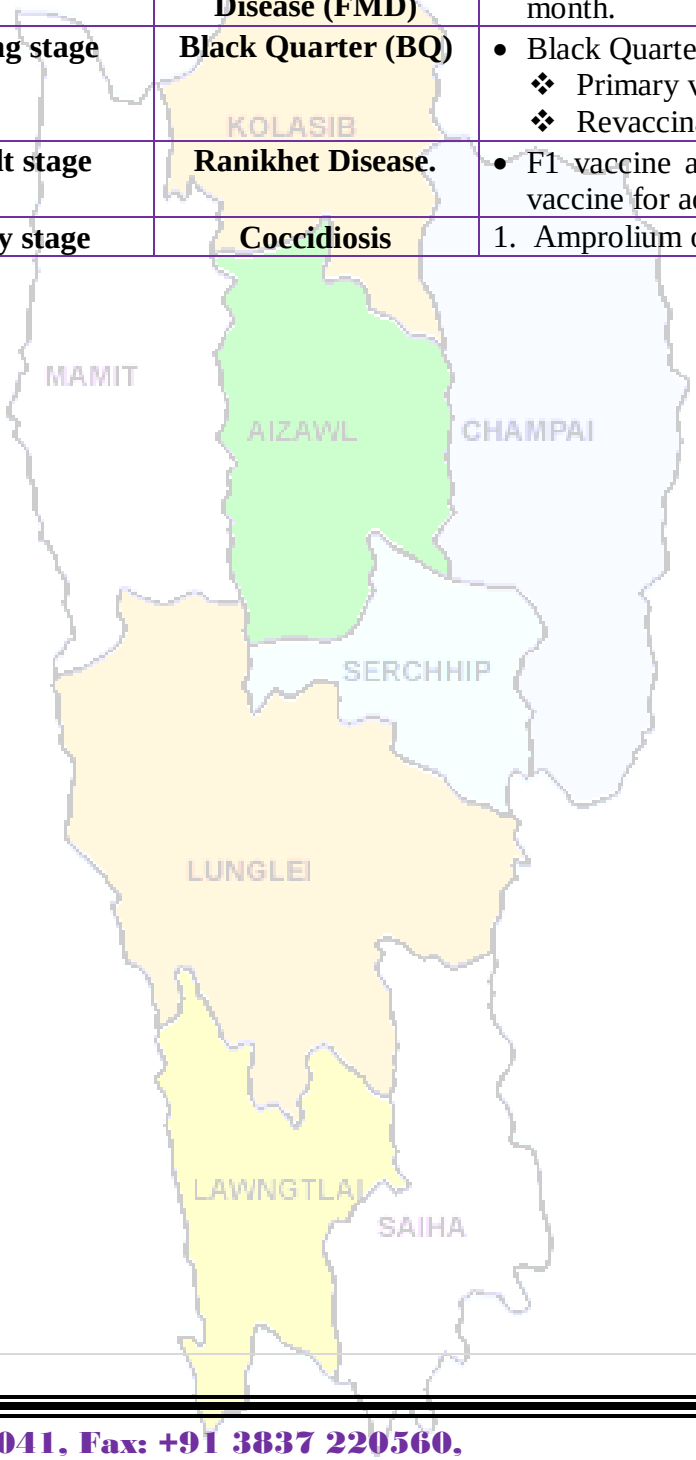
			months and yearly interval/6 month interval
Cattle	**All age group**	**Foot and Mouth Disease (FMD)**	• FMD vaccine at 16 week and repeat every 6 month.
	Young stage	**Black Quarter (BQ)**	• Black Quarter Vaccine (BQV). ❖ Primary vaccination 6 month or above ❖ Revaccination annually
Poultry	**Adult stage**	**Ranikhet Disease.**	• F1 vaccine at (1-6) days of birth and R_2B vaccine for adult birds.
	Early stage	**Coccidiosis**	1. Amprolium or coccidiostat



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(Prepared based on District wise Weather Forecast received from IMD, Guwahati)

District: Champhai **Period: 16 - 20 May, 2015**

Bulletin No: -518/2015/ Bulletin/English **Date of issue: 15th May, 2015**

Parameters	16.05.2015	17.05.2015	18.05.2015	19.05.2015	20.05.2015
Rainfall (mm)	3	3	16	5	19
Max Temp (oC)	32	33	33	32	34
Min Temp (oC)	19	19	20	18	19
Cloud Coverage	Mainly clear	Mainly clear	Partially clear	Clear sky	Clear sky
Max RH (%)	91	92	93	92	94
Min RH (%)	46	38	42	44	38
Wind Speed (KmpH)	3	4	4	3	4
*Wind Direction	S	S	S	S-E	S-E

Northerly- N, North-Easterly- N-E, Easterly- E, South-Easterly- S-E, Southerly- S, South-Westerly- S-W, Westerly-W, North-westerly- N-W.

STATUS OF PREMONSOON- April 1-30, 2015 (*Percent of deviation from normal in parenthesis*)

Aizawl- 185.66mm (112.8mm) **Champhai- 119.48mm (68.9mm)** **Saiha- 109.52 mm (40.2mm)** **Kolasib- 213.61mm (158.9mm)**

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Weather summary of the past three days	Weather forecast valid from 16th May, 2015 To 20th May, 2015.
	There are chances of moderate to light rainfall during the next 5 day. The maximum and minimum temperatures for the next 5 days may range for 32-34^{0}C and 18-20^{0}C. Maximum relative humidity is expected in the range of 91-94% and minimum may from 38-46%. Wind direction would be southeasterly with the wind speed of 3-4 km per hour. Partially cloudy sky will prevail during the next five days. ***Weekly cumulative rainfall:*** **46.0 mm**

Main Crop/ Animal /Fisheries	Stage	Cultural practices/ Pest/ Diseases	Agricultural / Horticultural/ animal husbandry advisories
Khasi Mandarin and acid lime	**Nursery stage**		**By seeds:** Seed should be sown in the nursery immediately after extraction in to a depth 1.5 to 2 cm extraction at 10x5 cm distance. Seedlings are planted in secondary bed or polythene bags at 4-6 leaf stages.

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		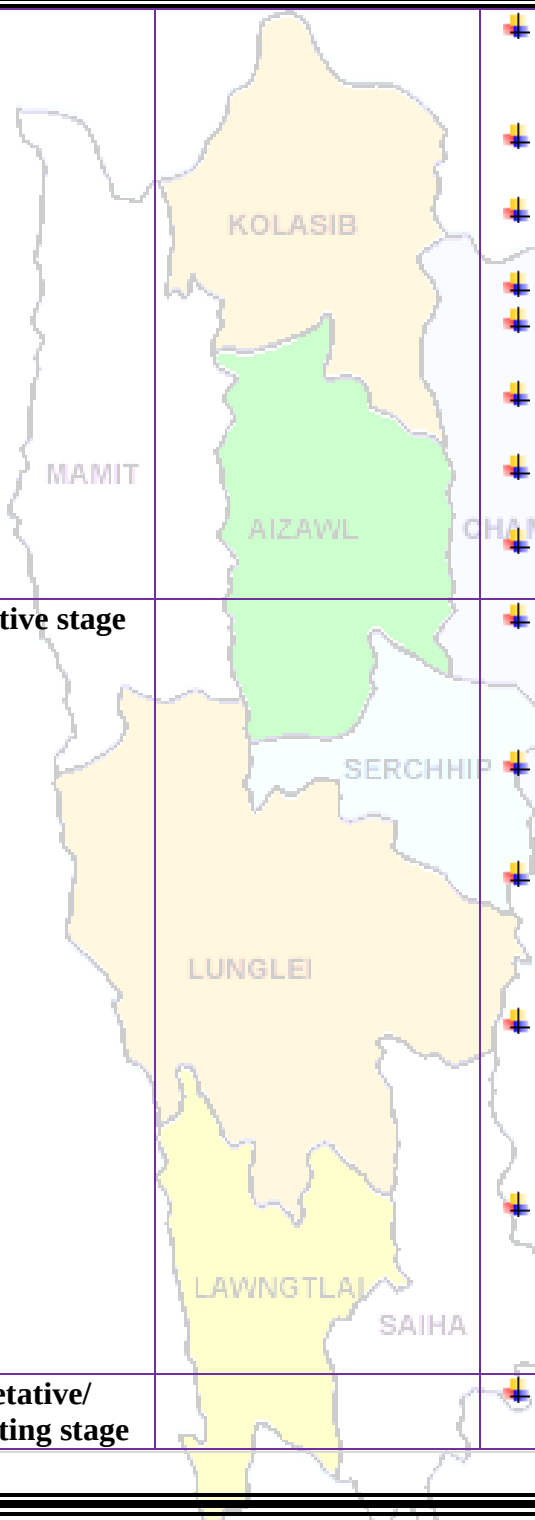	↓ Nursery should be located at least 500 meters away from the orchards to minimize the incidence of insects and diseases. ↓ Potting mixture of soil, sand and FYM or compost should be in proper ratio. ↓ Application of split dose of fertilizer 600: 200:100 (g/pt). ↓ Only certified seed should be used. ↓ Stagnation of water in beds should be avoided. ↓ Seedling of uniform height should be selected for planting. ↓ Hooked or bench rooted plants should be discarded. ↓ Plant protection measures should be followed.
Khasi Mandarin and acid lime	**Vegetative stage**		↓ Spray (10 ppm) of Gibberellic acid should be done at colour break stage to delay colour development, maintain firmness, extend harvesting period. ↓ Drip irrigation system should be preferred to provide proper water at the feeder root system. ↓ Fruit drops, which occur at least twice in each crop, should be controlled with the recommended doses of GA3, urea, benomyl and carbendazim at right time. ↓ Insect pests like Blackfly (Kolshi), Citrus Psylla, Leaf miner, Bark eating caterpillar, Fruit sucking Moth, Mites, Twing Blight, Gummosis, Root rot and Collar rot should be controlled. ↓ Recommended fungicide (Carbendazium) and proper doses (0.1% or 1000 ppm) should be sprayed at proper time (One month and 15 days before harvest i.e. two sprays).
Oil plam	**Vegetative/ Harvesting stage**		↓ Cleaning near base of the plant and cut unwanted branches.

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		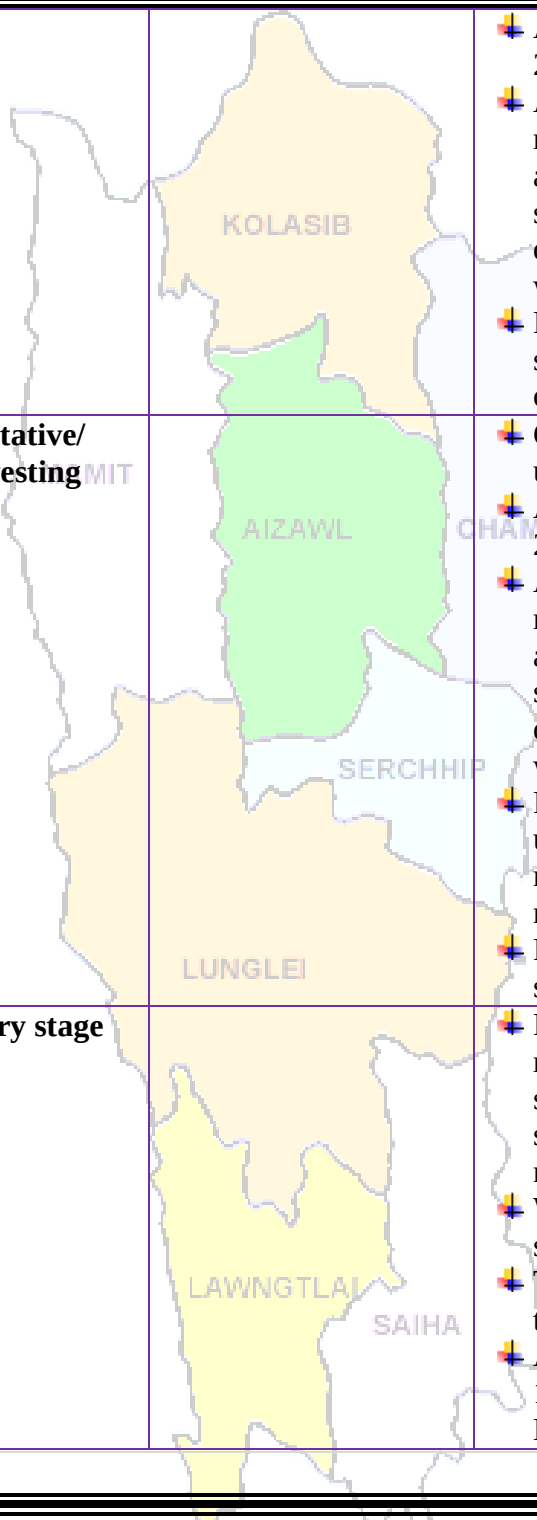	✚ Application of split dose of fertilizer 600: 200:100 (g/pt). ✚ Apply micro-nutrients viz. zinc, copper, manganese, iron, boron and molybdenum are required in ample quantities for supplying nutrients and also reduce serious disorders which may lead to decline of the whole orchard. ✚ Fruits are harvested when they attain full size, develop attractive colour with optimum sugar and acid blend.
Banana	**Vegetative/ harvesting**		✚ Cleaning near base of the plant and cut unwanted branches. ✚ Application of split dose of fertilizer 600: 200:100 (g/pt). ✚ Apply micro-nutrients viz. zinc, copper, manganese, iron, boron and molybdenum are required in ample quantities for supplying nutrients and also reduce serious disorders which may lead to decline of the whole orchard. ✚ Pruning on a regular basis removes unwanted or a sucker, keep production mats in optimum condition, saves fertilizer, reduces pest and disease. ✚ Fruits are harvested when they attain full size, develop attractive yellow colour.
Passion Fruit	**Nursery stage**		✚ Raising planting materials through seeds, ripe fruits from vines yielding quality fruits should be collected and extract the seeds should be sown after 15-20 days in raised nursery beds. ✚ When two to three leaves delop, seedling should be transplanted in polythene bags. ✚ The seedlings are planted in field when they become 3-4 months old. ✚ Apply well decompose FYM @ 15kg/pit/year along with 100.50.100 g NPK per pit.

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Pineapple	**Flowering stage**		✦ Apply flowering inducing chemical (Ethrel 10 PPM+2% urea+0.04% Sodium Carbonate) should be applied in the heart of the plant. In evening and only when plants have at least 32 leaves. ✦ The flowering emergence will come out after 55-60 days after chemical spraying. ✦ Apply split doses of fertilizer @ 60: 50:60 g per plant. ✦ Remove all unwanted leaves, branches and weed near to the plant.
Colocasia	**Sowing stage**		✦ Planting is done well prepared land or pits filled up with FYM (12-15) t/ha ✦ Sprouted corms or cormels are planted 5-7 deep at a spacing of 40-50 cm between and within rows in the pits. ✦ Inorganic fertilizer like Urea, SSP and MOP @ 220: 375: 134 kg.
		Corm borer	✦ Carbofuran 3G @1.5 kg a.i./ha applied in root zone when egg laying ooze is observed at plant base.
Cucurbitaceous crop	**Fruiting stage**		✦ Provide irrigation every 7 days interval which will give better yield. ✦ In large gardens apply carbaryl 0.2 per cent or malathion 0.15 per cent suspension containing sugar or jeggery at 10 g/l at fortnightly intervals at flowering and fruit initiation against fruit fly and pumpkin beetle. ✦ Provide split doses of urea (70g/pt) at the time of full blooming.
Okra	**Sowing stage**	**1. Weeding and light irrigation in nursery bed.** **2. Provide irrigation in transplanted okra field.**	✦ Mulching (if dry spell is there) ✦ Give irrigation at regular interval ✦ Provide banana shading to transplanted seedling.
		1. Aphid (*Aphis*	• Spray surf water solution to the plat

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		***gossypii*)**	• Spray any one of the insecticides Imidacloprid 200 SL @ 0.25ml/lt of water (Sucking pest) or Dimethoate 30 % EC 7ml/10lt of water.
		2. Flea beetle (*Phylliodes balyi*)	• Shake plants to dislodge grubs, pupae and adults and destroy. • Spray any one of the insecticides Imidacloprid 200 SL @ 0.25ml/lt or Dimethoate 30 % EC 7ml/10lt of water.
		3. Epilachna beetle. (*Epilachna viginctioctopancta ta*)	• Collect damaged leaves with grubs and egg masses and destroy them. • Spray with methyl parathion 0.5% or dimethoate 0.3% is effective.
		4. Leafhopper (*Empoasca devastans)*	• Spray any one of the insecticides Imidacloprid 200 SL @ 0.25ml/lt of water (Sucking pest) or Dimethoate 30 % EC 7ml/10lt of water.
		✓ **Bacterial Wilt (*Pseudomonas solanacearum)***	• Fields should be kept clean and effected plants are to be uprooted and burnt. • Spray Copper fungicides to control the disease (2% Bordeaux mixture.) • The disease is more prevalent in the presence of root knot Nematodes, so control of these nematodes will suppress the disease spread. • Soil drenching (Streptocycline sulphate 0.3 gm/lt of water) and Blitox 50 @ 5gm/ 15lt water.
		Damping off	✓ Seed treatment with thiram 3g/kg seed or Trichoderma viride 4g+ metalaxyl 4g (Apron)/ kg seed ✓ Drenching 1% Bordeaux mixture or 2 g captan or 3 copper oxychloride/ lt of water at 10-15 DAS are effective.
		Leaf spot and leaf blotch	○ Spraying Dithane M-45 @ 2.5g/litre of water or Bavistin @ 1g/litre of water, 2-3 sprayings should be given forthnightly intervals.

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			○ Spraying of Blitox @ 3 g/l of water was found effective against leaf spot.
French bean	**Flowering stage**		○ Remove all unwanted leaves, branches and weed near to the plant. ○ Earthing up the soil for better aeration. ○ Plant should be supported by bamboo or woods 20-25 days after sowing.
		Blister beetle	○ Manual collection of insect and destroy it immediately. ○ Apply cypermethrin 2 gm/lt of water.
Brinjal	**Sowing stage**		○ Equal quantity of sand and well decomposed FYM are mixed with soil and raised beds of 75-100 cm width and convenient length are prepared and these beds are treated with a solution of 100g of blue copper dissolved in 40 litres of water or formaldehyde. ○ The seeds can be sown in lines drawn at a spacing of 5 cm across the beds and cover with top soil.
Tomato	**Sowing stage**		○ Soils of nursery area brought into fine tilth and raised beds (0.8 m wide and 15 cm height of convenient length). ○ Apply 10 kg well decompose FYM along with 15:15:15 complex fertilizer along with 2.5 g carbofuran/2m^2. ○ The seeds can be sown in lines drawn at a spacing of 5 cm across the beds and cover with top soil.
		1. Aphid(*Aphis gossypii*)	• Spray surf water solution to the plat. • Spray any one of the insecticides Imidacloprid 200 SL @ 0.25ml/lt of water (Sucking pest) or Dimethoate 30 % EC 7ml/10lt of water.
		2. Epilachna beetle. (*Epilachna viginctioctopancta ta*)	• Spray with methyl parathion 0.5% or dimethoate 0.3% is effective against flea beetle.

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Rice	**Nursery stage**	**Pre Kharif Rice**	✓ Use only Well filled and healthy seeds. ✓ Put the seed in 2.5% salt solution i.e 250 g of common salt in 10 lts of water. ✓ Seed treated with Bavistin 50 WP @ 0.1% (2 g/lt) solution.
		Raised bed method	▪ The size of each bed should be 10 m in length in length and 1.25 m in width with 20-30 cm wide channel for irrigation, drainage and easy movement, it takes care of the seedlings without trampling them. ▪ Treated seed should be evenly broadcasted in each bed after applying manure.
Maize	**Sowing stage**		✓ Two to three plough are necessary to get the soil well pulverized and weed free. ✓ Seed is being placed in furrows. ✓ Seed should be treated with Thiram @4 g/kg seed. ✓ Use optimum seed rate (20-25 kg/ha) for desire plant population. ✓ Apply well decomposed FYM @ 5-10 t/ha along with 80:60:40 kg N, P_2O_5 and K_2O/ha incorporate with soil before sowing. Half nitrogen dose will use at the time of sowing and remaining 25% after one month and 25% at flowering stage.
Ginger and turmeric	**Land preparation**		✓ Remove all unwanted leaves, branches and weed near to the plant. ✓ Earthing up the soil for better aeration. ✓ Apply split dose of nitrogen fertilizer.
		Thrips	✓ Spray Roger or Monocrotophos (2.5 ml/lt) for controlling thrips.
		Scales	✓ Spray Quinalphos or Monocrotophos (2.5 ml/lt) for controlling scales.
Pig	**All stages**	**Porcine Reproductive Respiratory Syndrome (PRRS).**	1. Culling of positive pigs or piglets.
	Adult stage	**Swine fever.**	2. Vaccination of pigs with SF vaccines at 2

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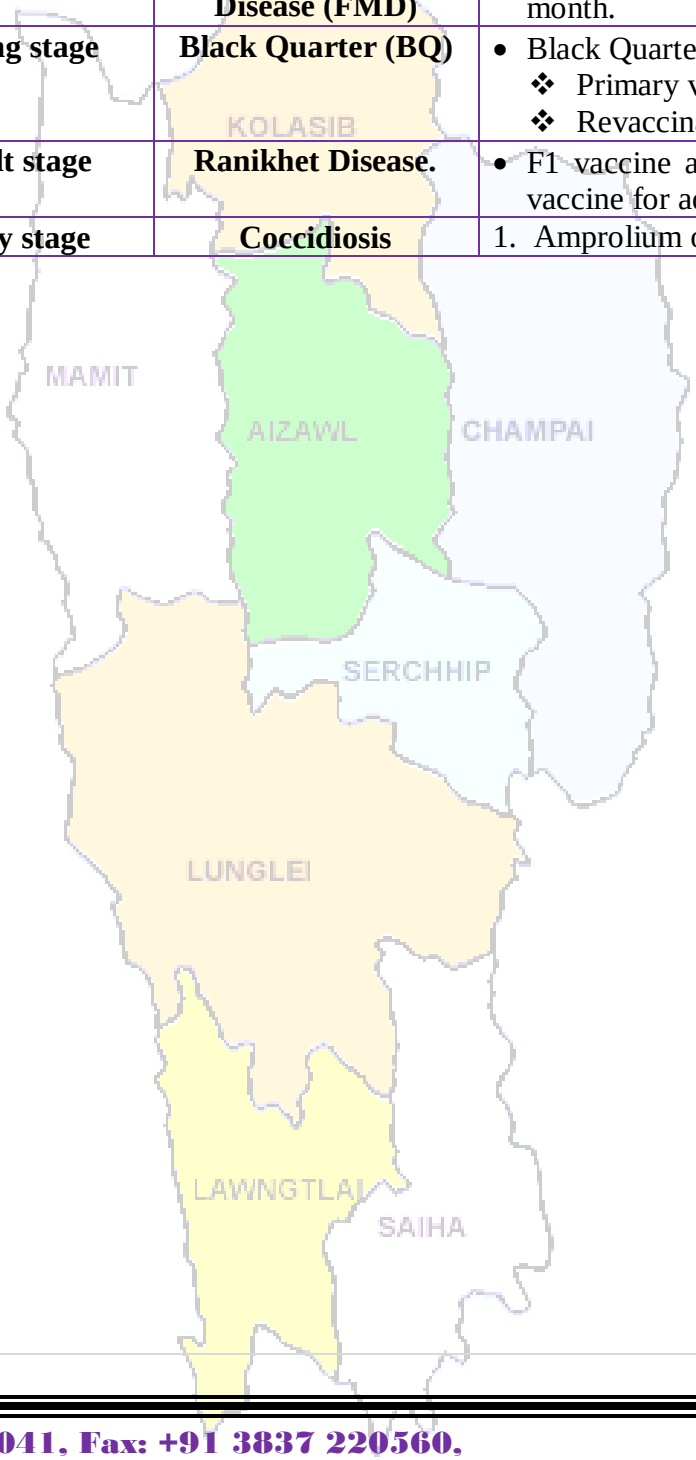
			months and yearly interval/6 month interval
Cattle	**All age group**	**Foot and Mouth Disease (FMD)**	• FMD vaccine at 16 week and repeat every 6 month.
	Young stage	**Black Quarter (BQ)**	• Black Quarter Vaccine (BQV). ❖ Primary vaccination 6 month or above ❖ Revaccination annually
Poultry	**Adult stage**	**Ranikhet Disease.**	• F1 vaccine at (1-6) days of birth and R_2B vaccine for adult birds.
	Early stage	**Coccidiosis**	1. Amprolium or coccidiostat



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GRAMIN KRISHI MAUSAM SEWA

ICAR RESEARCH COMPLEX FOR NEH REGION

Mizoram Centre, Kolasib- 796081, MIZORAM

(Prepared based on District wise Weather Forecast received from IMD, Guwahati)

District: Kolasib **Period: 16 - 20 May, 2015**

Bulletin No: -518/2015/ Bulletin/English **Date of issue: 15th May, 2015**

Parameters	16.05.2015	17.05.2015	18.05.2015	19.05.2015	20.05.2015
Rainfall (mm)	3	8	23	6	24
Max Temp (oC)	33	34	34	33	34
Min Temp (oC)	21	22	22	20	20
Cloud Coverage	Mainly clear	Mainly clear	Partially clear	Clear sky	Clear sky
Max RH (%)	94	96	98	95	98
Min RH (%)	53	46	49	51	44
Wind Speed (KmpH)	4	4	4	4	2
*Wind Direction	S-E	S-E	S-E	S-E	E

Northerly- N, North-Easterly- N-E, Easterly- E, South-Easterly- S-E, Southerly- S, South-Westerly- S-W, Westerly-W, North-westerly- N-W.

STATUS OF PREMONSOON- April 1-30, 2015 (*Percent of deviation from normal in parenthesis*)

Aizawl- 185.66mm (112.8mm) **Champhai- 119.48mm (68.9mm)** **Saiha- 109.52 mm (40.2mm)** **Kolasib- 213.61mm (158.9mm)**

Lawngtlai-101.62mm (18.5mm) **Lunglei-117.82mm (33.8mm)** **Mamit-236.61mm (75.6mm)** **Serchhip-110.96mm (25.9mm)**

Weather summary of the past three days

The temperature range for maximum and minimum were 31.3-35.5^{0}C and 23.1-26.3^{0}C respectively. Partially cloudy sky was observed. Wind direction is southeasterly. Maximum RH observed 84-90% & minimum of 44-53%. Rainfall recorded for the past three days is **0.00mm.**

Weather forecast valid from 16th May, 2015 To 20th May, 2015.

There are chances of moderate to light rainfall during the next 5 day. The maximum and minimum temperatures for the next 5 days may range for 33-34^{0}C and 20-22^{0}C. Maximum relative humidity is expected in the range of 94-98% and minimum may from 44-53%. Wind direction would be southeasterly with the wind speed of 4 km per hour. Partially clear sky will prevail during the next five days.

Weekly cumulative rainfall: **54.0 mm**

Main Crop/ Animal /Fisheries	Stage	Cultural practices/ Pest/ Diseases	Agricultural / Horticultural/ animal husbandry advisories
Khasi Mandarin and acid lime	**Nursery stage**		**By seeds:** Seed should be sown in the nursery immediately after extraction in to a depth 1.5 to 2 cm extraction at 10x5 cm distance. Seedlings are planted in secondary bed or polythene bags at 4-6 leaf stages.

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		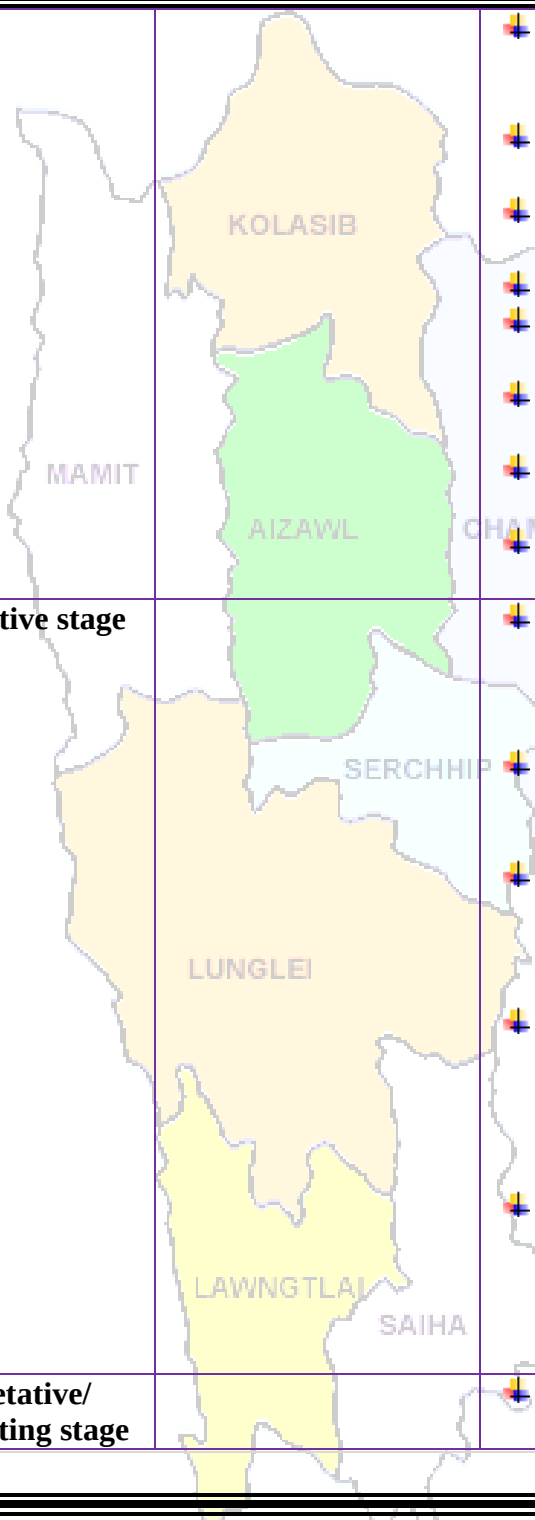	↓ Nursery should be located at least 500 meters away from the orchards to minimize the incidence of insects and diseases. ↓ Potting mixture of soil, sand and FYM or compost should be in proper ratio. ↓ Application of split dose of fertilizer 600: 200:100 (g/pt). ↓ Only certified seed should be used. ↓ Stagnation of water in beds should be avoided. ↓ Seedling of uniform height should be selected for planting. ↓ Hooked or bench rooted plants should be discarded. ↓ Plant protection measures should be followed.
Khasi Mandarin and acid lime	**Vegetative stage**		↓ Spray (10 ppm) of Gibberellic acid should be done at colour break stage to delay colour development, maintain firmness, extend harvesting period. ↓ Drip irrigation system should be preferred to provide proper water at the feeder root system. ↓ Fruit drops, which occur at least twice in each crop, should be controlled with the recommended doses of GA3, urea, benomyl and carbendazim at right time. ↓ Insect pests like Blackfly (Kolshi), Citrus Psylla, Leaf miner, Bark eating caterpillar, Fruit sucking Moth, Mites, Twing Blight, Gummosis, Root rot and Collar rot should be controlled. ↓ Recommended fungicide (Carbendazium) and proper doses (0.1% or 1000 ppm) should be sprayed at proper time (One month and 15 days before harvest i.e. two sprays).
Oil plam	**Vegetative/ Harvesting stage**		↓ Cleaning near base of the plant and cut unwanted branches.

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		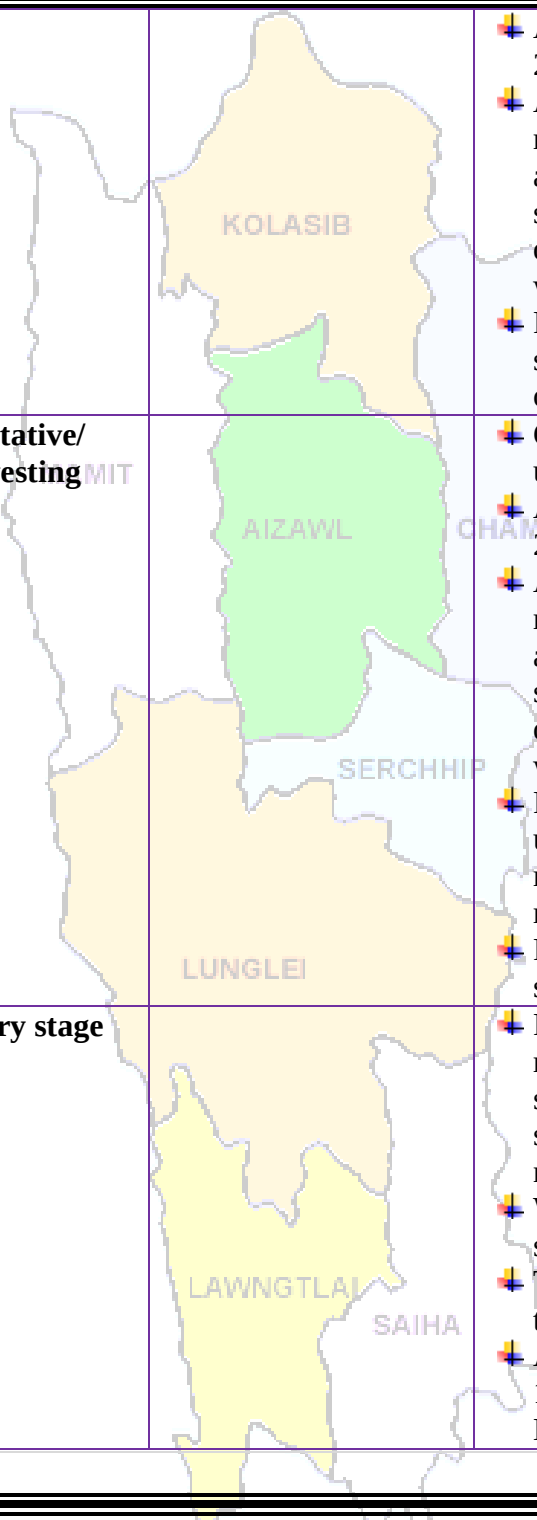	✚ Application of split dose of fertilizer 600: 200:100 (g/pt). ✚ Apply micro-nutrients viz. zinc, copper, manganese, iron, boron and molybdenum are required in ample quantities for supplying nutrients and also reduce serious disorders which may lead to decline of the whole orchard. ✚ Fruits are harvested when they attain full size, develop attractive colour with optimum sugar and acid blend.
Banana	**Vegetative/ harvesting**		✚ Cleaning near base of the plant and cut unwanted branches. ✚ Application of split dose of fertilizer 600: 200:100 (g/pt). ✚ Apply micro-nutrients viz. zinc, copper, manganese, iron, boron and molybdenum are required in ample quantities for supplying nutrients and also reduce serious disorders which may lead to decline of the whole orchard. ✚ Pruning on a regular basis removes unwanted or a sucker, keep production mats in optimum condition, saves fertilizer, reduces pest and disease. ✚ Fruits are harvested when they attain full size, develop attractive yellow colour.
Passion Fruit	**Nursery stage**		✚ Raising planting materials through seeds, ripe fruits from vines yielding quality fruits should be collected and extract the seeds should be sown after 15-20 days in raised nursery beds. ✚ When two to three leaves delop, seedling should be transplanted in polythene bags. ✚ The seedlings are planted in field when they become 3-4 months old. ✚ Apply well decompose FYM @ 15kg/pit/year along with 100.50.100 g NPK per pit.

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Pineapple	**Flowering stage**		✦ Apply flowering inducing chemical (Ethrel 10 PPM+2% urea+0.04% Sodium Carbonate) should be applied in the heart of the plant. In evening and only when plants have at least 32 leaves. ✦ The flowering emergence will come out after 55-60 days after chemical spraying. ✦ Apply split doses of fertilizer @ 60: 50:60 g per plant. ✦ Remove all unwanted leaves, branches and weed near to the plant.
Colocasia	**Sowing stage**		✦ Planting is done well prepared land or pits filled up with FYM (12-15) t/ha ✦ Sprouted corms or cormels are planted 5-7 deep at a spacing of 40-50 cm between and within rows in the pits. ✦ Inorganic fertilizer like Urea, SSP and MOP @ 220: 375: 134 kg.
		Corm borer	✦ Carbofuran 3G @1.5 kg a.i./ha applied in root zone when egg laying ooze is observed at plant base.
Cucurbitaceous crop	**Fruiting stage**		✦ Provide irrigation every 7 days interval which will give better yield. ✦ In large gardens apply carbaryl 0.2 per cent or malathion 0.15 per cent suspension containing sugar or jeggery at 10 g/l at fortnightly intervals at flowering and fruit initiation against fruit fly and pumpkin beetle. ✦ Provide split doses of urea (70g/pt) at the time of full blooming.
Okra	**Sowing stage**	**1. Weeding and light irrigation in nursery bed.** **2. Provide irrigation in transplanted okra field.**	✦ Mulching (if dry spell is there) ✦ Give irrigation at regular interval ✦ Provide banana shading to transplanted seedling.
		1. Aphid (*Aphis*	• Spray surf water solution to the plat

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		***gossypii*)**	• Spray any one of the insecticides Imidacloprid 200 SL @ 0.25ml/lt of water (Sucking pest) or Dimethoate 30 % EC 7ml/10lt of water.
		2. Flea beetle (*Phylliodes balyi*)	• Shake plants to dislodge grubs, pupae and adults and destroy. • Spray any one of the insecticides Imidacloprid 200 SL @ 0.25ml/lt or Dimethoate 30 % EC 7ml/10lt of water.
		3. Epilachna beetle. (*Epilachna viginctioctopancta ta*)	• Collect damaged leaves with grubs and egg masses and destroy them. • Spray with methyl parathion 0.5% or dimethoate 0.3% is effective.
		4. Leafhopper (*Empoasca devastans)*	• Spray any one of the insecticides Imidacloprid 200 SL @ 0.25ml/lt of water (Sucking pest) or Dimethoate 30 % EC 7ml/10lt of water.
		✓ **Bacterial Wilt (*Pseudomonas solanacearum)***	• Fields should be kept clean and effected plants are to be uprooted and burnt. • Spray Copper fungicides to control the disease (2% Bordeaux mixture.) • The disease is more prevalent in the presence of root knot Nematodes, so control of these nematodes will suppress the disease spread. • Soil drenching (Streptocycline sulphate 0.3 gm/lt of water) and Blitox 50 @ 5gm/ 15lt water.
		Damping off	✓ Seed treatment with thiram 3g/kg seed or Trichoderma viride 4g+ metalaxyl 4g (Apron)/ kg seed ✓ Drenching 1% Bordeaux mixture or 2 g captan or 3 copper oxychloride/ lt of water at 10-15 DAS are effective.
		Leaf spot and leaf blotch	○ Spraying Dithane M-45 @ 2.5g/litre of water or Bavistin @ 1g/litre of water, 2-3 sprayings should be given forthnightly intervals.

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			○ Spraying of Blitox @ 3 g/l of water was found effective against leaf spot.
French bean	**Flowering stage**		○ Remove all unwanted leaves, branches and weed near to the plant. ○ Earthing up the soil for better aeration. ○ Plant should be supported by bamboo or woods 20-25 days after sowing.
		Blister beetle	○ Manual collection of insect and destroy it immediately. ○ Apply cypermethrin 2 gm/lt of water.
Brinjal	**Sowing stage**		○ Equal quantity of sand and well decomposed FYM are mixed with soil and raised beds of 75-100 cm width and convenient length are prepared and these beds are treated with a solution of 100g of blue copper dissolved in 40 litres of water or formaldehyde. ○ The seeds can be sown in lines drawn at a spacing of 5 cm across the beds and cover with top soil.
Tomato	**Sowing stage**		○ Soils of nursery area brought into fine tilth and raised beds (0.8 m wide and 15 cm height of convenient length). ○ Apply 10 kg well decompose FYM along with 15:15:15 complex fertilizer along with 2.5 g carbofuran/2m^2. ○ The seeds can be sown in lines drawn at a spacing of 5 cm across the beds and cover with top soil.
		1. Aphid(*Aphis gossypii*)	• Spray surf water solution to the plat. • Spray any one of the insecticides Imidacloprid 200 SL @ 0.25ml/lt of water (Sucking pest) or Dimethoate 30 % EC 7ml/10lt of water.
		2. Epilachna beetle. (*Epilachna viginctioctopancta ta*)	• Spray with methyl parathion 0.5% or dimethoate 0.3% is effective against flea beetle.

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Rice	**Nursery stage**	**Pre Kharif Rice**	✓ Use only Well filled and healthy seeds. ✓ Put the seed in 2.5% salt solution i.e 250 g of common salt in 10 lts of water. ✓ Seed treated with Bavistin 50 WP @ 0.1% (2 g/lt) solution.
		Raised bed method	▪ The size of each bed should be 10 m in length in length and 1.25 m in width with 20-30 cm wide channel for irrigation, drainage and easy movement, it takes care of the seedlings without trampling them. ▪ Treated seed should be evenly broadcasted in each bed after applying manure.
Maize	**Sowing stage**		✚ Two to three plough are necessary to get the soil well pulverized and weed free. ✚ Seed is being placed in furrows. ✚ Seed should be treated with Thiram @4 g/kg seed. ✚ Use optimum seed rate (20-25 kg/ha) for desire plant population. ✚ Apply well decomposed FYM @ 5-10 t/ha along with 80:60:40 kg N, P_2O_5 and K_2O/ha incorporate with soil before sowing. Half nitrogen dose will use at the time of sowing and remaining 25% after one month and 25% at flowering stage.
Ginger and turmeric	**Land preparation**		✚ Remove all unwanted leaves, branches and weed near to the plant. ✚ Earthing up the soil for better aeration. ✚ Apply split dose of nitrogen fertilizer.
		Thrips	✚ Spray Roger or Monocrotophos (2.5 ml/lt) for controlling thrips.
		Scales	✚ Spray Quinalphos or Monocrotophos (2.5 ml/lt) for controlling scales.
Pig	**All stages**	**Porcine Reproductive Respiratory Syndrome (PRRS).**	1. Culling of positive pigs or piglets.
	Adult stage	**Swine fever.**	2. Vaccination of pigs with SF vaccines at 2

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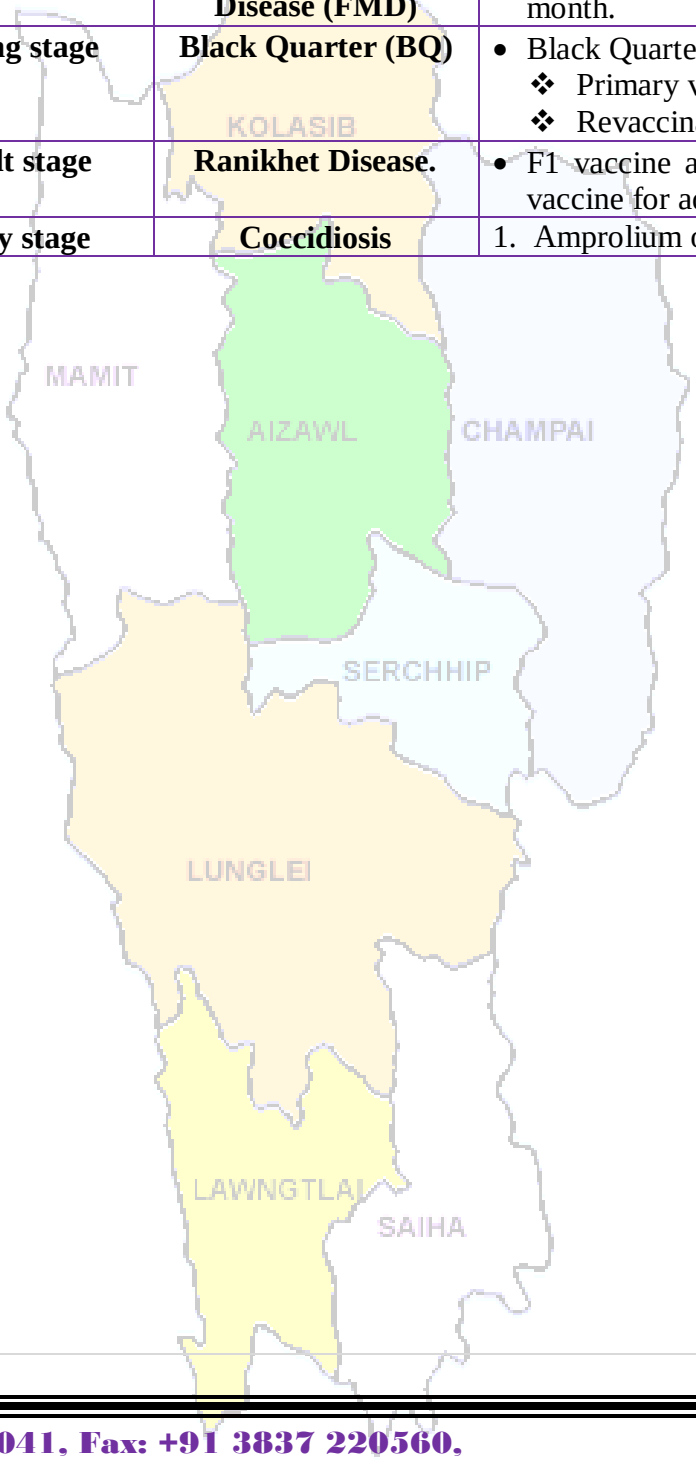
			months and yearly interval/6 month interval
Cattle	**All age group**	**Foot and Mouth Disease (FMD)**	• FMD vaccine at 16 week and repeat every 6 month.
	Young stage	**Black Quarter (BQ)**	• Black Quarter Vaccine (BQV). ❖ Primary vaccination 6 month or above ❖ Revaccination annually
Poultry	**Adult stage**	**Ranikhet Disease.**	• F1 vaccine at (1-6) days of birth and R_2B vaccine for adult birds.
	Early stage	**Coccidiosis**	1. Amprolium or coccidiostat



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(Prepared based on District wise Weather Forecast received from IMD, Guwahati)

District: Lawngtlai **Period: 16 - 20 May, 2015**

Bulletin No: -518/2015/ Bulletin/English **Date of issue: 15th May, 2015**

Parameters	16.05.2015	17.05.2015	18.05.2015	19.05.2015	20.05.2015
Rainfall (mm)	0	0	7	0	0
Max Temp (oC)	35	34	35	35	34
Min Temp (oC)	21	20	21	20	21
Cloud Coverage	Mainly clear	Mainly clear	Mainly clear	Clear sky	Clear sky
Max RH (%)	92	91	96	93	92
Min RH (%)	40	41	37	36	40
Wind Speed (KmpH)	5	6	6	5	6
*Wind Direction	S-E	E	E	E	E

Northerly- N, North-Easterly- N-E, Easterly- E, South-Easterly- S-E, Southerly- S, South-Westerly- S-W, Westerly-W, North-westerly- N-W.

STATUS OF PREMONSOON- April 1-30, 2015 (*Percent of deviation from normal in parenthesis*)

Aizawl- 185.66mm (112.8mm) **Champhai- 119.48mm (68.9mm)** **Saiha- 109.52 mm (40.2mm)** **Kolasib- 213.61mm (158.9mm)**

Lawngtlai-101.62mm (18.5mm) **Lunglei-117.82mm (33.8mm)** **Mamit-236.61mm (75.6mm)** **Serchhip-110.96mm (25.9mm)**

Weather summary of the past three days	Weather forecast valid from 16th May, 2015 To 20th May, 2015.
	There is a chance of light rainfall during the next 1 day. The maximum and minimum temperatures for the next 5 days may range for 34-35^{0}C and 20-21^{0}C. Maximum relative humidity is expected in the range of 91-96% and minimum may from 32-39%. Wind direction would be southeasterly with the wind speed of 5-6 km per hour. Clear sky will prevail during the next five days. ***Weekly cumulative rainfall:*** **07.0 mm**

Main Crop/ Animal /Fisheries	Stage	Cultural practices/ Pest/ Diseases	Agricultural / Horticultural/ animal husbandry advisories
Khasi Mandarin and acid lime	**Nursery stage**		**By seeds:** Seed should be sown in the nursery immediately after extraction in to a depth 1.5 to 2 cm extraction at 10x5 cm distance. Seedlings are planted in secondary bed or polythene bags at 4-6 leaf stages.

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		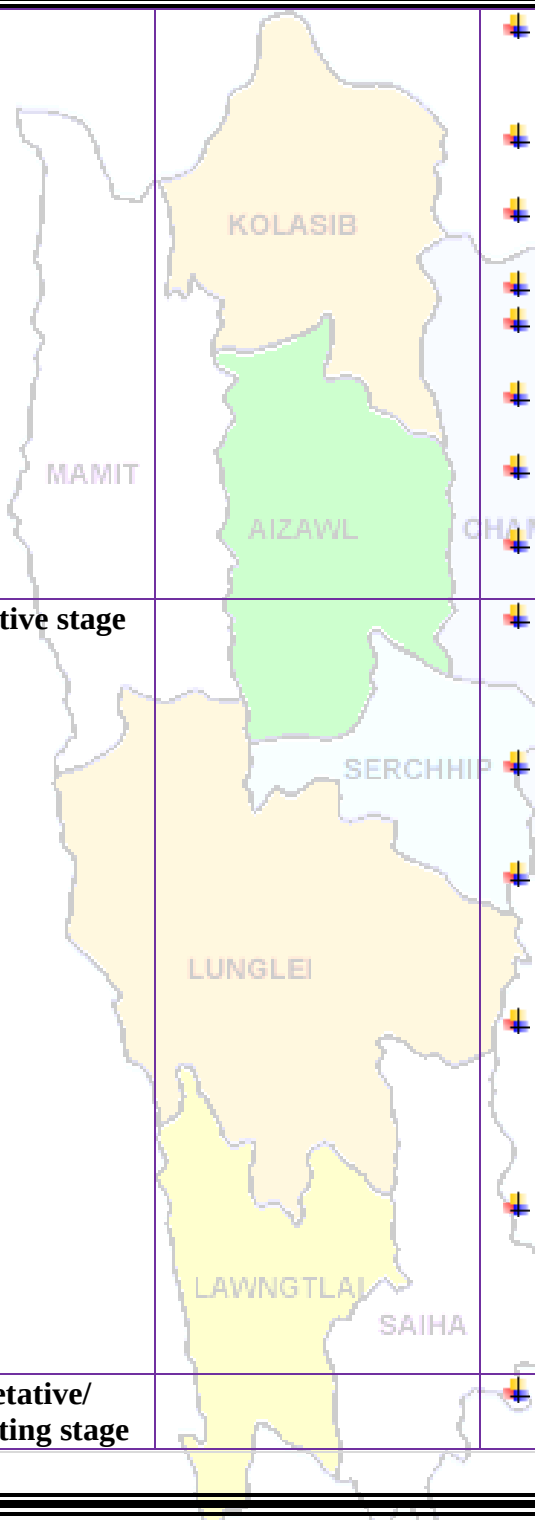	↓ Nursery should be located at least 500 meters away from the orchards to minimize the incidence of insects and diseases. ↓ Potting mixture of soil, sand and FYM or compost should be in proper ratio. ↓ Application of split dose of fertilizer 600: 200:100 (g/pt). ↓ Only certified seed should be used. ↓ Stagnation of water in beds should be avoided. ↓ Seedling of uniform height should be selected for planting. ↓ Hooked or bench rooted plants should be discarded. ↓ Plant protection measures should be followed.
Khasi Mandarin and acid lime	**Vegetative stage**		↓ Spray (10 ppm) of Gibberellic acid should be done at colour break stage to delay colour development, maintain firmness, extend harvesting period. ↓ Drip irrigation system should be preferred to provide proper water at the feeder root system. ↓ Fruit drops, which occur at least twice in each crop, should be controlled with the recommended doses of GA3, urea, benomyl and carbendazim at right time. ↓ Insect pests like Blackfly (Kolshi), Citrus Psylla, Leaf miner, Bark eating caterpillar, Fruit sucking Moth, Mites, Twing Blight, Gummosis, Root rot and Collar rot should be controlled. ↓ Recommended fungicide (Carbendazium) and proper doses (0.1% or 1000 ppm) should be sprayed at proper time (One month and 15 days before harvest i.e. two sprays).
Oil plam	**Vegetative/ Harvesting stage**		↓ Cleaning near base of the plant and cut unwanted branches.

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		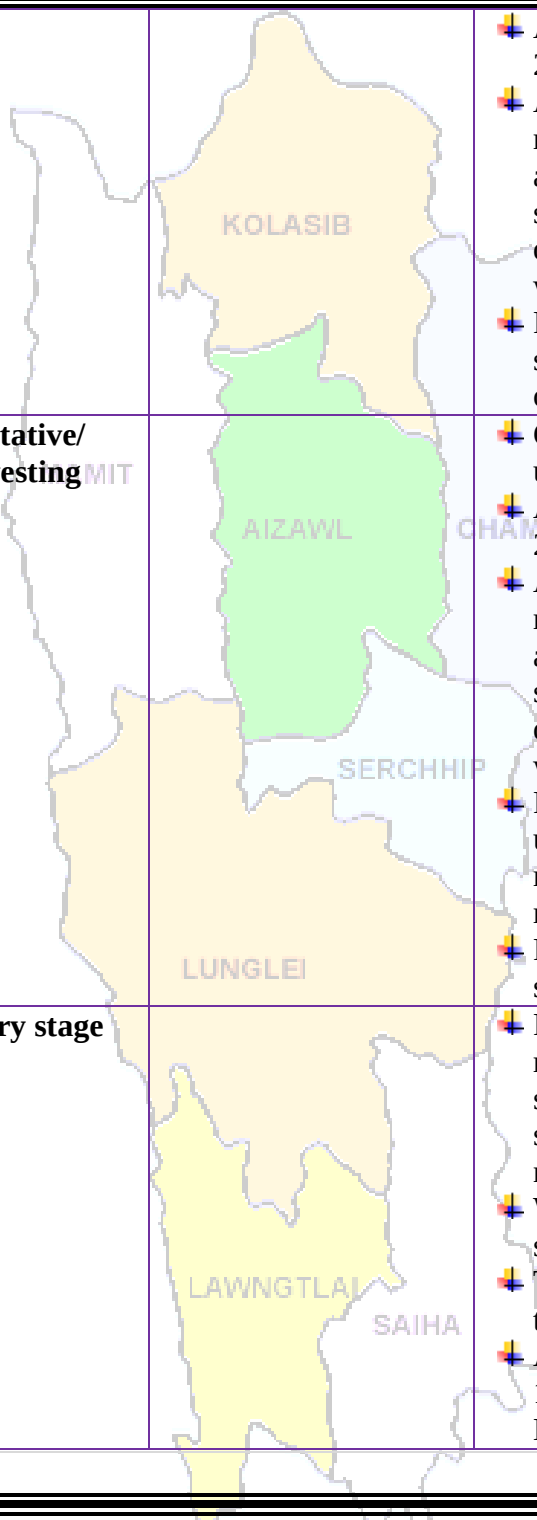	✦ Application of split dose of fertilizer 600: 200:100 (g/pt). ✦ Apply micro-nutrients viz. zinc, copper, manganese, iron, boron and molybdenum are required in ample quantities for supplying nutrients and also reduce serious disorders which may lead to decline of the whole orchard. ✦ Fruits are harvested when they attain full size, develop attractive colour with optimum sugar and acid blend.
Banana	**Vegetative/ harvesting**		✦ Cleaning near base of the plant and cut unwanted branches. ✦ Application of split dose of fertilizer 600: 200:100 (g/pt). ✦ Apply micro-nutrients viz. zinc, copper, manganese, iron, boron and molybdenum are required in ample quantities for supplying nutrients and also reduce serious disorders which may lead to decline of the whole orchard. ✦ Pruning on a regular basis removes unwanted or a sucker, keep production mats in optimum condition, saves fertilizer, reduces pest and disease. ✦ Fruits are harvested when they attain full size, develop attractive yellow colour.
Passion Fruit	**Nursery stage**		✦ Raising planting materials through seeds, ripe fruits from vines yielding quality fruits should be collected and extract the seeds should be sown after 15-20 days in raised nursery beds. ✦ When two to three leaves delop, seedling should be transplanted in polythene bags. ✦ The seedlings are planted in field when they become 3-4 months old. ✦ Apply well decompose FYM @ 15kg/pit/year along with 100.50.100 g NPK per pit.

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Pineapple	**Flowering stage**		✦ Apply flowering inducing chemical (Ethrel 10 PPM+2% urea+0.04% Sodium Carbonate) should be applied in the heart of the plant. In evening and only when plants have at least 32 leaves. ✦ The flowering emergence will come out after 55-60 days after chemical spraying. ✦ Apply split doses of fertilizer @ 60: 50:60 g per plant. ✦ Remove all unwanted leaves, branches and weed near to the plant.
Colocasia	**Sowing stage**		✦ Planting is done well prepared land or pits filled up with FYM (12-15) t/ha ✦ Sprouted corms or cormels are planted 5-7 deep at a spacing of 40-50 cm between and within rows in the pits. ✦ Inorganic fertilizer like Urea, SSP and MOP @ 220: 375: 134 kg.
		Corm borer	✦ Carbofuran 3G @1.5 kg a.i./ha applied in root zone when egg laying ooze is observed at plant base.
Cucurbitaceous crop	**Fruiting stage**		✦ Provide irrigation every 7 days interval which will give better yield. ✦ In large gardens apply carbaryl 0.2 per cent or malathion 0.15 per cent suspension containing sugar or jeggery at 10 g/l at fortnightly intervals at flowering and fruit initiation against fruit fly and pumpkin beetle. ✦ Provide split doses of urea (70g/pt) at the time of full blooming.
Okra	**Sowing stage**	**1. Weeding and light irrigation in nursery bed.** **2. Provide irrigation in transplanted okra field.**	✦ Mulching (if dry spell is there) ✦ Give irrigation at regular interval ✦ Provide banana shading to transplanted seedling.
		1. Aphid (*Aphis*	• Spray surf water solution to the plat

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		***gossypii*)**	• Spray any one of the insecticides Imidacloprid 200 SL @ 0.25ml/lt of water (Sucking pest) or Dimethoate 30 % EC 7ml/10lt of water.
		2. Flea beetle (*Phylliodes balyi*)	• Shake plants to dislodge grubs, pupae and adults and destroy. • Spray any one of the insecticides Imidacloprid 200 SL @ 0.25ml/lt or Dimethoate 30 % EC 7ml/10lt of water.
		3. Epilachna beetle. (*Epilachna viginctioctopancta ta*)	• Collect damaged leaves with grubs and egg masses and destroy them. • Spray with methyl parathion 0.5% or dimethoate 0.3% is effective.
		4. Leafhopper (*Empoasca devastans)*	• Spray any one of the insecticides Imidacloprid 200 SL @ 0.25ml/lt of water (Sucking pest) or Dimethoate 30 % EC 7ml/10lt of water.
		✓ **Bacterial Wilt (*Pseudomonas solanacearum)***	• Fields should be kept clean and effected plants are to be uprooted and burnt. • Spray Copper fungicides to control the disease (2% Bordeaux mixture.) • The disease is more prevalent in the presence of root knot Nematodes, so control of these nematodes will suppress the disease spread. • Soil drenching (Streptocycline sulphate 0.3 gm/lt of water) and Blitox 50 @ 5gm/ 15lt water.
		Damping off	✓ Seed treatment with thiram 3g/kg seed or Trichoderma viride 4g+ metalaxyl 4g (Apron)/ kg seed ✓ Drenching 1% Bordeaux mixture or 2 g captan or 3 copper oxychloride/ lt of water at 10-15 DAS are effective.
		Leaf spot and leaf blotch	○ Spraying Dithane M-45 @ 2.5g/litre of water or Bavistin @ 1g/litre of water, 2-3 sprayings should be given forthnightly intervals.

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			○ Spraying of Blitox @ 3 g/l of water was found effective against leaf spot.
French bean	**Flowering stage**		○ Remove all unwanted leaves, branches and weed near to the plant. ○ Earthing up the soil for better aeration. ○ Plant should be supported by bamboo or woods 20-25 days after sowing.
		Blister beetle	○ Manual collection of insect and destroy it immediately. ○ Apply cypermethrin 2 gm/lt of water.
Brinjal	**Sowing stage**		○ Equal quantity of sand and well decomposed FYM are mixed with soil and raised beds of 75-100 cm width and convenient length are prepared and these beds are treated with a solution of 100g of blue copper dissolved in 40 litres of water or formaldehyde. ○ The seeds can be sown in lines drawn at a spacing of 5 cm across the beds and cover with top soil.
Tomato	**Sowing stage**		○ Soils of nursery area brought into fine tilth and raised beds (0.8 m wide and 15 cm height of convenient length). ○ Apply 10 kg well decompose FYM along with 15:15:15 complex fertilizer along with 2.5 g carbofuran/$2m^2$. ○ The seeds can be sown in lines drawn at a spacing of 5 cm across the beds and cover with top soil.
		1. Aphid(*Aphis gossypii*)	• Spray surf water solution to the plat. • Spray any one of the insecticides Imidacloprid 200 SL @ 0.25ml/lt of water (Sucking pest) or Dimethoate 30 % EC 7ml/10lt of water.
		2. Epilachna beetle. (*Epilachna viginctioctopancta ta*)	• Spray with methyl parathion 0.5% or dimethoate 0.3% is effective against flea beetle.

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Rice	**Nursery stage**	**Pre Kharif Rice**	✓ Use only Well filled and healthy seeds. ✓ Put the seed in 2.5% salt solution i.e 250 g of common salt in 10 lts of water. ✓ Seed treated with Bavistin 50 WP @ 0.1% (2 g/lt) solution.
		Raised bed method	▪ The size of each bed should be 10 m in length in length and 1.25 m in width with 20-30 cm wide channel for irrigation, drainage and easy movement, it takes care of the seedlings without trampling them. ▪ Treated seed should be evenly broadcasted in each bed after applying manure.
Maize	**Sowing stage**		✚ Two to three plough are necessary to get the soil well pulverized and weed free. ✚ Seed is being placed in furrows. ✚ Seed should be treated with Thiram @4 g/kg seed. ✚ Use optimum seed rate (20-25 kg/ha) for desire plant population. ✚ Apply well decomposed FYM @ 5-10 t/ha along with 80:60:40 kg N, P_2O_5 and K_2O/ha incorporate with soil before sowing. Half nitrogen dose will use at the time of sowing and remaining 25% after one month and 25% at flowering stage.
Ginger and turmeric	**Land preparation**		✚ Remove all unwanted leaves, branches and weed near to the plant. ✚ Earthing up the soil for better aeration. ✚ Apply split dose of nitrogen fertilizer.
		Thrips	✚ Spray Roger or Monocrotophos (2.5 ml/lt) for controlling thrips.
		Scales	✚ Spray Quinalphos or Monocrotophos (2.5 ml/lt) for controlling scales.
Pig	**All stages**	**Porcine Reproductive Respiratory Syndrome (PRRS).**	1. Culling of positive pigs or piglets.
	Adult stage	**Swine fever.**	2. Vaccination of pigs with SF vaccines at 2

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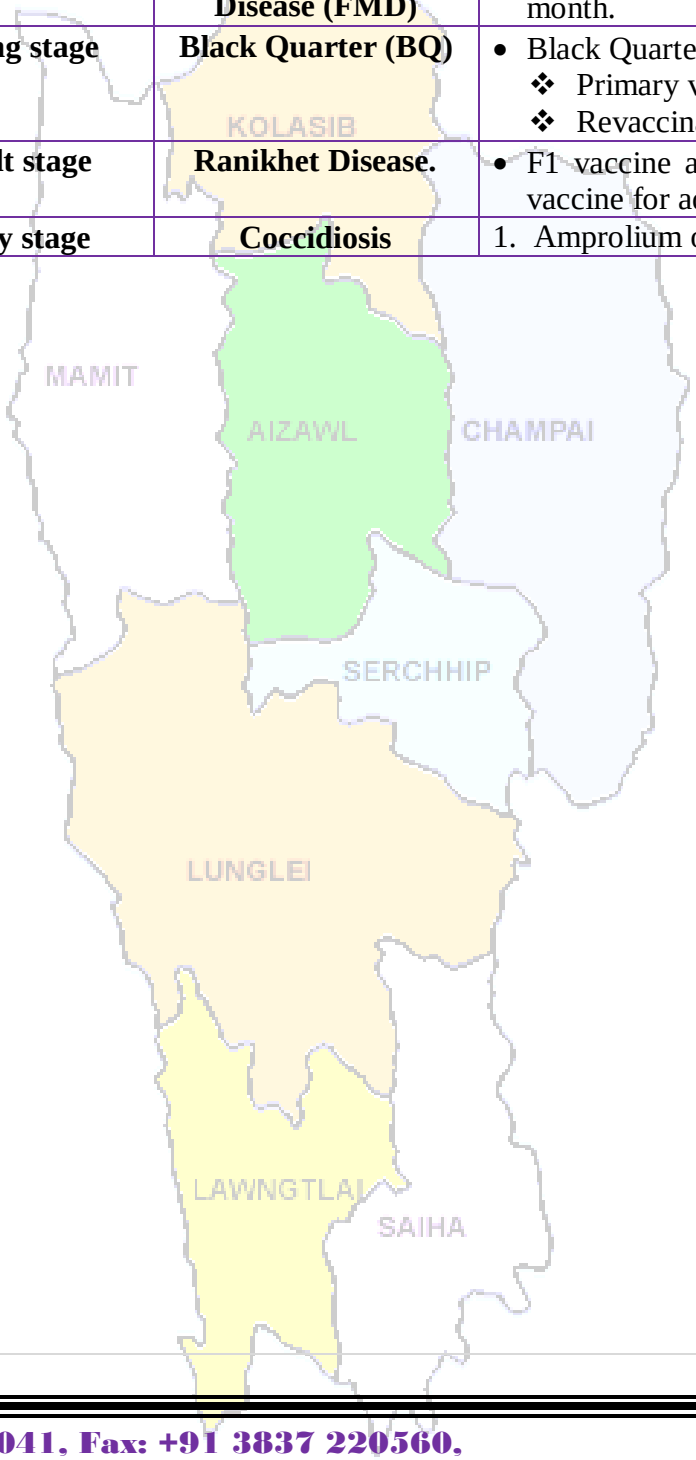
			months and yearly interval/6 month interval
Cattle	**All age group**	**Foot and Mouth Disease (FMD)**	• FMD vaccine at 16 week and repeat every 6 month.
	Young stage	**Black Quarter (BQ)**	• Black Quarter Vaccine (BQV). ❖ Primary vaccination 6 month or above ❖ Revaccination annually
Poultry	**Adult stage**	**Ranikhet Disease.**	• F1 vaccine at (1-6) days of birth and R_2B vaccine for adult birds.
	Early stage	**Coccidiosis**	1. Amprolium or coccidiostat



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GRAMIN KRISHI MAUSAM SEWA

ICAR RESEARCH COMPLEX FOR NEH REGION

Mizoram Centre, Kolasib- 796081, MIZORAM

(Prepared based on District wise Weather Forecast received from IMD, Guwahati)

District: Lunglei **Period: 16 - 20 May, 2015**

Bulletin No: -518/2015/ Bulletin/English **Date of issue: 15th May, 2015**

Parameters	16.05.2015	17.05.2015	18.05.2015	19.05.2015	20.05.2015
Rainfall (mm)	0	0	13	0	0
Max Temp (oC)	34	34	34	33	33
Min Temp (oC)	20	20	20	19	20
Cloud Coverage	Clear sky	Clear sky	Mainly clear	Clear sky	Clear sky
Max RH (%)	95	94	99	96	96
Min RH (%)	42	43	42	39	41
Wind Speed (KmpH)	4	5	4	3	5
*Wind Direction	S-E	S-E	S-E	E	S-E

Northerly- N, North-Easterly- N-E, Easterly- E, South-Easterly- S-E, Southerly- S, South-Westerly- S-W, Westerly-W, North-westerly- N-W.

STATUS OF PREMONSOON- April 1-30, 2015 (*Percent of deviation from normal in parenthesis*)

Aizawl- 185.66mm (112.8mm) **Champhai- 119.48mm (68.9mm)** **Saiha- 109.52 mm (40.2mm)** **Kolasib- 213.61mm (158.9mm)**

Lawngtlai-101.62mm (18.5mm) **Lunglei-117.82mm (33.8mm)** **Mamit-236.61mm (75.6mm)** **Serchhip-110.96mm (25.9mm)**

Weather summary of the past three days	Weather forecast valid from 16th May, 2015 To 20th May, 2015.
	There is a chance of moderate rainfall during the next 1 day. The maximum and minimum temperatures for the next 5 days may range for 33-34^{0}C and 19-20^{0}C. Maximum relative humidity is expected in the range of 94-99% and minimum may from 39-43%. Wind direction would be southeasterly with the wind speed of 3-5 km per hour. Clear sky will prevail during the next five days. ***Weekly cumulative rainfall:*** **13.0 mm**

Main Crop/ Animal /Fisheries	Stage	Cultural practices/ Pest/ Diseases	Agricultural / Horticultural/ animal husbandry advisories
Khasi Mandarin and acid lime	**Nursery stage**		**By seeds:** Seed should be sown in the nursery immediately after extraction in to a depth 1.5 to 2 cm extraction at 10x5 cm distance. Seedlings are planted in secondary bed or polythene bags at 4-6 leaf stages.

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		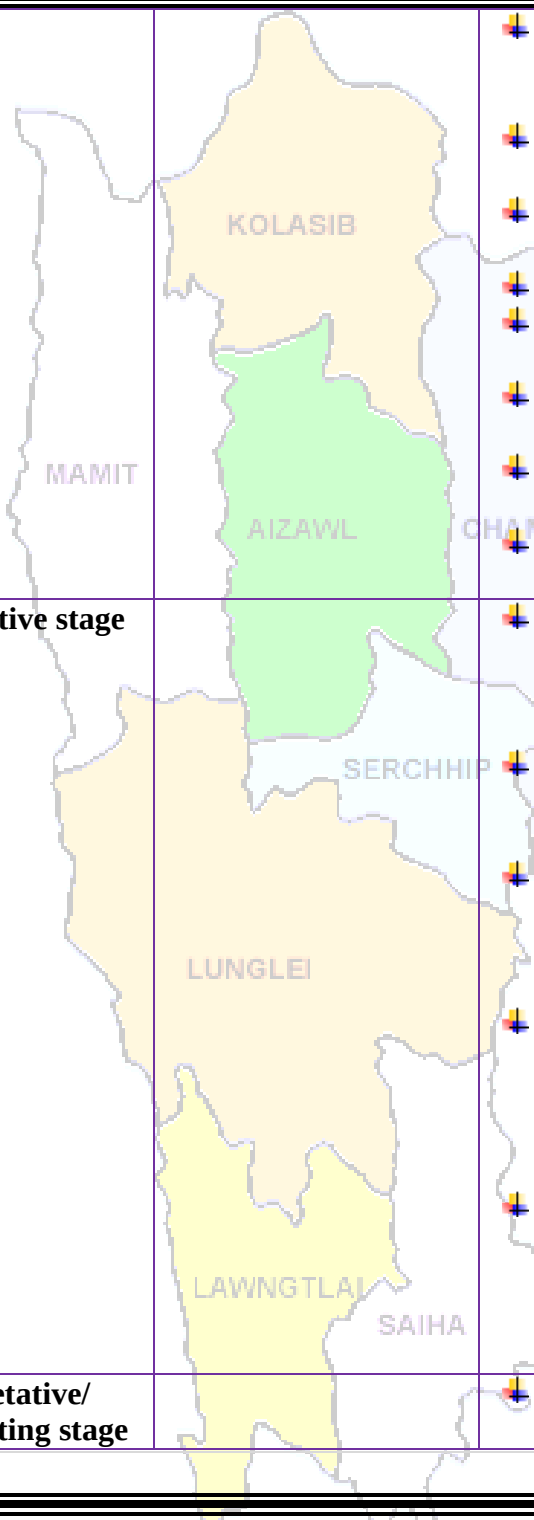	↓ Nursery should be located at least 500 meters away from the orchards to minimize the incidence of insects and diseases. ↓ Potting mixture of soil, sand and FYM or compost should be in proper ratio. ↓ Application of split dose of fertilizer 600: 200:100 (g/pt). ↓ Only certified seed should be used. ↓ Stagnation of water in beds should be avoided. ↓ Seedling of uniform height should be selected for planting. ↓ Hooked or bench rooted plants should be discarded. ↓ Plant protection measures should be followed.
Khasi Mandarin and acid lime	**Vegetative stage**		↓ Spray (10 ppm) of Gibberellic acid should be done at colour break stage to delay colour development, maintain firmness, extend harvesting period. ↓ Drip irrigation system should be preferred to provide proper water at the feeder root system. ↓ Fruit drops, which occur at least twice in each crop, should be controlled with the recommended doses of GA3, urea, benomyl and carbendazim at right time. ↓ Insect pests like Blackfly (Kolshi), Citrus Psylla, Leaf miner, Bark eating caterpillar, Fruit sucking Moth, Mites, Twing Blight, Gummosis, Root rot and Collar rot should be controlled. ↓ Recommended fungicide (Carbendazium) and proper doses (0.1% or 1000 ppm) should be sprayed at proper time (One month and 15 days before harvest i.e. two sprays).
Oil plam	**Vegetative/ Harvesting stage**		↓ Cleaning near base of the plant and cut unwanted branches.

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		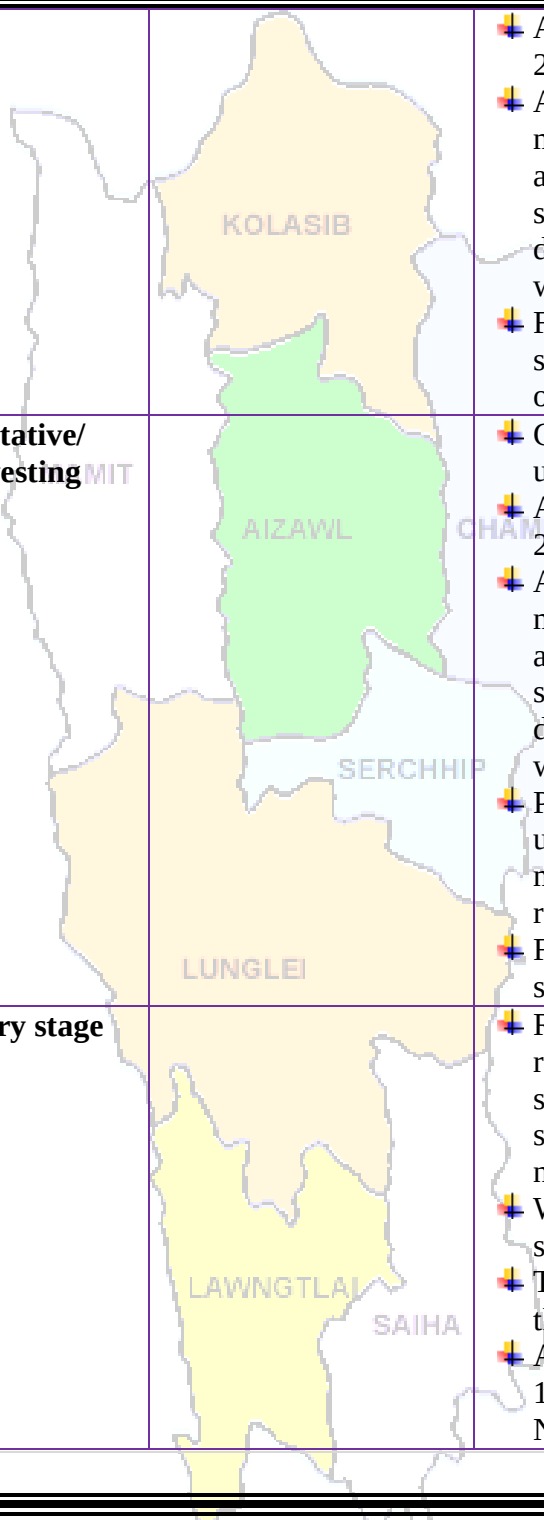	✚ Application of split dose of fertilizer 600: 200:100 (g/pt). ✚ Apply micro-nutrients viz. zinc, copper, manganese, iron, boron and molybdenum are required in ample quantities for supplying nutrients and also reduce serious disorders which may lead to decline of the whole orchard. ✚ Fruits are harvested when they attain full size, develop attractive colour with optimum sugar and acid blend.
Banana	**Vegetative/ harvesting**		✚ Cleaning near base of the plant and cut unwanted branches. ✚ Application of split dose of fertilizer 600: 200:100 (g/pt). ✚ Apply micro-nutrients viz. zinc, copper, manganese, iron, boron and molybdenum are required in ample quantities for supplying nutrients and also reduce serious disorders which may lead to decline of the whole orchard. ✚ Pruning on a regular basis removes unwanted or a sucker, keep production mats in optimum condition, saves fertilizer, reduces pest and disease. ✚ Fruits are harvested when they attain full size, develop attractive yellow colour.
Passion Fruit	**Nursery stage**		✚ Raising planting materials through seeds, ripe fruits from vines yielding quality fruits should be collected and extract the seeds should be sown after 15-20 days in raised nursery beds. ✚ When two to three leaves delop, seedling should be transplanted in polythene bags. ✚ The seedlings are planted in field when they become 3-4 months old. ✚ Apply well decompose FYM @ 15kg/pit/year along with 100.50.100 g NPK per pit.

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Pineapple	**Flowering stage**		✦ Apply flowering inducing chemical (Ethrel 10 PPM+2% urea+0.04% Sodium Carbonate) should be applied in the heart of the plant. In evening and only when plants have at least 32 leaves. ✦ The flowering emergence will come out after 55-60 days after chemical spraying. ✦ Apply split doses of fertilizer @ 60: 50:60 g per plant. ✦ Remove all unwanted leaves, branches and weed near to the plant.
Colocasia	**Sowing stage**		✦ Planting is done well prepared land or pits filled up with FYM (12-15) t/ha ✦ Sprouted corms or cormels are planted 5-7 deep at a spacing of 40-50 cm between and within rows in the pits. ✦ Inorganic fertilizer like Urea, SSP and MOP @ 220: 375: 134 kg.
		Corm borer	✦ Carbofuran 3G @1.5 kg a.i./ha applied in root zone when egg laying ooze is observed at plant base.
Cucurbitaceous crop	**Fruiting stage**		✦ Provide irrigation every 7 days interval which will give better yield. ✦ In large gardens apply carbaryl 0.2 per cent or malathion 0.15 per cent suspension containing sugar or jeggery at 10 g/l at fortnightly intervals at flowering and fruit initiation against fruit fly and pumpkin beetle. ✦ Provide split doses of urea (70g/pt) at the time of full blooming.
Okra	**Sowing stage**	**1. Weeding and light irrigation in nursery bed.** **2. Provide irrigation in transplanted okra field.**	✦ Mulching (if dry spell is there) ✦ Give irrigation at regular interval ✦ Provide banana shading to transplanted seedling.
		1. Aphid (*Aphis*	• Spray surf water solution to the plat

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		***gossypii*)**	• Spray any one of the insecticides Imidacloprid 200 SL @ 0.25ml/lt of water (Sucking pest) or Dimethoate 30 % EC 7ml/10lt of water.
		2. Flea beetle (*Phylliodes balyi*)	• Shake plants to dislodge grubs, pupae and adults and destroy. • Spray any one of the insecticides Imidacloprid 200 SL @ 0.25ml/lt or Dimethoate 30 % EC 7ml/10lt of water.
		3. Epilachna beetle. (*Epilachna viginctioctopancta ta*)	• Collect damaged leaves with grubs and egg masses and destroy them. • Spray with methyl parathion 0.5% or dimethoate 0.3% is effective.
		4. Leafhopper (*Empoasca devastans)*	• Spray any one of the insecticides Imidacloprid 200 SL @ 0.25ml/lt of water (Sucking pest) or Dimethoate 30 % EC 7ml/10lt of water.
		✓ **Bacterial Wilt (*Pseudomonas solanacearum)***	• Fields should be kept clean and effected plants are to be uprooted and burnt. • Spray Copper fungicides to control the disease (2% Bordeaux mixture.) • The disease is more prevalent in the presence of root knot Nematodes, so control of these nematodes will suppress the disease spread. • Soil drenching (Streptocycline sulphate 0.3 gm/lt of water) and Blitox 50 @ 5gm/ 15lt water.
		Damping off	✓ Seed treatment with thiram 3g/kg seed or Trichoderma viride 4g+ metalaxyl 4g (Apron)/ kg seed ✓ Drenching 1% Bordeaux mixture or 2 g captan or 3 copper oxychloride/ lt of water at 10-15 DAS are effective.
		Leaf spot and leaf blotch	○ Spraying Dithane M-45 @ 2.5g/litre of water or Bavistin @ 1g/litre of water, 2-3 sprayings should be given forthnightly intervals.

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			○ Spraying of Blitox @ 3 g/l of water was found effective against leaf spot.
French bean	**Flowering stage**		○ Remove all unwanted leaves, branches and weed near to the plant. ○ Earthing up the soil for better aeration. ○ Plant should be supported by bamboo or woods 20-25 days after sowing.
		Blister beetle	○ Manual collection of insect and destroy it immediately. ○ Apply cypermethrin 2 gm/lt of water.
Brinjal	**Sowing stage**		○ Equal quantity of sand and well decomposed FYM are mixed with soil and raised beds of 75-100 cm width and convenient length are prepared and these beds are treated with a solution of 100g of blue copper dissolved in 40 litres of water or formaldehyde. ○ The seeds can be sown in lines drawn at a spacing of 5 cm across the beds and cover with top soil.
Tomato	**Sowing stage**		○ Soils of nursery area brought into fine tilth and raised beds (0.8 m wide and 15 cm height of convenient length). ○ Apply 10 kg well decompose FYM along with 15:15:15 complex fertilizer along with 2.5 g carbofuran/2m^2. ○ The seeds can be sown in lines drawn at a spacing of 5 cm across the beds and cover with top soil.
		1. Aphid(*Aphis gossypii*)	• Spray surf water solution to the plat. • Spray any one of the insecticides Imidacloprid 200 SL @ 0.25ml/lt of water (Sucking pest) or Dimethoate 30 % EC 7ml/10lt of water.
		2. Epilachna beetle. (*Epilachna viginctioctopancta ta*)	• Spray with methyl parathion 0.5% or dimethoate 0.3% is effective against flea beetle.

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Rice	**Nursery stage**	**Pre Kharif Rice**	✓ Use only Well filled and healthy seeds. ✓ Put the seed in 2.5% salt solution i.e 250 g of common salt in 10 lts of water. ✓ Seed treated with Bavistin 50 WP @ 0.1% (2 g/lt) solution.
		Raised bed method	▪ The size of each bed should be 10 m in length in length and 1.25 m in width with 20-30 cm wide channel for irrigation, drainage and easy movement, it takes care of the seedlings without trampling them. ▪ Treated seed should be evenly broadcasted in each bed after applying manure.
Maize	**Sowing stage**		✚ Two to three plough are necessary to get the soil well pulverized and weed free. ✚ Seed is being placed in furrows. ✚ Seed should be treated with Thiram @4 g/kg seed. ✚ Use optimum seed rate (20-25 kg/ha) for desire plant population. ✚ Apply well decomposed FYM @ 5-10 t/ha along with 80:60:40 kg N, P_2O_5 and K_2O/ha incorporate with soil before sowing. Half nitrogen dose will use at the time of sowing and remaining 25% after one month and 25% at flowering stage.
Ginger and turmeric	**Land preparation**		✚ Remove all unwanted leaves, branches and weed near to the plant. ✚ Earthing up the soil for better aeration. ✚ Apply split dose of nitrogen fertilizer.
		Thrips	✚ Spray Roger or Monocrotophos (2.5 ml/lt) for controlling thrips.
		Scales	✚ Spray Quinalphos or Monocrotophos (2.5 ml/lt) for controlling scales.
Pig	**All stages**	**Porcine Reproductive Respiratory Syndrome (PRRS).**	1. Culling of positive pigs or piglets.
	Adult stage	**Swine fever.**	2. Vaccination of pigs with SF vaccines at 2

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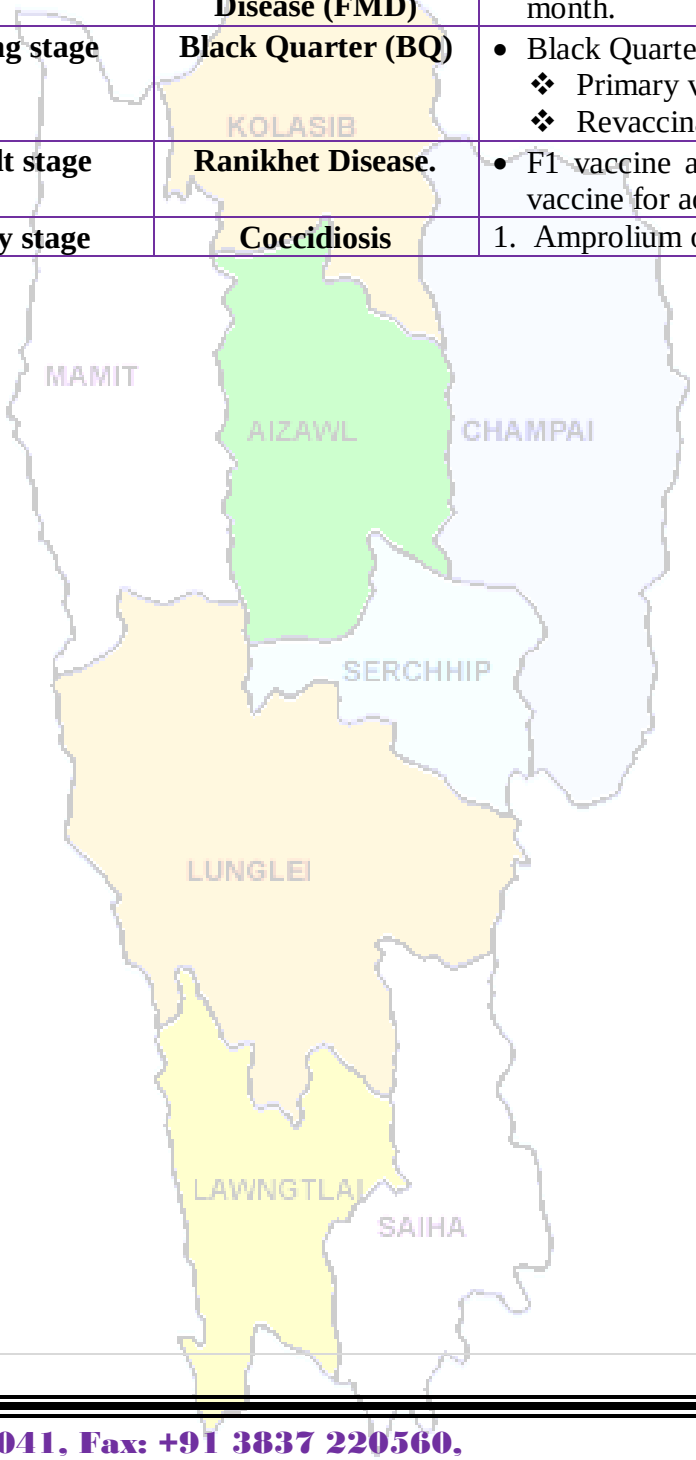
			months and yearly interval/6 month interval
Cattle	**All age group**	**Foot and Mouth Disease (FMD)**	• FMD vaccine at 16 week and repeat every 6 month.
	Young stage	**Black Quarter (BQ)**	• Black Quarter Vaccine (BQV). ❖ Primary vaccination 6 month or above ❖ Revaccination annually
Poultry	**Adult stage**	**Ranikhet Disease.**	• F1 vaccine at (1-6) days of birth and R_2B vaccine for adult birds.
	Early stage	**Coccidiosis**	1. Amprolium or coccidiostat



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GRAMIN KRISHI MAUSAM SEWA

ICAR RESEARCH COMPLEX FOR NEH REGION

Mizoram Centre, Kolasib- 796081, MIZORAM

(Prepared based on District wise Weather Forecast received from IMD, Guwahati)

District: Mamit **Period: 16 - 20 May, 2015**

Bulletin No: -518/2015/ Bulletin/English **Date of issue: 15th May, 2015**

Parameters	16.05.2015	17.05.2015	18.05.2015	19.05.2015	20.05.2015
Rainfall (mm)	0	0	33	0	15
Max Temp (oC)	34	35	35	34	34
Min Temp (oC)	22	22	22	21	21
Cloud Coverage	Mainly clear	Mainly clear	Partially clear	Clear sky	Clear sky
Max RH (%)	93	93	98	93	97
Min RH (%)	50	47	48	48	45
Wind Speed (KmpH)	6	6	4	4	2
*Wind Direction	S-E	S-E	S-E	S-E	E

Northerly- N, North-Easterly- N-E, Easterly- E, South-Easterly- S-E, Southerly- S, South-Westerly- S-W, Westerly-W, North-westerly- N-W.

STATUS OF PREMONSOON- April 1-30, 2015 (*Percent of deviation from normal in parenthesis*)

Aizawl- 185.66mm (112.8mm) **Champhai- 119.48mm (68.9mm)** **Saiha- 109.52 mm (40.2mm)** **Kolasib- 213.61mm (158.9mm)**

Lawngtlai-101.62mm (18.5mm) **Lunglei-117.82mm (33.8mm)** **Mamit-236.61mm (75.6mm)** **Serchhip-110.96mm (25.9mm)**

Weather summary of the past three days	Weather forecast valid from 16th May, 2015 To 20th May, 2015.
	There are chances of moderate to light rainfall during the next 2 day. The maximum and minimum temperatures for the next 5 days may range for 34-35^{0}C and 21-22^{0}C. Maximum relative humidity is expected in the range of 93-98% and minimum may from 45-50%. Wind direction would be southeasterly with the wind speed of 2-6 km per hour. Clear sky will prevail during the next five days. ***Weekly cumulative rainfall:*** **48.0 mm**

Main Crop/ Animal /Fisheries	Stage	Cultural practices/ Pest/ Diseases	Agricultural / Horticultural/ animal husbandry advisories
Khasi Mandarin and acid lime	**Nursery stage**		**By seeds:** Seed should be sown in the nursery immediately after extraction in to a depth 1.5 to 2 cm extraction at 10x5 cm distance. Seedlings are planted in secondary bed or polythene bags at 4-6 leaf stages.

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		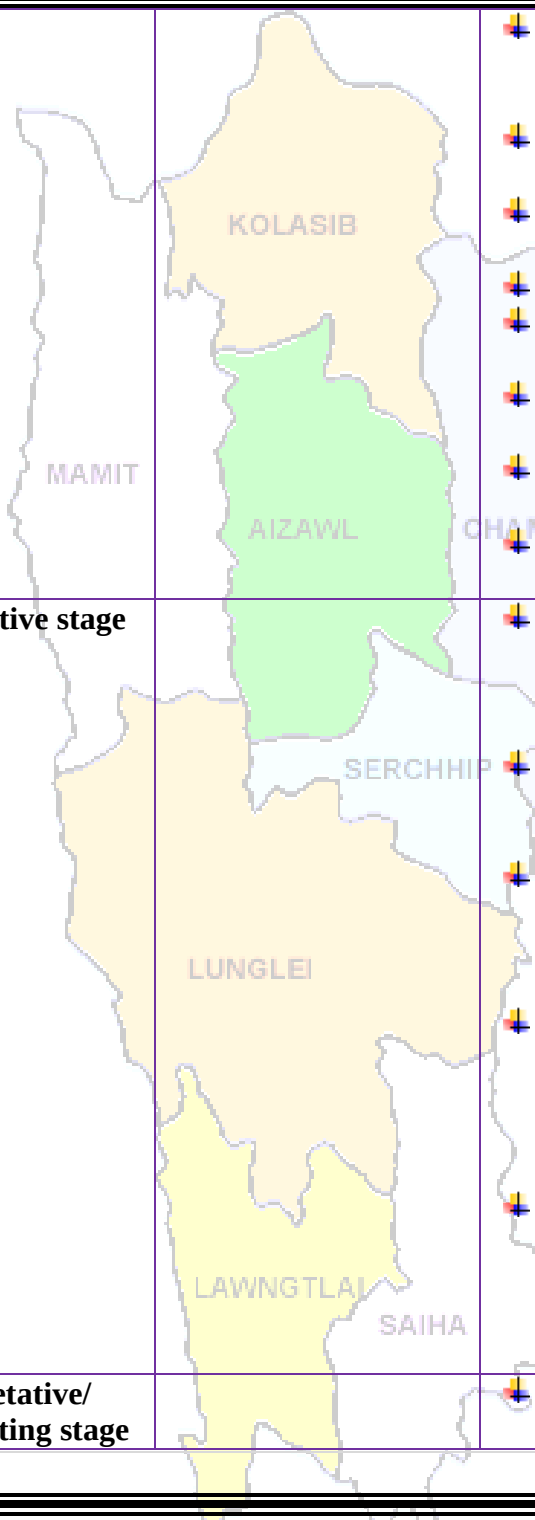	↓ Nursery should be located at least 500 meters away from the orchards to minimize the incidence of insects and diseases. ↓ Potting mixture of soil, sand and FYM or compost should be in proper ratio. ↓ Application of split dose of fertilizer 600: 200:100 (g/pt). ↓ Only certified seed should be used. ↓ Stagnation of water in beds should be avoided. ↓ Seedling of uniform height should be selected for planting. ↓ Hooked or bench rooted plants should be discarded. ↓ Plant protection measures should be followed.
Khasi Mandarin and acid lime	**Vegetative stage**		↓ Spray (10 ppm) of Gibberellic acid should be done at colour break stage to delay colour development, maintain firmness, extend harvesting period. ↓ Drip irrigation system should be preferred to provide proper water at the feeder root system. ↓ Fruit drops, which occur at least twice in each crop, should be controlled with the recommended doses of GA3, urea, benomyl and carbendazim at right time. ↓ Insect pests like Blackfly (Kolshi), Citrus Psylla, Leaf miner, Bark eating caterpillar, Fruit sucking Moth, Mites, Twing Blight, Gummosis, Root rot and Collar rot should be controlled. ↓ Recommended fungicide (Carbendazium) and proper doses (0.1% or 1000 ppm) should be sprayed at proper time (One month and 15 days before harvest i.e. two sprays).
Oil plam	**Vegetative/ Harvesting stage**		↓ Cleaning near base of the plant and cut unwanted branches.

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		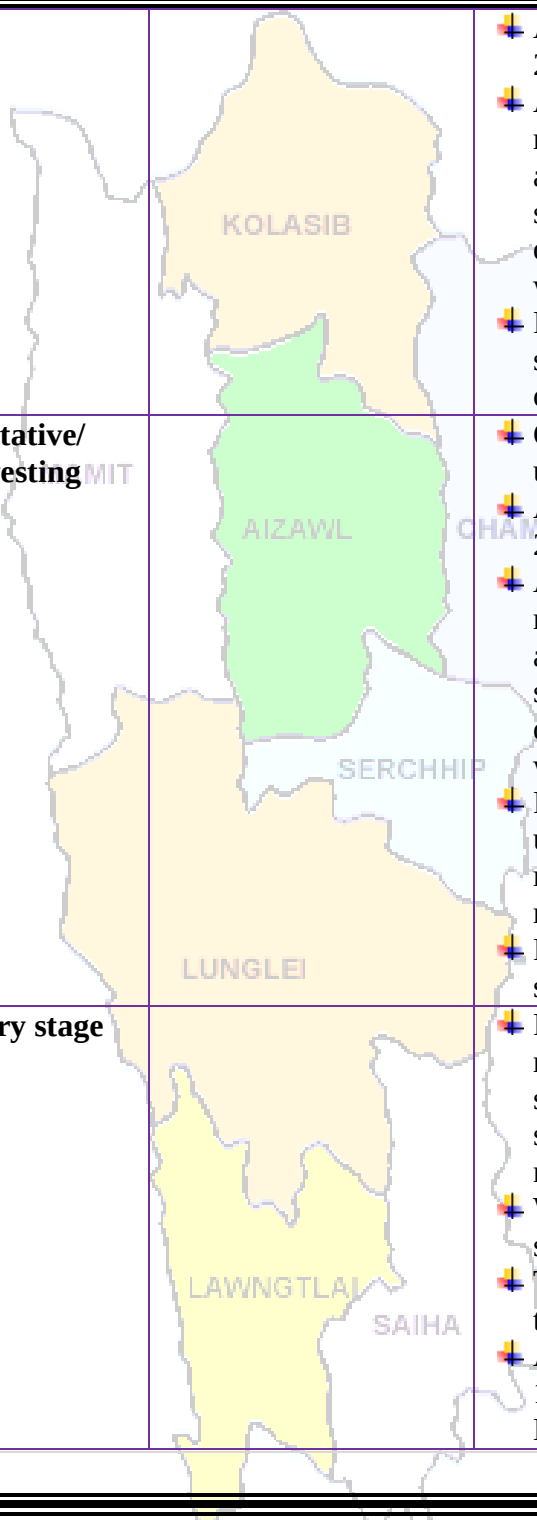	✦ Application of split dose of fertilizer 600: 200:100 (g/pt). ✦ Apply micro-nutrients viz. zinc, copper, manganese, iron, boron and molybdenum are required in ample quantities for supplying nutrients and also reduce serious disorders which may lead to decline of the whole orchard. ✦ Fruits are harvested when they attain full size, develop attractive colour with optimum sugar and acid blend.
Banana	**Vegetative/ harvesting**		✦ Cleaning near base of the plant and cut unwanted branches. ✦ Application of split dose of fertilizer 600: 200:100 (g/pt). ✦ Apply micro-nutrients viz. zinc, copper, manganese, iron, boron and molybdenum are required in ample quantities for supplying nutrients and also reduce serious disorders which may lead to decline of the whole orchard. ✦ Pruning on a regular basis removes unwanted or a sucker, keep production mats in optimum condition, saves fertilizer, reduces pest and disease. ✦ Fruits are harvested when they attain full size, develop attractive yellow colour.
Passion Fruit	**Nursery stage**		✦ Raising planting materials through seeds, ripe fruits from vines yielding quality fruits should be collected and extract the seeds should be sown after 15-20 days in raised nursery beds. ✦ When two to three leaves delop, seedling should be transplanted in polythene bags. ✦ The seedlings are planted in field when they become 3-4 months old. ✦ Apply well decompose FYM @ 15kg/pit/year along with 100.50.100 g NPK per pit.

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Pineapple	**Flowering stage**		✦ Apply flowering inducing chemical (Ethrel 10 PPM+2% urea+0.04% Sodium Carbonate) should be applied in the heart of the plant. In evening and only when plants have at least 32 leaves. ✦ The flowering emergence will come out after 55-60 days after chemical spraying. ✦ Apply split doses of fertilizer @ 60: 50:60 g per plant. ✦ Remove all unwanted leaves, branches and weed near to the plant.
Colocasia	**Sowing stage**		✦ Planting is done well prepared land or pits filled up with FYM (12-15) t/ha ✦ Sprouted corms or cormels are planted 5-7 deep at a spacing of 40-50 cm between and within rows in the pits. ✦ Inorganic fertilizer like Urea, SSP and MOP @ 220: 375: 134 kg.
		Corm borer	✦ Carbofuran 3G @1.5 kg a.i./ha applied in root zone when egg laying ooze is observed at plant base.
Cucurbitaceous crop	**Fruiting stage**		✦ Provide irrigation every 7 days interval which will give better yield. ✦ In large gardens apply carbaryl 0.2 per cent or malathion 0.15 per cent suspension containing sugar or jeggery at 10 g/l at fortnightly intervals at flowering and fruit initiation against fruit fly and pumpkin beetle. ✦ Provide split doses of urea (70g/pt) at the time of full blooming.
Okra	**Sowing stage**	**1. Weeding and light irrigation in nursery bed.** **2. Provide irrigation in transplanted okra field.**	✦ Mulching (if dry spell is there) ✦ Give irrigation at regular interval ✦ Provide banana shading to transplanted seedling.
		1. Aphid (*Aphis*	• Spray surf water solution to the plat

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		***gossypii*)**	• Spray any one of the insecticides Imidacloprid 200 SL @ 0.25ml/lt of water (Sucking pest) or Dimethoate 30 % EC 7ml/10lt of water.
		2. Flea beetle (*Phylliodes balyi*)	• Shake plants to dislodge grubs, pupae and adults and destroy. • Spray any one of the insecticides Imidacloprid 200 SL @ 0.25ml/lt or Dimethoate 30 % EC 7ml/10lt of water.
		3. Epilachna beetle. (*Epilachna viginctioctopancta ta*)	• Collect damaged leaves with grubs and egg masses and destroy them. • Spray with methyl parathion 0.5% or dimethoate 0.3% is effective.
		4. Leafhopper (*Empoasca devastans)*	• Spray any one of the insecticides Imidacloprid 200 SL @ 0.25ml/lt of water (Sucking pest) or Dimethoate 30 % EC 7ml/10lt of water.
		✓ **Bacterial Wilt (*Pseudomonas solanacearum)***	• Fields should be kept clean and effected plants are to be uprooted and burnt. • Spray Copper fungicides to control the disease (2% Bordeaux mixture.) • The disease is more prevalent in the presence of root knot Nematodes, so control of these nematodes will suppress the disease spread. • Soil drenching (Streptocycline sulphate 0.3 gm/lt of water) and Blitox 50 @ 5gm/ 15lt water.
		Damping off	✓ Seed treatment with thiram 3g/kg seed or Trichoderma viride 4g+ metalaxyl 4g (Apron)/ kg seed ✓ Drenching 1% Bordeaux mixture or 2 g captan or 3 copper oxychloride/ lt of water at 10-15 DAS are effective.
		Leaf spot and leaf blotch	○ Spraying Dithane M-45 @ 2.5g/litre of water or Bavistin @ 1g/litre of water, 2-3 sprayings should be given forthnightly intervals.

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			○ Spraying of Blitox @ 3 g/l of water was found effective against leaf spot.
French bean	**Flowering stage**		○ Remove all unwanted leaves, branches and weed near to the plant. ○ Earthing up the soil for better aeration. ○ Plant should be supported by bamboo or woods 20-25 days after sowing.
		Blister beetle	○ Manual collection of insect and destroy it immediately. ○ Apply cypermethrin 2 gm/lt of water.
Brinjal	**Sowing stage**		○ Equal quantity of sand and well decomposed FYM are mixed with soil and raised beds of 75-100 cm width and convenient length are prepared and these beds are treated with a solution of 100g of blue copper dissolved in 40 litres of water or formaldehyde. ○ The seeds can be sown in lines drawn at a spacing of 5 cm across the beds and cover with top soil.
Tomato	**Sowing stage**		○ Soils of nursery area brought into fine tilth and raised beds (0.8 m wide and 15 cm height of convenient length). ○ Apply 10 kg well decompose FYM along with 15:15:15 complex fertilizer along with 2.5 g carbofuran/2m^2. ○ The seeds can be sown in lines drawn at a spacing of 5 cm across the beds and cover with top soil.
		1. Aphid(*Aphis gossypii*)	• Spray surf water solution to the plat. • Spray any one of the insecticides Imidacloprid 200 SL @ 0.25ml/lt of water (Sucking pest) or Dimethoate 30 % EC 7ml/10lt of water.
		2. Epilachna beetle. (*Epilachna viginctioctopancta ta*)	• Spray with methyl parathion 0.5% or dimethoate 0.3% is effective against flea beetle.

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Rice	**Nursery stage**	**Pre Kharif Rice**	✓ Use only Well filled and healthy seeds. ✓ Put the seed in 2.5% salt solution i.e 250 g of common salt in 10 lts of water. ✓ Seed treated with Bavistin 50 WP @ 0.1% (2 g/lt) solution.
		Raised bed method	▪ The size of each bed should be 10 m in length in length and 1.25 m in width with 20-30 cm wide channel for irrigation, drainage and easy movement, it takes care of the seedlings without trampling them. ▪ Treated seed should be evenly broadcasted in each bed after applying manure.
Maize	**Sowing stage**		✓ Two to three plough are necessary to get the soil well pulverized and weed free. ✓ Seed is being placed in furrows. ✓ Seed should be treated with Thiram @4 g/kg seed. ✓ Use optimum seed rate (20-25 kg/ha) for desire plant population. ✓ Apply well decomposed FYM @ 5-10 t/ha along with 80:60:40 kg N, P_2O_5 and K_2O/ha incorporate with soil before sowing. Half nitrogen dose will use at the time of sowing and remaining 25% after one month and 25% at flowering stage.
Ginger and turmeric	**Land preparation**		✓ Remove all unwanted leaves, branches and weed near to the plant. ✓ Earthing up the soil for better aeration. ✓ Apply split dose of nitrogen fertilizer.
		Thrips	✓ Spray Roger or Monocrotophos (2.5 ml/lt) for controlling thrips.
		Scales	✓ Spray Quinalphos or Monocrotophos (2.5 ml/lt) for controlling scales.
Pig	**All stages**	**Porcine Reproductive Respiratory Syndrome (PRRS).**	1. Culling of positive pigs or piglets.
	Adult stage	**Swine fever.**	2. Vaccination of pigs with SF vaccines at 2

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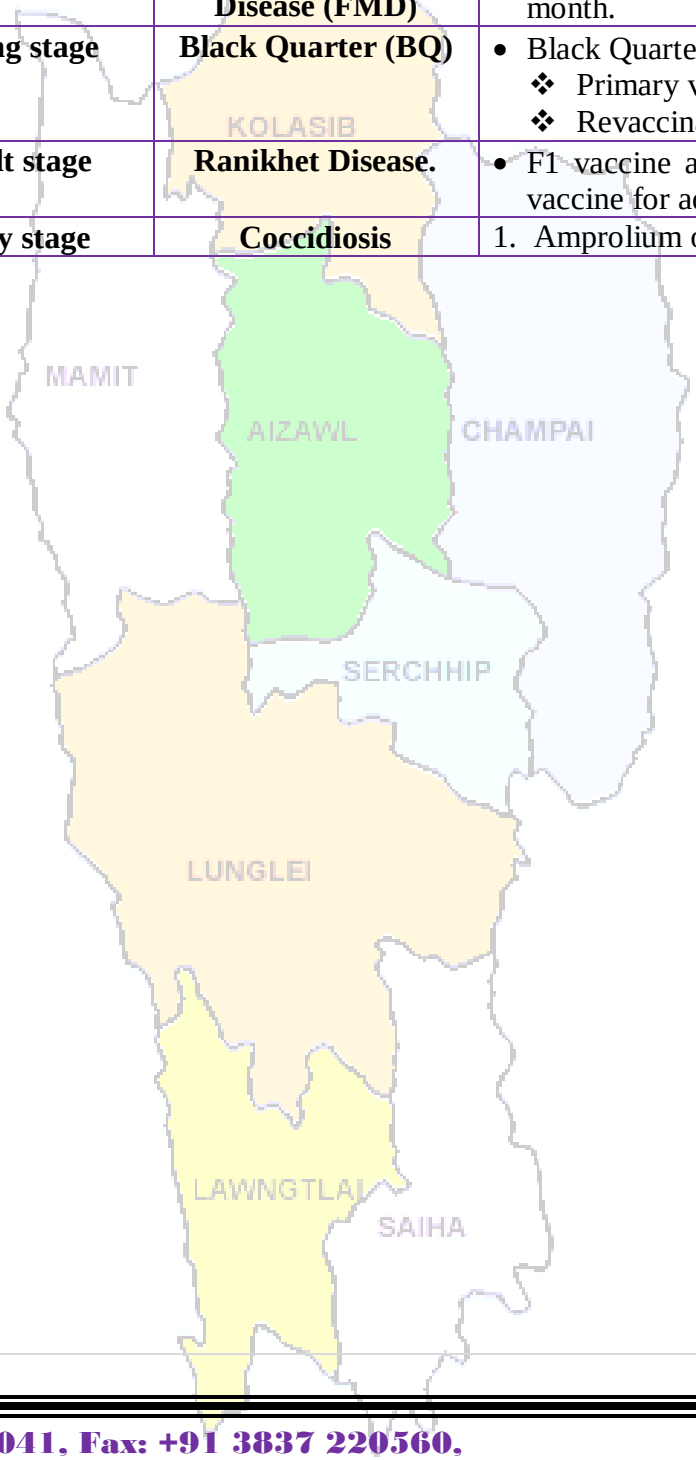
			months and yearly interval/6 month interval
Cattle	**All age group**	**Foot and Mouth Disease (FMD)**	• FMD vaccine at 16 week and repeat every 6 month.
	Young stage	**Black Quarter (BQ)**	• Black Quarter Vaccine (BQV). ❖ Primary vaccination 6 month or above ❖ Revaccination annually
Poultry	**Adult stage**	**Ranikhet Disease.**	• F1 vaccine at (1-6) days of birth and R_2B vaccine for adult birds.
	Early stage	**Coccidiosis**	1. Amprolium or coccidiostat



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ICAR RESEARCH COMPLEX FOR NEH REGION

Mizoram Centre, Kolasib- 796081, MIZORAM

(Prepared based on District wise Weather Forecast received from IMD, Guwahati)

District: Saiha **Period: 16 - 20 May, 2015**

Bulletin No: -518/2015/ Bulletin/English **Date of issue: 15th May, 2015**

Parameters	16.05.2015	17.05.2015	18.05.2015	19.05.2015	20.05.2015
Rainfall (mm)	0	0	9	0	0
Max Temp (oC)	34	34	34	34	33
Min Temp (oC)	19	18	19	18	19
Cloud Coverage	Clear sky	Mainly clear	Mainly clear	Clear sky	Clear sky
Max RH (%)	94	92	98	96	94
Min RH (%)	37	38	33	34	37
Wind Speed (KmpH)	2	2	4	3	4
*Wind Direction	E	E	E	E	E

Northerly- N, North-Easterly- N-E, Easterly- E, South-Easterly- S-E, Southerly- S, South-Westerly- S-W, Westerly-W, North-westerly- N-W.

STATUS OF PREMONSOON- April 1-30, 2015 (*Percent of deviation from normal in parenthesis*)

Aizawl- 185.66mm (112.8mm) **Champhai- 119.48mm (68.9mm)** **Saiha- 109.52 mm (40.2mm)** **Kolasib- 213.61mm (158.9mm)**

Lawngtlai-101.62mm (18.5mm) **Lunglei-117.82mm (33.8mm)** **Mamit-236.61mm (75.6mm)** **Serchhip-110.96mm (25.9mm)**

Weather summary of the past three days	Weather forecast valid from 16th May, 2015 To 20th May, 2015.
	There is a chance of light rainfall during the next 1 day. The maximum and minimum temperatures for the next 5 days may range for 33-34^{0}C and 18-19^{0}C. Maximum relative humidity is expected in the range of 92-98% and minimum may from 33-38%. Wind direction would be southeasterly with the wind speed of 2-4 km per hour. Clear sky will prevail during the next five days. ***Weekly cumulative rainfall:*** **09.0 mm**

Main Crop/ Animal /Fisheries	Stage	Cultural practices/ Pest/ Diseases	Agricultural / Horticultural/ animal husbandry advisories
Khasi Mandarin and acid lime	**Nursery stage**		**By seeds:** Seed should be sown in the nursery immediately after extraction in to a depth 1.5 to 2 cm extraction at 10x5 cm distance. Seedlings are planted in secondary bed or polythene bags at 4-6 leaf stages.

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		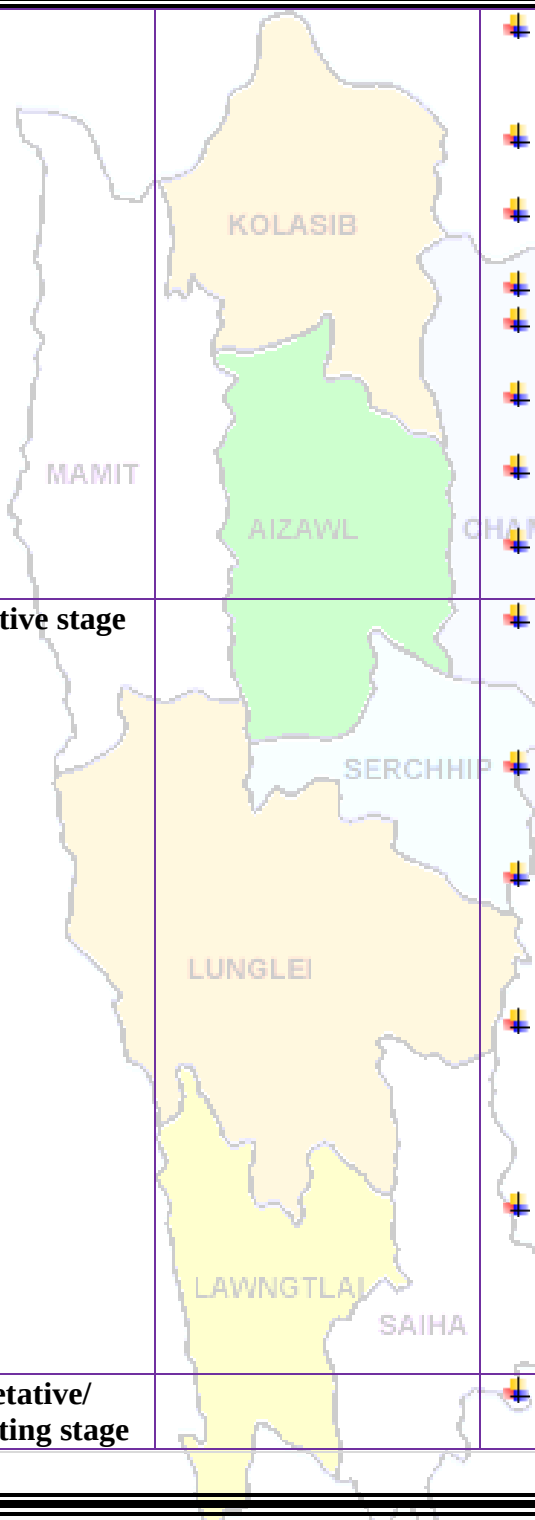	↓ Nursery should be located at least 500 meters away from the orchards to minimize the incidence of insects and diseases. ↓ Potting mixture of soil, sand and FYM or compost should be in proper ratio. ↓ Application of split dose of fertilizer 600: 200:100 (g/pt). ↓ Only certified seed should be used. ↓ Stagnation of water in beds should be avoided. ↓ Seedling of uniform height should be selected for planting. ↓ Hooked or bench rooted plants should be discarded. ↓ Plant protection measures should be followed.
Khasi Mandarin and acid lime	**Vegetative stage**		↓ Spray (10 ppm) of Gibberellic acid should be done at colour break stage to delay colour development, maintain firmness, extend harvesting period. ↓ Drip irrigation system should be preferred to provide proper water at the feeder root system. ↓ Fruit drops, which occur at least twice in each crop, should be controlled with the recommended doses of GA3, urea, benomyl and carbendazim at right time. ↓ Insect pests like Blackfly (Kolshi), Citrus Psylla, Leaf miner, Bark eating caterpillar, Fruit sucking Moth, Mites, Twing Blight, Gummosis, Root rot and Collar rot should be controlled. ↓ Recommended fungicide (Carbendazium) and proper doses (0.1% or 1000 ppm) should be sprayed at proper time (One month and 15 days before harvest i.e. two sprays).
Oil plam	**Vegetative/ Harvesting stage**		↓ Cleaning near base of the plant and cut unwanted branches.

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		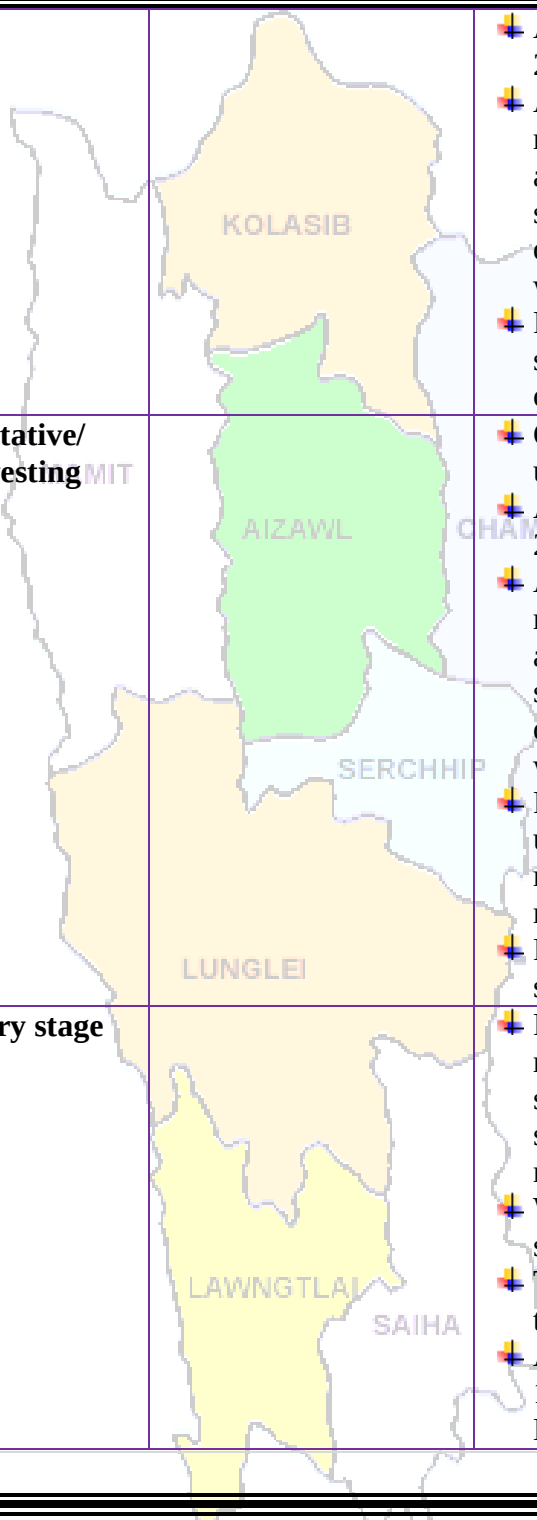	✦ Application of split dose of fertilizer 600: 200:100 (g/pt). ✦ Apply micro-nutrients viz. zinc, copper, manganese, iron, boron and molybdenum are required in ample quantities for supplying nutrients and also reduce serious disorders which may lead to decline of the whole orchard. ✦ Fruits are harvested when they attain full size, develop attractive colour with optimum sugar and acid blend.
Banana	**Vegetative/ harvesting**		✦ Cleaning near base of the plant and cut unwanted branches. ✦ Application of split dose of fertilizer 600: 200:100 (g/pt). ✦ Apply micro-nutrients viz. zinc, copper, manganese, iron, boron and molybdenum are required in ample quantities for supplying nutrients and also reduce serious disorders which may lead to decline of the whole orchard. ✦ Pruning on a regular basis removes unwanted or a sucker, keep production mats in optimum condition, saves fertilizer, reduces pest and disease. ✦ Fruits are harvested when they attain full size, develop attractive yellow colour.
Passion Fruit	**Nursery stage**		✦ Raising planting materials through seeds, ripe fruits from vines yielding quality fruits should be collected and extract the seeds should be sown after 15-20 days in raised nursery beds. ✦ When two to three leaves delop, seedling should be transplanted in polythene bags. ✦ The seedlings are planted in field when they become 3-4 months old. ✦ Apply well decompose FYM @ 15kg/pit/year along with 100.50.100 g NPK per pit.

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Pineapple	**Flowering stage**		✦ Apply flowering inducing chemical (Ethrel 10 PPM+2% urea+0.04% Sodium Carbonate) should be applied in the heart of the plant. In evening and only when plants have at least 32 leaves. ✦ The flowering emergence will come out after 55-60 days after chemical spraying. ✦ Apply split doses of fertilizer @ 60: 50:60 g per plant. ✦ Remove all unwanted leaves, branches and weed near to the plant.
Colocasia	**Sowing stage**		✦ Planting is done well prepared land or pits filled up with FYM (12-15) t/ha ✦ Sprouted corms or cormels are planted 5-7 deep at a spacing of 40-50 cm between and within rows in the pits. ✦ Inorganic fertilizer like Urea, SSP and MOP @ 220: 375: 134 kg.
		Corm borer	✦ Carbofuran 3G @1.5 kg a.i./ha applied in root zone when egg laying ooze is observed at plant base.
Cucurbitaceous crop	**Fruiting stage**		✦ Provide irrigation every 7 days interval which will give better yield. ✦ In large gardens apply carbaryl 0.2 per cent or malathion 0.15 per cent suspension containing sugar or jeggery at 10 g/l at fortnightly intervals at flowering and fruit initiation against fruit fly and pumpkin beetle. ✦ Provide split doses of urea (70g/pt) at the time of full blooming.
Okra	**Sowing stage**	**1. Weeding and light irrigation in nursery bed.** **2. Provide irrigation in transplanted okra field.**	✦ Mulching (if dry spell is there) ✦ Give irrigation at regular interval ✦ Provide banana shading to transplanted seedling.
		1. Aphid (*Aphis*	• Spray surf water solution to the plat

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		***gossypii*)**	• Spray any one of the insecticides Imidacloprid 200 SL @ 0.25ml/lt of water (Sucking pest) or Dimethoate 30 % EC 7ml/10lt of water.
		2. Flea beetle (*Phylliodes balyi*)	• Shake plants to dislodge grubs, pupae and adults and destroy. • Spray any one of the insecticides Imidacloprid 200 SL @ 0.25ml/lt or Dimethoate 30 % EC 7ml/10lt of water.
		3. Epilachna beetle. (*Epilachna viginctioctopancta ta*)	• Collect damaged leaves with grubs and egg masses and destroy them. • Spray with methyl parathion 0.5% or dimethoate 0.3% is effective.
		4. Leafhopper (*Empoasca devastans)*	• Spray any one of the insecticides Imidacloprid 200 SL @ 0.25ml/lt of water (Sucking pest) or Dimethoate 30 % EC 7ml/10lt of water.
		✓ **Bacterial Wilt (*Pseudomonas solanacearum)***	• Fields should be kept clean and effected plants are to be uprooted and burnt. • Spray Copper fungicides to control the disease (2% Bordeaux mixture.) • The disease is more prevalent in the presence of root knot Nematodes, so control of these nematodes will suppress the disease spread. • Soil drenching (Streptocycline sulphate 0.3 gm/lt of water) and Blitox 50 @ 5gm/ 15lt water.
		Damping off	✓ Seed treatment with thiram 3g/kg seed or Trichoderma viride 4g+ metalaxyl 4g (Apron)/ kg seed ✓ Drenching 1% Bordeaux mixture or 2 g captan or 3 copper oxychloride/ lt of water at 10-15 DAS are effective.
		Leaf spot and leaf blotch	○ Spraying Dithane M-45 @ 2.5g/litre of water or Bavistin @ 1g/litre of water, 2-3 sprayings should be given forthnightly intervals.

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			○ Spraying of Blitox @ 3 g/l of water was found effective against leaf spot.
French bean	**Flowering stage**		○ Remove all unwanted leaves, branches and weed near to the plant. ○ Earthing up the soil for better aeration. ○ Plant should be supported by bamboo or woods 20-25 days after sowing.
		Blister beetle	○ Manual collection of insect and destroy it immediately. ○ Apply cypermethrin 2 gm/lt of water.
Brinjal	**Sowing stage**		○ Equal quantity of sand and well decomposed FYM are mixed with soil and raised beds of 75-100 cm width and convenient length are prepared and these beds are treated with a solution of 100g of blue copper dissolved in 40 litres of water or formaldehyde. ○ The seeds can be sown in lines drawn at a spacing of 5 cm across the beds and cover with top soil.
Tomato	**Sowing stage**		○ Soils of nursery area brought into fine tilth and raised beds (0.8 m wide and 15 cm height of convenient length). ○ Apply 10 kg well decompose FYM along with 15:15:15 complex fertilizer along with 2.5 g carbofuran/$2m^2$. ○ The seeds can be sown in lines drawn at a spacing of 5 cm across the beds and cover with top soil.
		1. Aphid(*Aphis gossypii*)	• Spray surf water solution to the plat. • Spray any one of the insecticides Imidacloprid 200 SL @ 0.25ml/lt of water (Sucking pest) or Dimethoate 30 % EC 7ml/10lt of water.
		2. Epilachna beetle. (*Epilachna viginctioctopancta ta*)	• Spray with methyl parathion 0.5% or dimethoate 0.3% is effective against flea beetle.

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Rice	**Nursery stage**	**Pre Kharif Rice**	✓ Use only Well filled and healthy seeds. ✓ Put the seed in 2.5% salt solution i.e 250 g of common salt in 10 lts of water. ✓ Seed treated with Bavistin 50 WP @ 0.1% (2 g/lt) solution.
		Raised bed method	▪ The size of each bed should be 10 m in length in length and 1.25 m in width with 20-30 cm wide channel for irrigation, drainage and easy movement, it takes care of the seedlings without trampling them. ▪ Treated seed should be evenly broadcasted in each bed after applying manure.
Maize	**Sowing stage**		✚ Two to three plough are necessary to get the soil well pulverized and weed free. ✚ Seed is being placed in furrows. ✚ Seed should be treated with Thiram @4 g/kg seed. ✚ Use optimum seed rate (20-25 kg/ha) for desire plant population. ✚ Apply well decomposed FYM @ 5-10 t/ha along with 80:60:40 kg N, P_2O_5 and K_2O/ha incorporate with soil before sowing. Half nitrogen dose will use at the time of sowing and remaining 25% after one month and 25% at flowering stage.
Ginger and turmeric	**Land preparation**		✚ Remove all unwanted leaves, branches and weed near to the plant. ✚ Earthing up the soil for better aeration. ✚ Apply split dose of nitrogen fertilizer.
		Thrips	✚ Spray Roger or Monocrotophos (2.5 ml/lt) for controlling thrips.
		Scales	✚ Spray Quinalphos or Monocrotophos (2.5 ml/lt) for controlling scales.
Pig	**All stages**	**Porcine Reproductive Respiratory Syndrome (PRRS).**	1. Culling of positive pigs or piglets.
	Adult stage	**Swine fever.**	2. Vaccination of pigs with SF vaccines at 2

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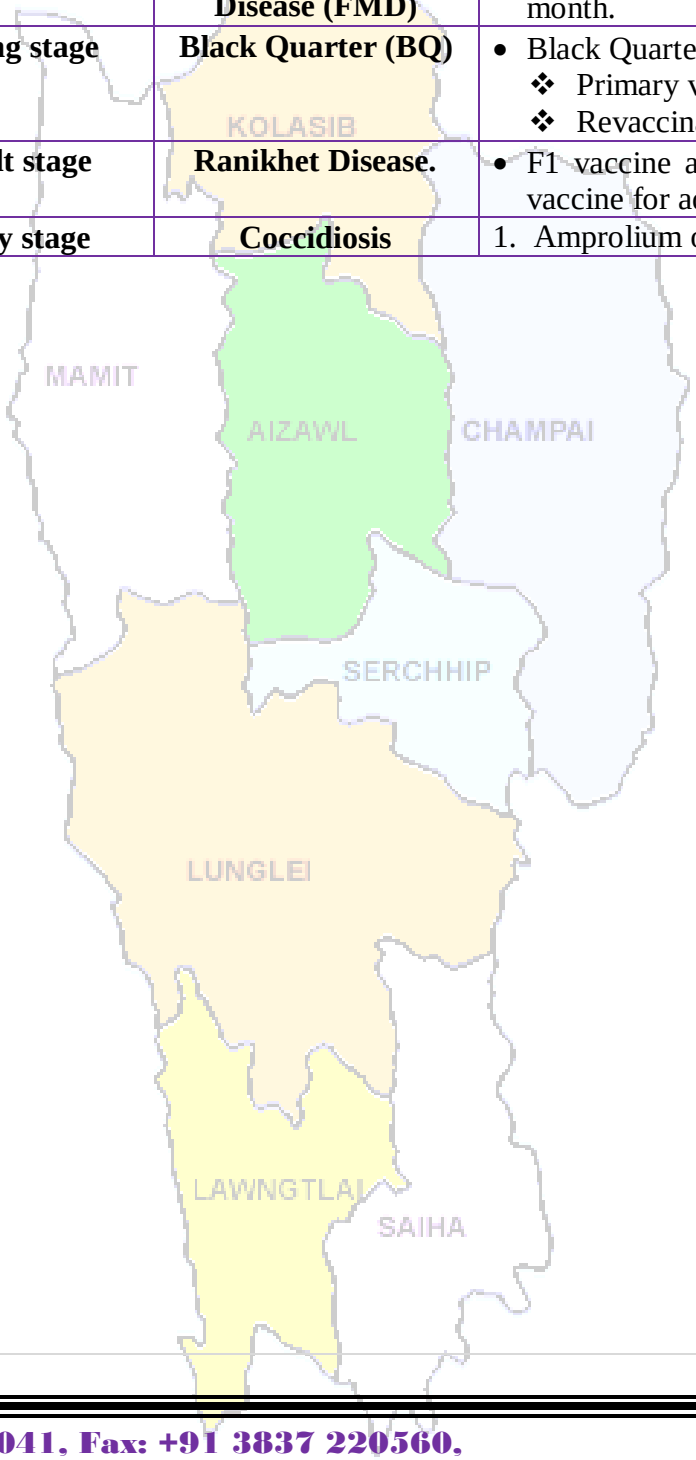
			months and yearly interval/6 month interval
Cattle	**All age group**	**Foot and Mouth Disease (FMD)**	• FMD vaccine at 16 week and repeat every 6 month.
	Young stage	**Black Quarter (BQ)**	• Black Quarter Vaccine (BQV). ❖ Primary vaccination 6 month or above ❖ Revaccination annually
Poultry	**Adult stage**	**Ranikhet Disease.**	• F1 vaccine at (1-6) days of birth and R_2B vaccine for adult birds.
	Early stage	**Coccidiosis**	1. Amprolium or coccidiostat



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GRAMIN KRISHI MAUSAM SEWA

ICAR RESEARCH COMPLEX FOR NEH REGION

Mizoram Centre, Kolasib- 796081, MIZORAM

(Prepared based on District wise Weather Forecast received from IMD, Guwahati)

District: Serchhip **Period: 16 - 20 May, 2015**

Bulletin No: -518/2015/ Bulletin/English **Date of issue: 15th May, 2015**

Parameters	16.05.2015	17.05.2015	18.05.2015	19.05.2015	20.05.2015
Rainfall (mm)	0	0	15	3	5
Max Temp (oC)	32	33	33	32	32
Min Temp (oC)	18	18	18	17	18
Cloud Coverage	Clear sky	Clear sky	Mainly clear	Clear sky	Clear sky
Max RH (%)	97	96	100	98	100
Min RH (%)	44	40	41	41	39
Wind Speed (KmpH)	2	4	4	2	4
*Wind Direction	S-E	S-E	S-E	E	E

Northerly- N, North-Easterly- N-E, Easterly- E, South-Easterly- S-E, Southerly- S, South-Westerly- S-W, Westerly-W, North-westerly- N-W.

STATUS OF PREMONSOON- April 1-30, 2015 (*Percent of deviation from normal in parenthesis*)

Aizawl- 185.66mm (112.8mm)	Champhai- 119.48mm (68.9mm)	Saiha- 109.52 mm (40.2mm)	Kolasib- 213.61mm (158.9mm)
Lawngtlai-101.62mm (18.5mm)	Lunglei-117.82mm (33.8mm)	Mamit-236.61mm (75.6mm)	Serchhip-110.96mm (25.9mm)

Weather summary of the past three days	Weather forecast valid from 16th May, 2015 To 20th May, 2015.
	There are chances of light rainfall during the next 2 day. The maximum and minimum temperatures for the next 5 days may range for 32-33^{0}C and 17-18^{0}C. Maximum relative humidity is expected in the range of 96-100% and minimum may from 39-44%. Wind direction would be southeasterly with the wind speed of 2-4 km per hour. Clear sky will prevail during the next five days. ***Weekly cumulative rainfall:*** **20.0 mm**

Main Crop/ Animal /Fisheries	Stage	Cultural practices/ Pest/ Diseases	Agricultural / Horticultural/ animal husbandry advisories
Khasi Mandarin and acid lime	**Nursery stage**		**By seeds:** Seed should be sown in the nursery immediately after extraction in to a depth 1.5 to 2 cm extraction at 10x5 cm distance. Seedlings are planted in secondary bed or polythene bags at 4-6 leaf stages.

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		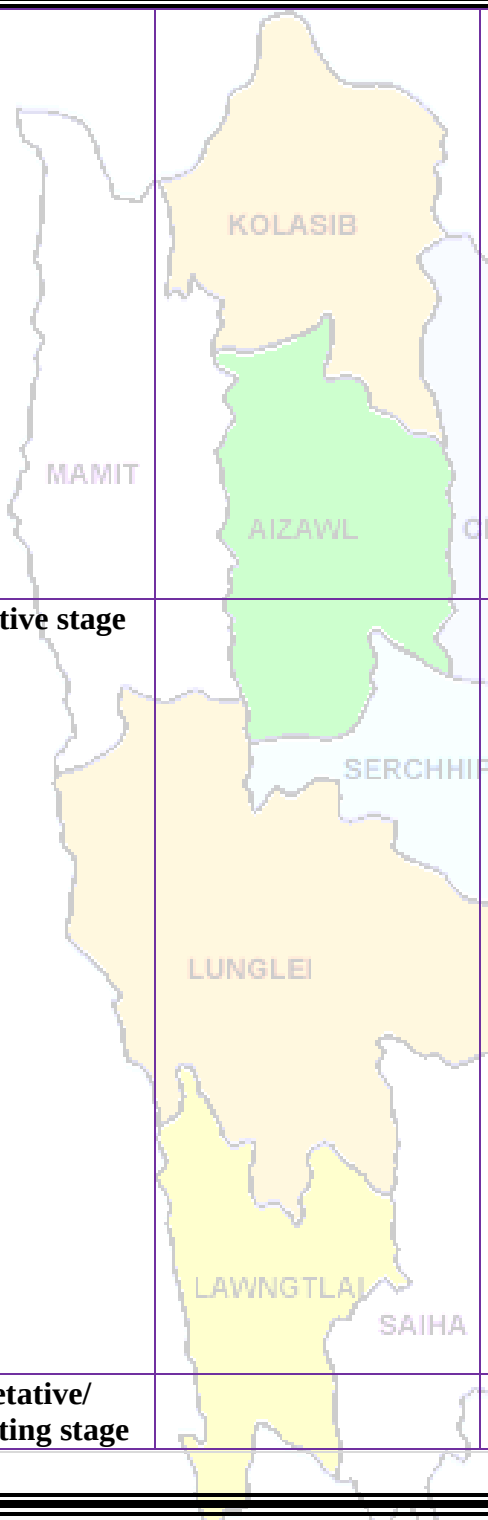	↓ Nursery should be located at least 500 meters away from the orchards to minimize the incidence of insects and diseases. ↓ Potting mixture of soil, sand and FYM or compost should be in proper ratio. ↓ Application of split dose of fertilizer 600: 200:100 (g/pt). ↓ Only certified seed should be used. ↓ Stagnation of water in beds should be avoided. ↓ Seedling of uniform height should be selected for planting. ↓ Hooked or bench rooted plants should be discarded. ↓ Plant protection measures should be followed.
Khasi Mandarin and acid lime	**Vegetative stage**		↓ Spray (10 ppm) of Gibberellic acid should be done at colour break stage to delay colour development, maintain firmness, extend harvesting period. ↓ Drip irrigation system should be preferred to provide proper water at the feeder root system. ↓ Fruit drops, which occur at least twice in each crop, should be controlled with the recommended doses of GA3, urea, benomyl and carbendazim at right time. ↓ Insect pests like Blackfly (Kolshi), Citrus Psylla, Leaf miner, Bark eating caterpillar, Fruit sucking Moth, Mites, Twing Blight, Gummosis, Root rot and Collar rot should be controlled. ↓ Recommended fungicide (Carbendazium) and proper doses (0.1% or 1000 ppm) should be sprayed at proper time (One month and 15 days before harvest i.e. two sprays).
Oil plam	**Vegetative/ Harvesting stage**		↓ Cleaning near base of the plant and cut unwanted branches.

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		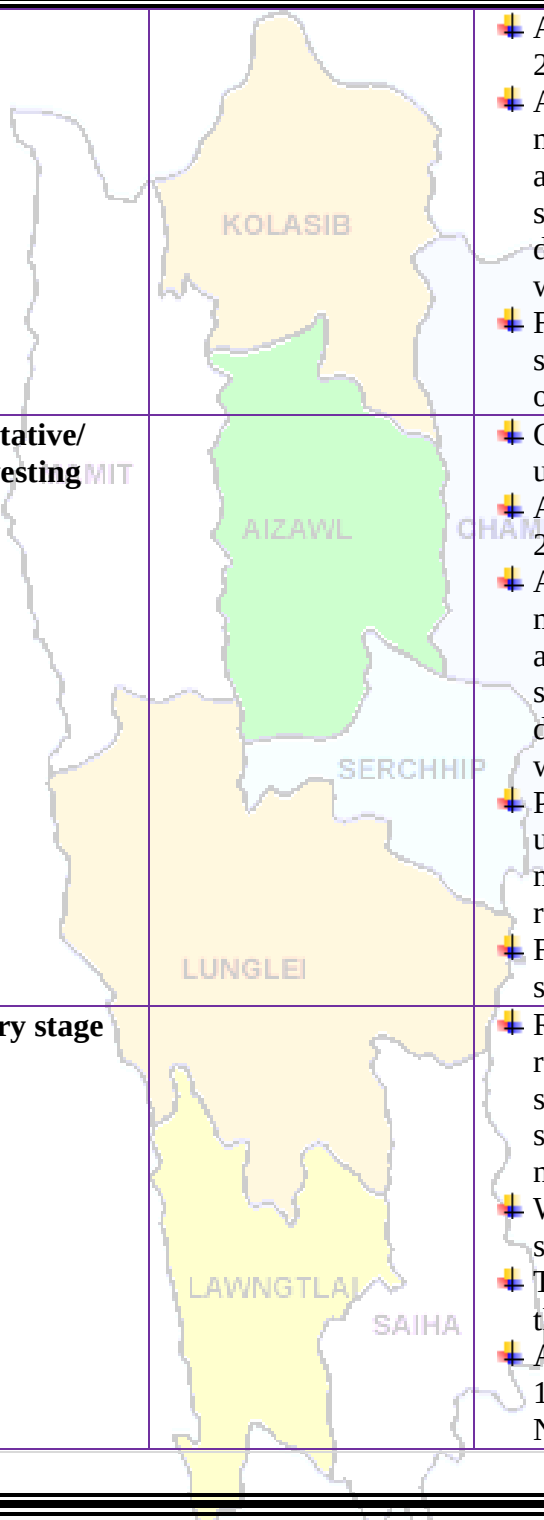	✦ Application of split dose of fertilizer 600: 200:100 (g/pt). ✦ Apply micro-nutrients viz. zinc, copper, manganese, iron, boron and molybdenum are required in ample quantities for supplying nutrients and also reduce serious disorders which may lead to decline of the whole orchard. ✦ Fruits are harvested when they attain full size, develop attractive colour with optimum sugar and acid blend.
Banana	**Vegetative/ harvesting**		✦ Cleaning near base of the plant and cut unwanted branches. ✦ Application of split dose of fertilizer 600: 200:100 (g/pt). ✦ Apply micro-nutrients viz. zinc, copper, manganese, iron, boron and molybdenum are required in ample quantities for supplying nutrients and also reduce serious disorders which may lead to decline of the whole orchard. ✦ Pruning on a regular basis removes unwanted or a sucker, keep production mats in optimum condition, saves fertilizer, reduces pest and disease. ✦ Fruits are harvested when they attain full size, develop attractive yellow colour.
Passion Fruit	**Nursery stage**		✦ Raising planting materials through seeds, ripe fruits from vines yielding quality fruits should be collected and extract the seeds should be sown after 15-20 days in raised nursery beds. ✦ When two to three leaves delop, seedling should be transplanted in polythene bags. ✦ The seedlings are planted in field when they become 3-4 months old. ✦ Apply well decompose FYM @ 15kg/pit/year along with 100.50.100 g NPK per pit.

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Pineapple	**Flowering stage**		✦ Apply flowering inducing chemical (Ethrel 10 PPM+2% urea+0.04% Sodium Carbonate) should be applied in the heart of the plant. In evening and only when plants have at least 32 leaves. ✦ The flowering emergence will come out after 55-60 days after chemical spraying. ✦ Apply split doses of fertilizer @ 60: 50:60 g per plant. ✦ Remove all unwanted leaves, branches and weed near to the plant.
Colocasia	**Sowing stage**		✦ Planting is done well prepared land or pits filled up with FYM (12-15) t/ha ✦ Sprouted corms or cormels are planted 5-7 deep at a spacing of 40-50 cm between and within rows in the pits. ✦ Inorganic fertilizer like Urea, SSP and MOP @ 220: 375: 134 kg.
		Corm borer	✦ Carbofuran 3G @1.5 kg a.i./ha applied in root zone when egg laying ooze is observed at plant base.
Cucurbitaceous crop	**Fruiting stage**		✦ Provide irrigation every 7 days interval which will give better yield. ✦ In large gardens apply carbaryl 0.2 per cent or malathion 0.15 per cent suspension containing sugar or jeggery at 10 g/l at fortnightly intervals at flowering and fruit initiation against fruit fly and pumpkin beetle. ✦ Provide split doses of urea (70g/pt) at the time of full blooming.
Okra	**Sowing stage**	**1. Weeding and light irrigation in nursery bed.** **2. Provide irrigation in transplanted okra field.**	✦ Mulching (if dry spell is there) ✦ Give irrigation at regular interval ✦ Provide banana shading to transplanted seedling.
		1. Aphid (*Aphis*	• Spray surf water solution to the plat

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		***gossypii*)**	• Spray any one of the insecticides Imidacloprid 200 SL @ 0.25ml/lt of water (Sucking pest) or Dimethoate 30 % EC 7ml/10lt of water.
		2. Flea beetle (*Phylliodes balyi*)	• Shake plants to dislodge grubs, pupae and adults and destroy. • Spray any one of the insecticides Imidacloprid 200 SL @ 0.25ml/lt or Dimethoate 30 % EC 7ml/10lt of water.
		3. Epilachna beetle. (*Epilachna viginctioctopancta ta*)	• Collect damaged leaves with grubs and egg masses and destroy them. • Spray with methyl parathion 0.5% or dimethoate 0.3% is effective.
		4. Leafhopper (*Empoasca devastans)*	• Spray any one of the insecticides Imidacloprid 200 SL @ 0.25ml/lt of water (Sucking pest) or Dimethoate 30 % EC 7ml/10lt of water.
		✓ **Bacterial Wilt (*Pseudomonas solanacearum)***	• Fields should be kept clean and effected plants are to be uprooted and burnt. • Spray Copper fungicides to control the disease (2% Bordeaux mixture.) • The disease is more prevalent in the presence of root knot Nematodes, so control of these nematodes will suppress the disease spread. • Soil drenching (Streptocycline sulphate 0.3 gm/lt of water) and Blitox 50 @ 5gm/ 15lt water.
		Damping off	✓ Seed treatment with thiram 3g/kg seed or Trichoderma viride 4g+ metalaxyl 4g (Apron)/ kg seed ✓ Drenching 1% Bordeaux mixture or 2 g captan or 3 copper oxychloride/ lt of water at 10-15 DAS are effective.
		Leaf spot and leaf blotch	○ Spraying Dithane M-45 @ 2.5g/litre of water or Bavistin @ 1g/litre of water, 2-3 sprayings should be given forthnightly intervals.

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			○ Spraying of Blitox @ 3 g/l of water was found effective against leaf spot.
French bean	**Flowering stage**		○ Remove all unwanted leaves, branches and weed near to the plant. ○ Earthing up the soil for better aeration. ○ Plant should be supported by bamboo or woods 20-25 days after sowing.
		Blister beetle	○ Manual collection of insect and destroy it immediately. ○ Apply cypermethrin 2 gm/lt of water.
Brinjal	**Sowing stage**		○ Equal quantity of sand and well decomposed FYM are mixed with soil and raised beds of 75-100 cm width and convenient length are prepared and these beds are treated with a solution of 100g of blue copper dissolved in 40 litres of water or formaldehyde. ○ The seeds can be sown in lines drawn at a spacing of 5 cm across the beds and cover with top soil.
Tomato	**Sowing stage**		○ Soils of nursery area brought into fine tilth and raised beds (0.8 m wide and 15 cm height of convenient length). ○ Apply 10 kg well decompose FYM along with 15:15:15 complex fertilizer along with 2.5 g carbofuran/$2m^2$. ○ The seeds can be sown in lines drawn at a spacing of 5 cm across the beds and cover with top soil.
		1. Aphid(*Aphis gossypii*)	• Spray surf water solution to the plat. • Spray any one of the insecticides Imidacloprid 200 SL @ 0.25ml/lt of water (Sucking pest) or Dimethoate 30 % EC 7ml/10lt of water.
		2. Epilachna beetle. (*Epilachna viginctioctopancta ta*)	• Spray with methyl parathion 0.5% or dimethoate 0.3% is effective against flea beetle.

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Rice	**Nursery stage**	**Pre Kharif Rice**	✓ Use only Well filled and healthy seeds. ✓ Put the seed in 2.5% salt solution i.e 250 g of common salt in 10 lts of water. ✓ Seed treated with Bavistin 50 WP @ 0.1% (2 g/lt) solution.
		Raised bed method	▪ The size of each bed should be 10 m in length in length and 1.25 m in width with 20-30 cm wide channel for irrigation, drainage and easy movement, it takes care of the seedlings without trampling them. ▪ Treated seed should be evenly broadcasted in each bed after applying manure.
Maize	**Sowing stage**		✚ Two to three plough are necessary to get the soil well pulverized and weed free. ✚ Seed is being placed in furrows. ✚ Seed should be treated with Thiram @4 g/kg seed. ✚ Use optimum seed rate (20-25 kg/ha) for desire plant population. ✚ Apply well decomposed FYM @ 5-10 t/ha along with 80:60:40 kg N, P_2O_5 and K_2O/ha incorporate with soil before sowing. Half nitrogen dose will use at the time of sowing and remaining 25% after one month and 25% at flowering stage.
Ginger and turmeric	**Land preparation**		✚ Remove all unwanted leaves, branches and weed near to the plant. ✚ Earthing up the soil for better aeration. ✚ Apply split dose of nitrogen fertilizer.
		Thrips	✚ Spray Roger or Monocrotophos (2.5 ml/lt) for controlling thrips.
		Scales	✚ Spray Quinalphos or Monocrotophos (2.5 ml/lt) for controlling scales.
Pig	**All stages**	**Porcine Reproductive Respiratory Syndrome (PRRS).**	1. Culling of positive pigs or piglets.
	Adult stage	**Swine fever.**	2. Vaccination of pigs with SF vaccines at 2

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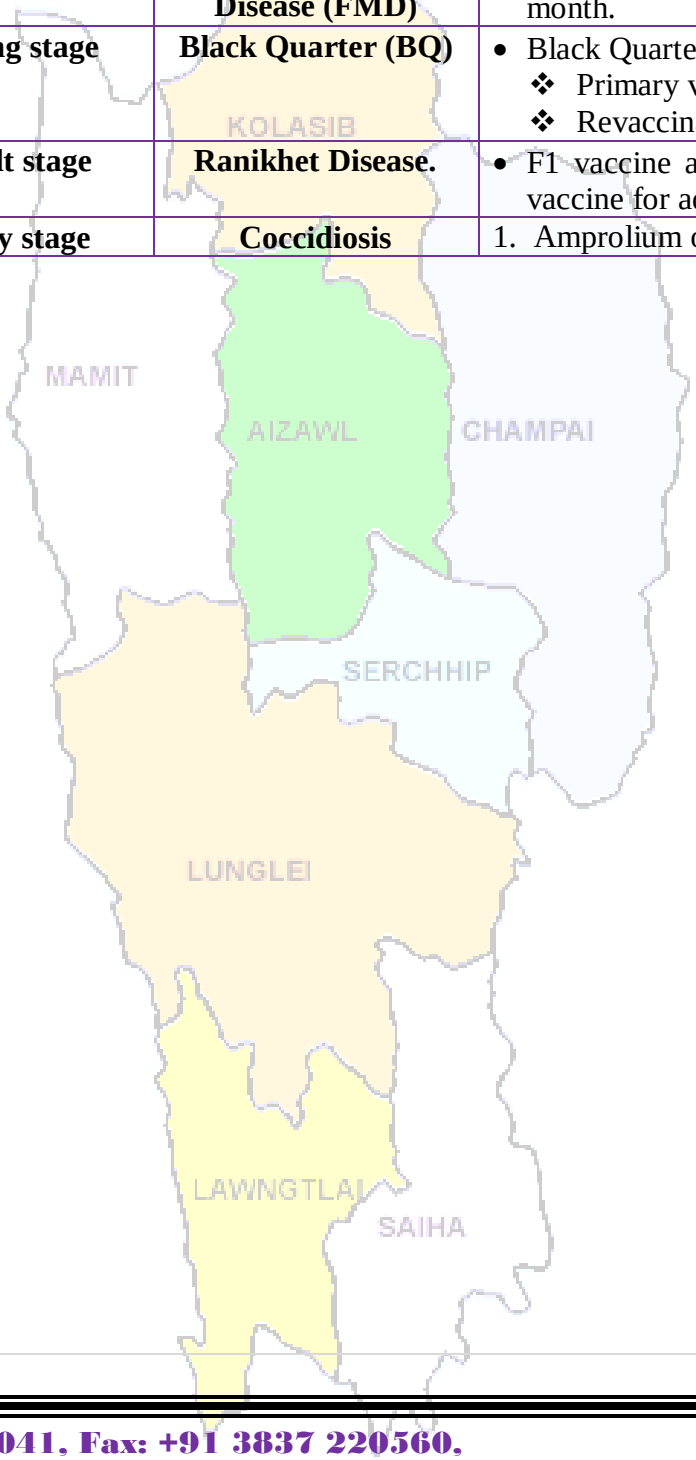
			months and yearly interval/6 month interval
Cattle	**All age group**	**Foot and Mouth Disease (FMD)**	• FMD vaccine at 16 week and repeat every 6 month.
	Young stage	**Black Quarter (BQ)**	• Black Quarter Vaccine (BQV). ❖ Primary vaccination 6 month or above ❖ Revaccination annually
Poultry	**Adult stage**	**Ranikhet Disease.**	• F1 vaccine at (1-6) days of birth and R_2B vaccine for adult birds.
	Early stage	**Coccidiosis**	1. Amprolium or coccidiostat



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