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: Champhai **Period:** 15- 19 August, 2015

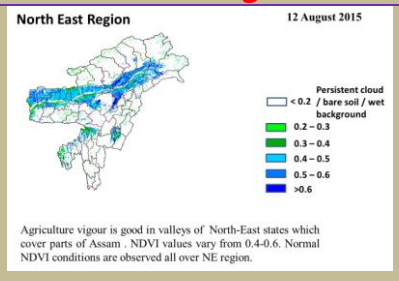
Bulletin No: -544/2015/ Bulletin/English **Date of issue:** 14th August, 2015

Parameters	15.08.2015	16.08.2015	17.08.2015	18.08.2015	19.08.2015
Rainfall (mm)	4	6	5	4	0
Max Temp (oC)	29	29	29	28	28
Min Temp (oC)	20	21	20	20	21
Cloud Coverage	Mainly cloudy	Mainly cloudy	Mainly cloudy	Mainly cloudy	Mainly cloudy
Max RH (%)	98	98	98	98	97
Min RH (%)	69	69	66	70	78
Wind Speed (KmpH)	2	3	2	3	4
*Wind Direction	S	S	S	S	S

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 MONSOON- July 1-31, 2015 (*Percent of deviation from normal in parenthesis*)

Aizawl- 412.50mm (341.8mm)	Champhai- 105.47mm (250.30mm)	Saiha- 307.78 mm (87.2mm)	Kolasib- 331.10mm (380.9mm)
Lawngtlai-291.28mm (285.5mm)	Lunglei-326.52mm (186.21mm)	Mamit-204.84mm (442.80mm)	Serchhip-189.57mm (25.9mm)

Weather summary of the past three days	Weather forecast valid from 15th August, 2015 To 19th August, 2015.
	There is a chance of light rainfall during the next 4 days. The maximum and minimum temperatures for the next 5 days may range for 28-29^{0}C and 20-21^{0}C. Maximum relative humidity is expected in the range of 97-98% and minimum may from 66-78%. Wind direction would be southerly with the wind speed of 2-4 km per hour. Mainly cloudy sky will prevail during the next five days. ***Weekly cumulative rainfall:*** **19.0 mm**
NDVI for Mizoram	 NDVI for Mizoram is less than normal NDVI. Value shown that NDVI is zero. So, it represents "Bare Soil".

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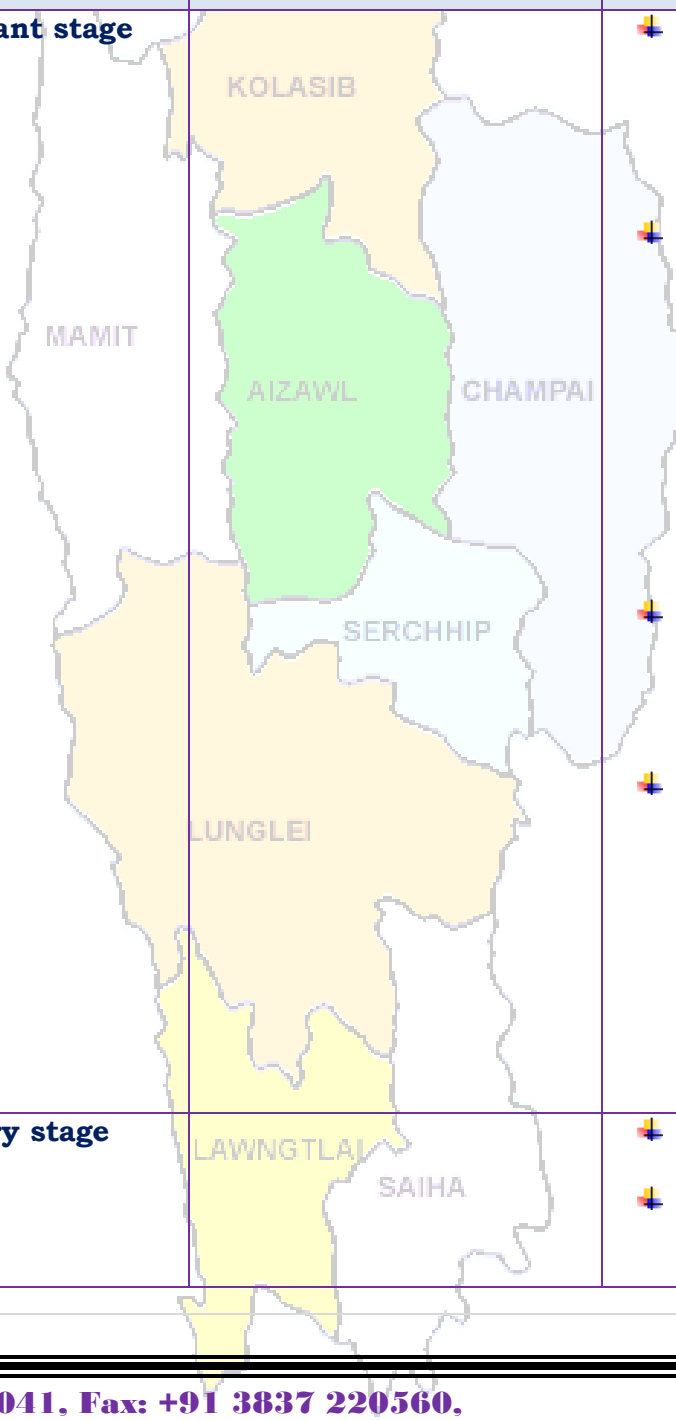
Main Crop/ Animal /Fisheries	Stage	Cultural practices/ Pest/ Diseases	Agricultural / Horticultural/ animal husbandry advisories
Khasi Mandarin and acid lime	**Transplant stage**		▪ Well rotten FYM @ 500g/pit is applied at 15-20 days before planting along with 12 g each of N and K2O/plant and 4 g of P2O5/plant. ▪ This root stock has proved very successful for raising some sweet orange and mandarin orange varieties This root stock is resistant to Tristeza virus but highly susceptible to exocortis. It is also recommended for this region till any other rootstock is found to be promising. ▪ Citrus plantations are seldom put under planned cultivation, and plantations are always kept under sod or raised as mixed crops ▪ Layered plants about one year old, are also selected in case of lemon, lime etc. Vigorous plants are always preferred for better growth. While placing the plants in the pits care should be taken that bud union remains 12-15 cm above the ground level.
Oil plam	**Nursery stage**		▪ Remove the exocarp and mesocarp with knife. ▪ Dry the seeds on concrete or wooden floors under shade for 2 days and stored for 3-9

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		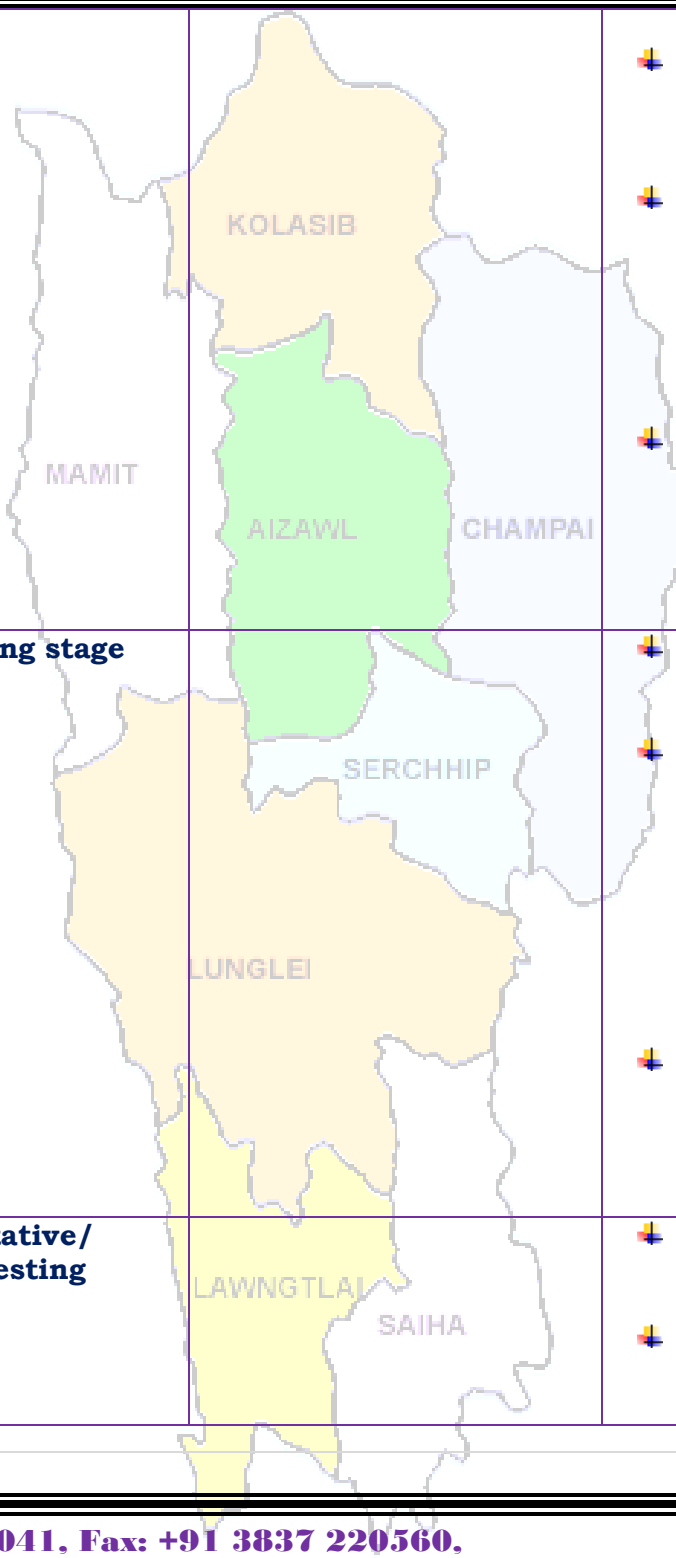	months. • Seeds are soaked in water for 5 days (changing the water daily) and spread out to dry for 24 hours. • Dried seeds are put in 250 gauge and 23 X 13 cm size polythene bags filled with top soil, sand and well decomposed cattle manure in equal proportions and placed for germination. • Germination (90-95 %) starts 10-12 days. Apply fertilizer mixture containing 15:15:6 of NPK @ 8 g in 5 litres of water for 100 seedlings
Oil plam	**Flowering stage**		• 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).

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		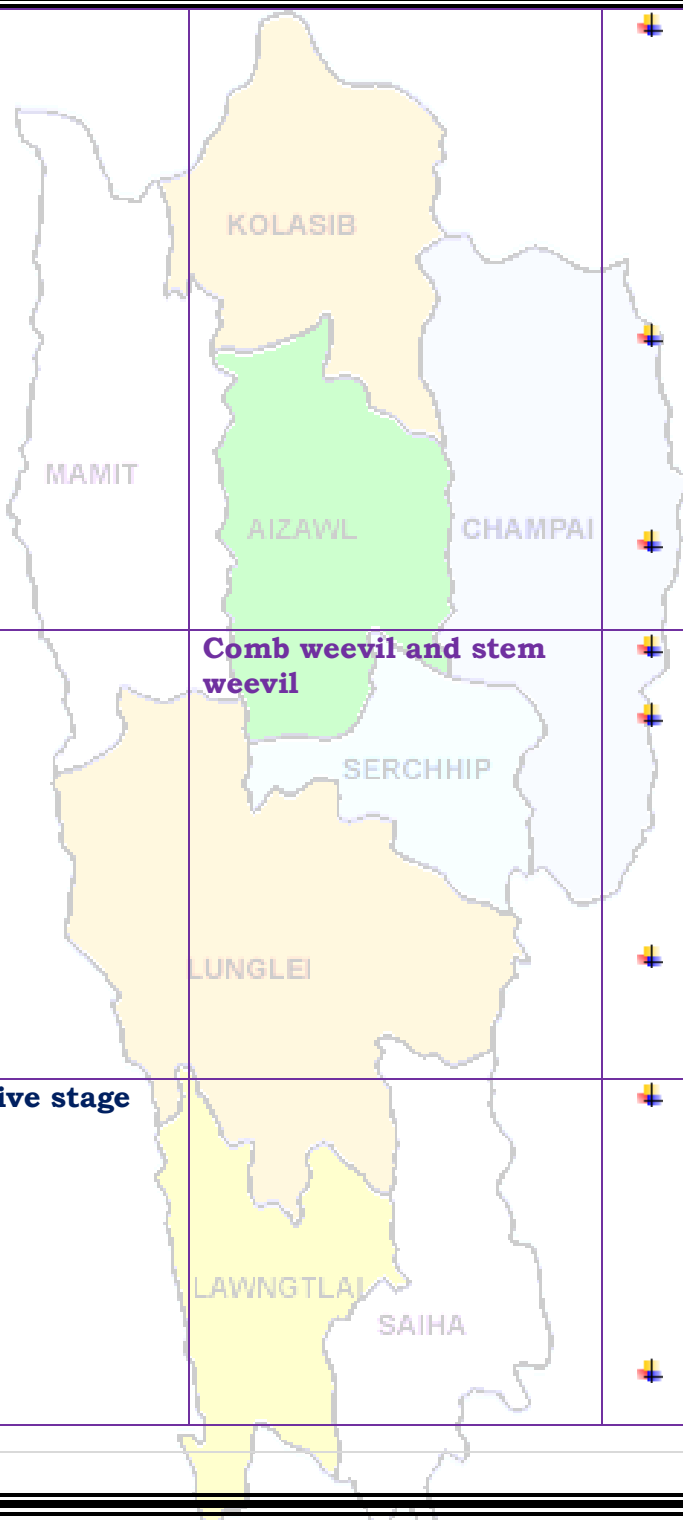	✦ Apply micro-nutrients viz. zinc, copper, manganese, iron, boron and molybdenum are required in ample quantities for supplying nutrients and also reduce serious disorders which may lead to decline of the whole orchard. ✦ Pruning on a regular basis removes unwanted or a sucker, keep production mats in optimum condition, saves fertilizer, reduces pest and disease. ✦ Fruits are harvested when they attain full size, develop attractive yellow colour.
		Comb weevil and stem weevil	✦ Applications of neem powder effectively controlled weevils. ✦ Application of 60 to 100 g of neem seed powder or neem cake at planting and then at 4 months intervals significantly diminished pest damage and increased yields. ✦ Application of over 100 g or neem oil was phytotoxic (harmful to plants) and uneconomical.
Passion Fruit	**Vegetative stage**		✦ Except for a space of about 60-90cm radius around the base of each vine which has to be kept clean weeded at all times, the rest of the plantation maybe allowed to have an undergrowth of grass. ✦ Application of 217gms, 312 gms, 167gms of Urea, Super

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		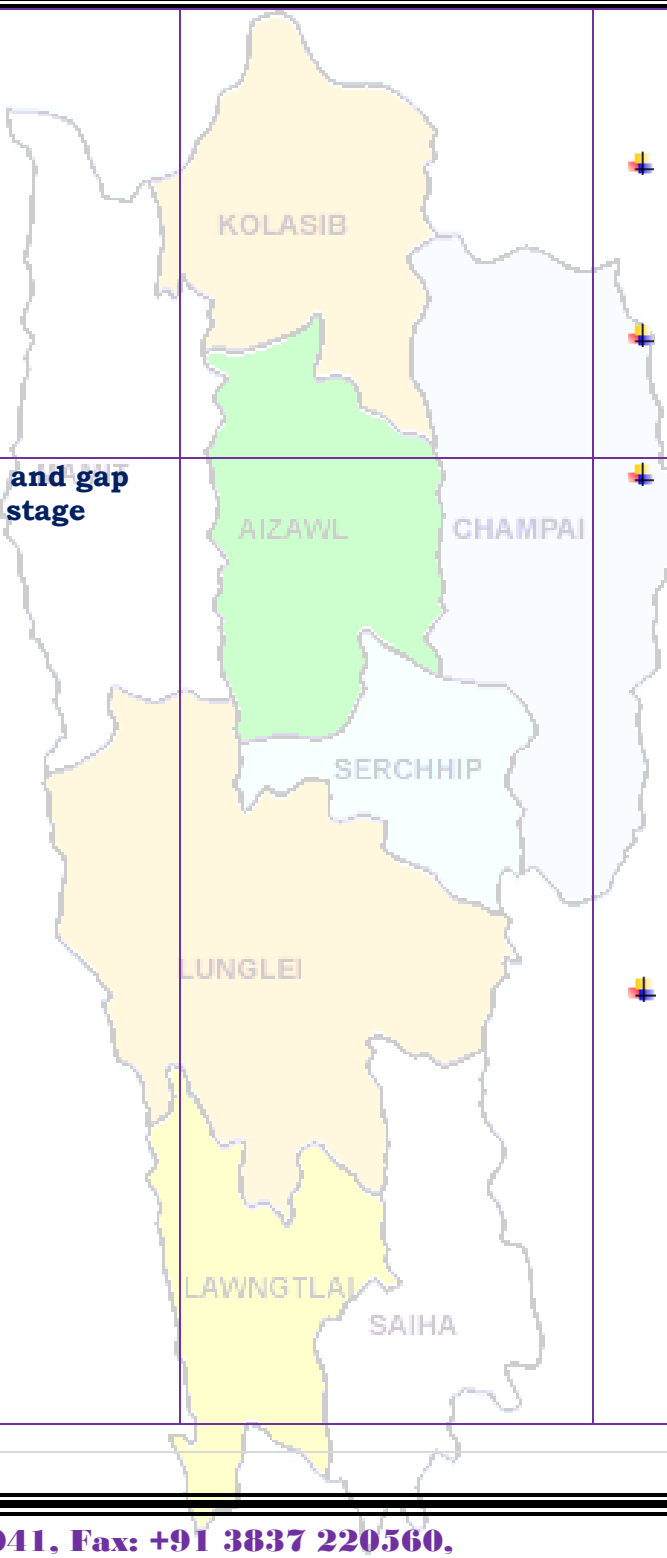	and Potash respectively per vine annually in splits for the purple and the yellow variety. For the Kavari variety 238.7gm, 375gms,167gms of Urea super, Potash respectively per vine per year in split doses. **Trellies making** : Establishment of proper and durable frame work for the purpose is very necessary.
Pineapple	**Planting and gap filling stage**		Double row planting is done by alternating two rows of crops by a wider mound or path. For optimum plant density, particularly in the hills. It is advisable to space two rows of crops at a distance of 60 cm, followed by a mound or flat path of 90 cm width. Within the row plants are spaced 30 cm apart. In this way 43,500 plants can be accommodated in one hectare of land. The pineapple suckers are allowed to dry at least for 25-30 days before planting. In fact, if fresh suckers are planted in moist soil, or if more moisture is available as in rainy season, they may begin to decay. To facilitate better rooting, it is necessary to strip off the scale leaves from the basal portions of the planting materials. After removing

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		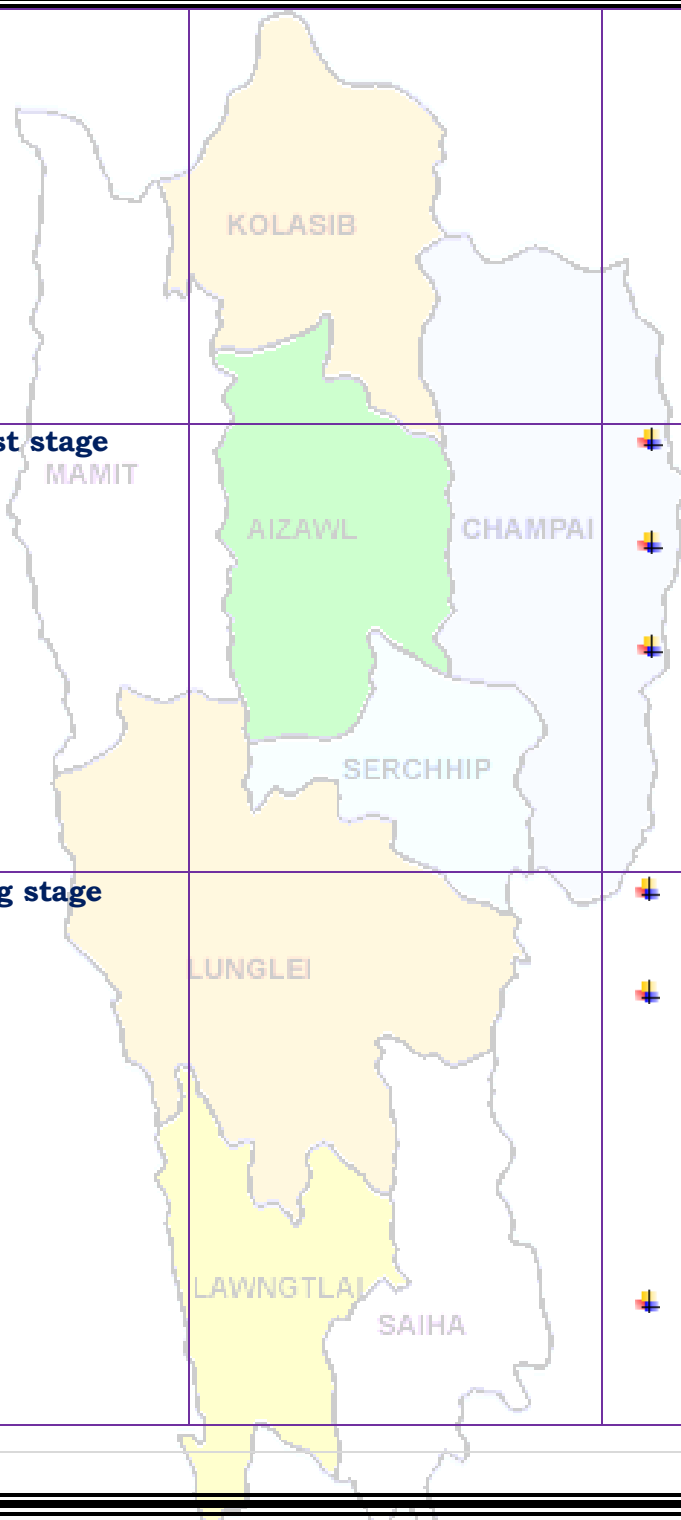	scaly leaves, the planting material should be treated with Difolation (0.2%) solution to avoid heart rot disease. Planting is usually done during monsoon, preferably in the beginning or later part of monsoon such as in August. Periods of heavy rainfall like July should be avoided for pineapple plantation.
Colocasia	**Harvest stage**		✦ Colocasia becomes ready for harvest five to six months after planting. ✦ The mother corms and side tubers are separated after harvest. ✦ The side tubers to be used as planting materials are usually separated from the mother corm and stored. Keep seed tuber in sand spread over the floor to avoid rotting.
French bean	**sowing stage**		✦ Land is ploughed to a fine tilth and divided into plots of convenient size. ✦ Ridges and furrows are prepared by ploughing after a basal dose application of farmyard manure. Field is irrigated once and seeds are sown under optimum moisture condition on side of ridges 2-3 days after irrigation. ✦ Spacing and seed rate vary with varieties. Early varieties are sown at a spacing of 45-60 cm x 10-15 cm and seed

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		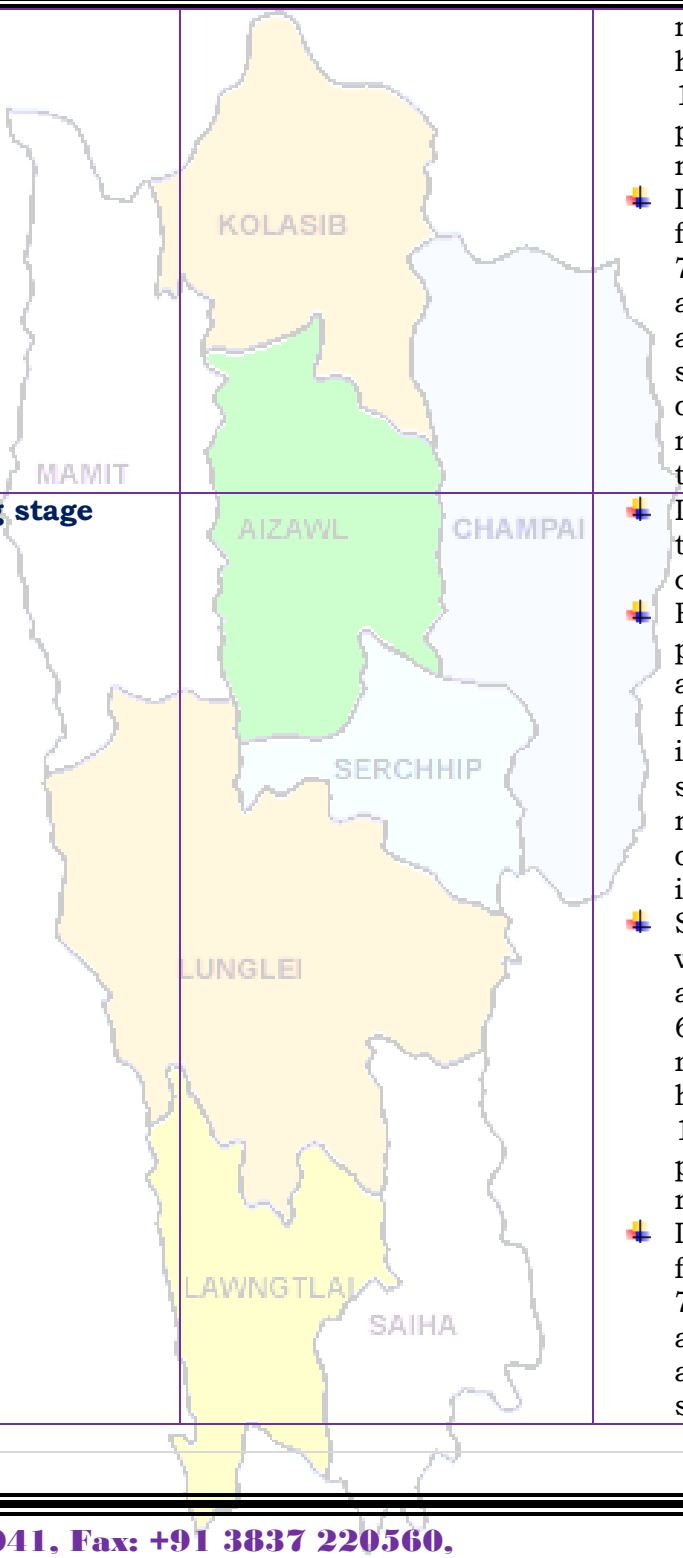	rate required is 80-90 kg / ha. Pole types are sown at 1.0 m apart in hills @ 3-4 plants / hill and seed rate is much less (25-30 kg/ha.). In addition to 20-25 t. of farmyard manure, 50 kg N, 75 kg, P2O5 and 75 kg K2O are recommended. Half of N along with full P and K should be applied as basal dose at the time of making ridges and furrows or one or two weeks after germination.
Cowpea	**sowing stage**		Land is ploughed to a fine tilth and divided into plots of convenient size. Ridges and furrows are prepared by ploughing after a basal dose application of farmyard manure. Field is irrigated once and seeds are sown under optimum moisture condition on side of ridges 2-3 days after irrigation. Spacing and seed rate vary with varieties. Early varieties are sown at a spacing of 45-60 cm x 10-15 cm and seed rate required is 80-90 kg / ha. Pole types are sown at 1.0 m apart in hills @ 3-4 plants / hill and seed rate is much less (25-30 kg/ha.). In addition to 20-25 t. of farmyard manure, 50 kg N, 75 kg, P2O5 and 75 kg K2O are recommended. Half of N along with full P and K should be applied as basal

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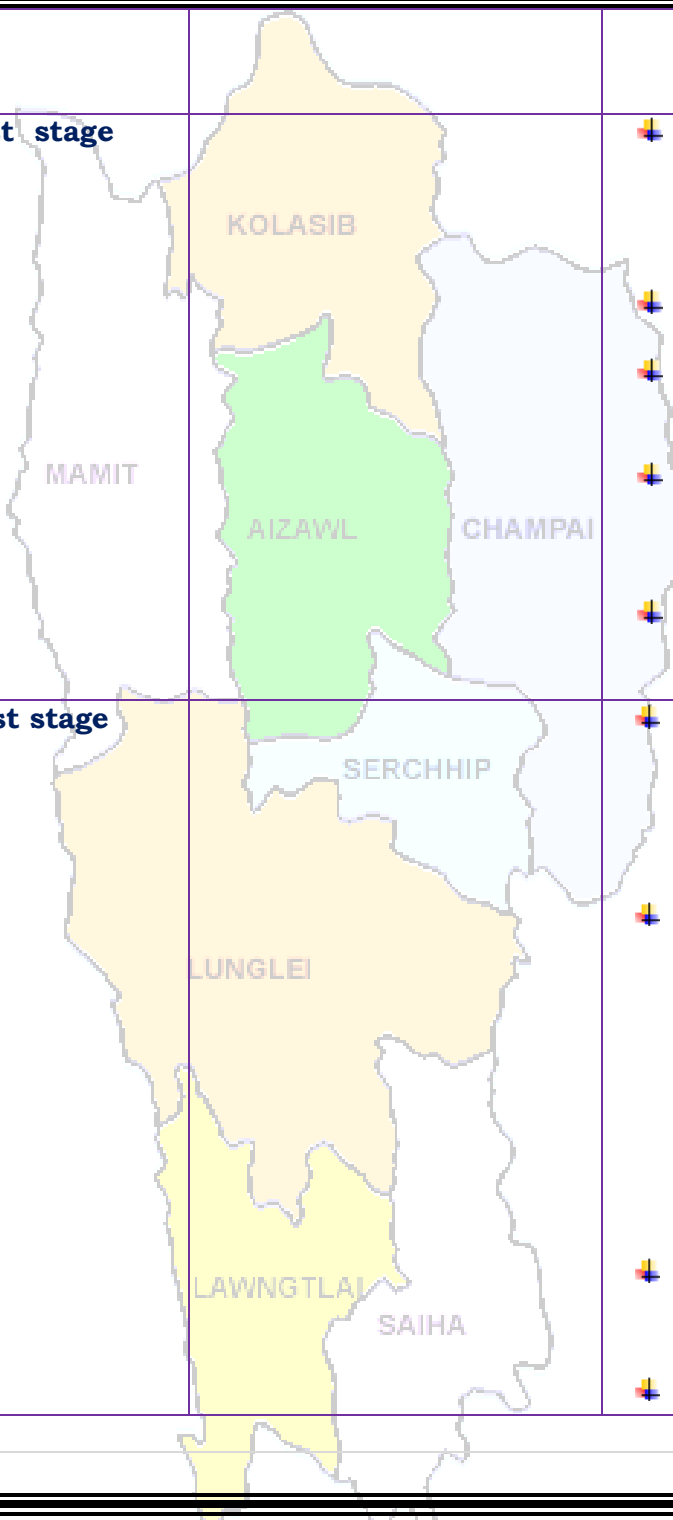
			dose at the time of making ridges and furrows or one or two weeks after germination.
Brinjal	**Harvest stage**		▪ Brinjal fruits are harvested at immature stage after attaining full size, but before loosing its glossy appearance. ▪ Dullness of fruit indicates over maturity. ▪ Usually fruits are harvested along with its stalk with a slight twist by hand. ▪ The harvested fruits are graded and packed in baskets or in loose gunny bags. ▪ Care should be taken to remove the fruits affected by Phomopsis blight.
Tomato	**Harvest stage**		▪ Immature: Before the seeds fully developed and before the jelly-like substances surrounding the seeds were formed. ▪ Mature green: The fully grown fruit with a brownish ring at stemscar. Removal of calyx, light green colour at blossom end changed yellowish green and seeds surrounded by jelly-like substances filling the seed cavity. ▪ Turning: ¼ of the surface at blossom end shows pink (breaker stage). ▪ Pink: ¾ of the surface shows

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			pink Hard ripe: Nearly all red or pink with firm flesh Over ripe: Fully coloured and soft.
Rice	**Panicle initiation stage**	**Kharif Rice**	Apply split dose of nitrogenous fertilizer. Use cracker or shining rope to resist from the attack of birds. Remove excess water from the field and make a drain in four corner of the field Planning for second crop like toria or pea.
Maize	**Harvest stage**		Cobs which are to be utilized as grain should be harvested when the grains are almost dry or containing roughly 20 % moisture. The appearance in the grains of composite and high yielding varieties however may be misleading as grains become dry while the stalk and leaves are still green. The cobs are removed from the standing crop and sun dried before shelling, otherwise retained in their jackets, if kept for seed or to be consumed or utilized at a later stage.
Kharif pulses (Green gram, Black gram and	**flowering stage**		One or two hand hoeing and weeding should be done, depending upon soil type and extent of weed infestation. Weeds can also be

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Rajma)			controlled effectively by the application of TOK-E-25 at the rate of 10 ml dissolved in 1 liter of water as pre-emergence spray. - Provide irrigation in dry condition or dry spell. - Provide 2% urea solution for better growth.
Ginger and turmeric	**Vegetative stage**		- Remove unwanted plant near base of the plant and cut dead branches. - Pre-emergence application of Atrazine (Atratraf 50 wp, Gesaprim 500 fw) @ of 1.0-1.5 kg a.i ha-1in 600 litre water, Alachlor (Lasso) @ 2-2.5 kg a.i ha-1, Metolachlor (Dual) @ 1.5-2.0 kg a.i ha-1, Pendamethalin (Stomp) @ 1-1.5 kg a.i. ha-1arge effective way for control of many annual and broad leaved weeds. - Earting up of soil along with fertilizer mixture.
		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 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.

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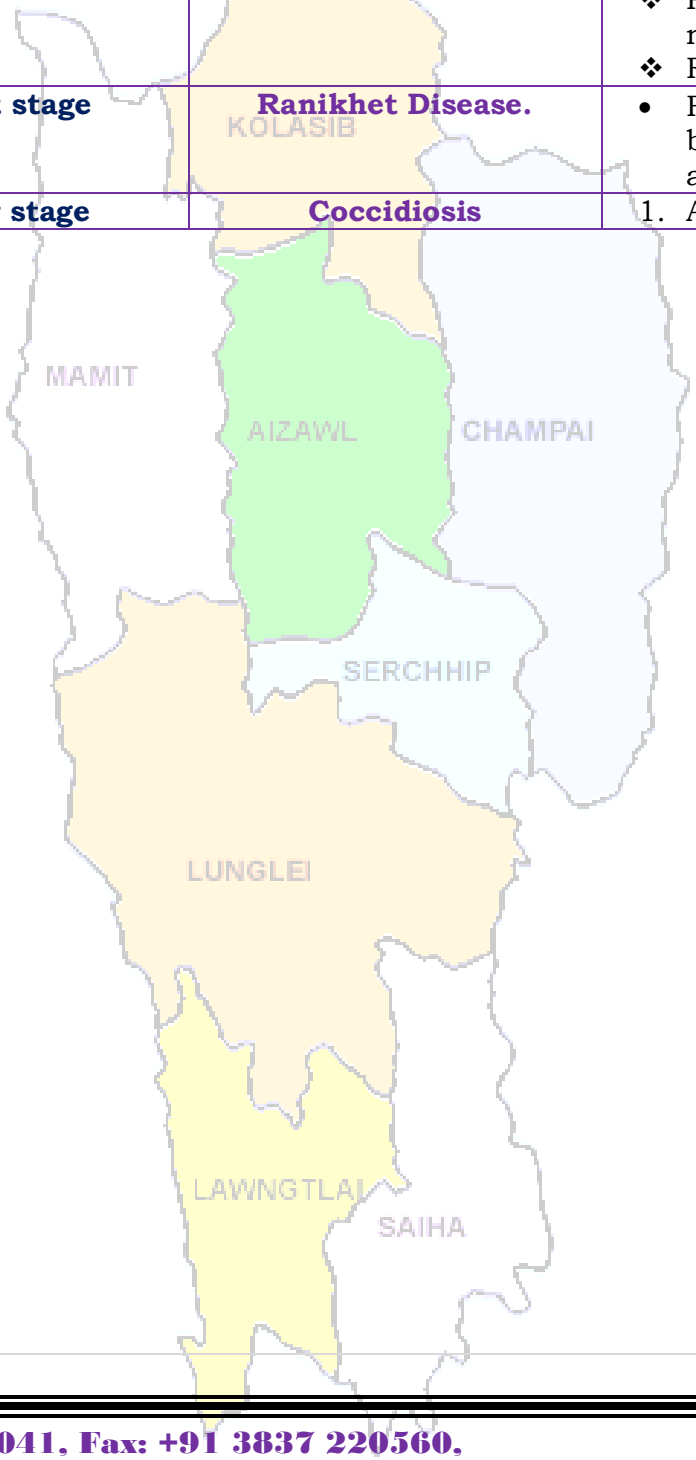
	Young stage	**Black Quarter (BQ)**	• Black Quarter Vaccine (BQV). ❖ Primary vaccination 6 month or above ❖ Revaccination annually
Poultry	**Adult stage**	**Ranikhet Disease.**	• F1 vaccine at (1-6) days of birth and R_2B vaccine for adult birds.
	Early stage	**Coccidiosis**	1. Amprolium or coccidiostat



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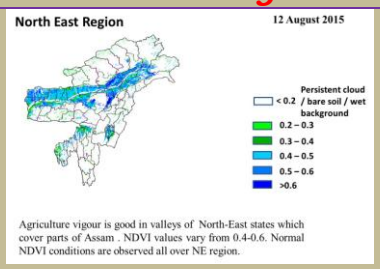
Ni thum kaltha sik leh sa dinhmun tlangpui	August 15, 2015 atanga August 19, 2015 sik leh sa dinhmun hmuhlawk dan	
	Ni 4 lo awm turah hian ruahtui a tlak beisei a ni. Khua a lum lai berin 28-29^{0}C a ni ang a.A vawh lai ber in 20-21^{0}C ni tur ah beisei a ni.RH san lai berin 97-98% leh a hniam lai berin 66-78% ni tur a beisei niin. Thli tleh dan kawng zawng chu chhimchhak lam atangin a nat zawng chu darkar 2-4 km ni tur a beisei niin. Ni nga chhung lo awm tur ah hian chhum tlem a lan beisei a ni. ***Weekly cumulative rainfall:*** **19.0mm**	
NDVI for Mizoram		NDVI for Mizoram is less than normal NDVI. Value shown that NDVI is zero. So, it represents "Bare Soil".

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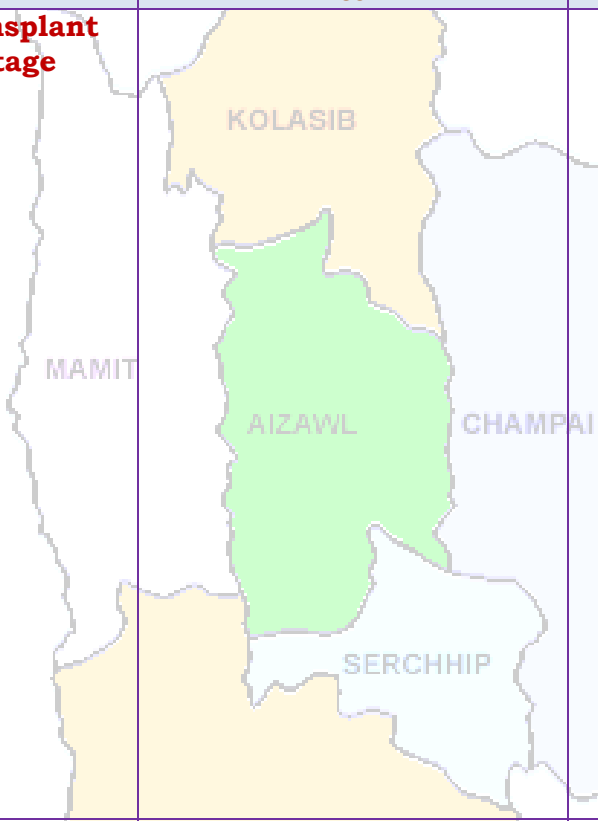
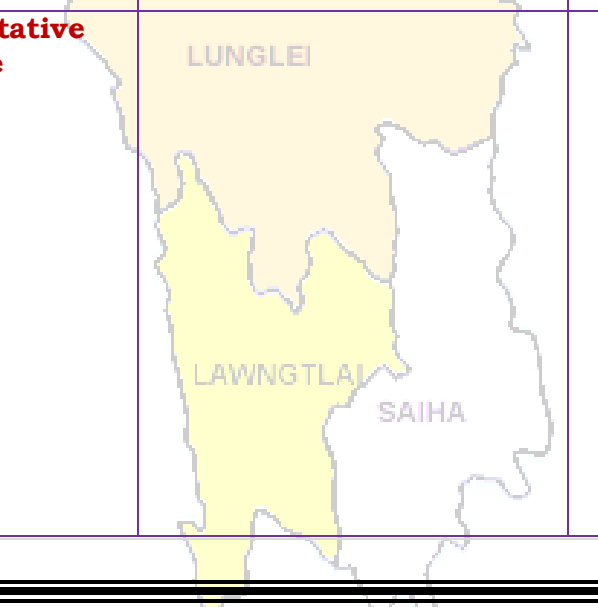
Thlai/ ran /sangha	Spat zawng	Hmalakna tur/ rannung leh natna hrik awm thei te	Agricultural/Horticultural/ animal husbandry atana thurawn
Khasi Mandarin and acid lime	**Transplant stage**		• A chi: A chi chu lakchhuah anih veleh nurseey ah a thuk zawng 1.5-2cm leh 10X5cm a inhlat a chin tur. A rawn chawr chu polythene bag ah hnah 4-6 a neih hunah phun sawn tur. • Nursery chu rannung leh a damlohna dang laka ven nan ser huan atanga meter 500 a hla ah dah tur. • Lei, balu leh bawngek leitha chu a inzat theuha pawlhin pek tur. • Bawngek leitha chu thlai pakhat ah 600:200:100g a pek tur. • Certified thlai chi chauh hman tur. • Ser kung bula tuitling chu paihfai vek tur. • A tiak inchen tlang chauh phun atan hman tur. • A zar tliak leh hnip chu paih fai zel tur. • Thlai chu hrisel taka enkawl tur.
	Vegetative stage		• Gibberellins (10ppm) chu a rah khal that nan te, a rawng insiam nan te kah tur. • Thlai in tui tha taka an hmuh theih nan drip irrigation hman tur. • Ser rah tla hi ser kung khatah vawi 2 a thleng thin a, hemi ven nan hian GA3, urea, benomyl leh carbendazim a hun takah pek tur, • Heng rannung blackfly(kolshi), citrus psylla, leaf miner, bark eating caterpillar, fruit sucking moth, mites, twing blight,

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			gummosis, root rot leh collar rot te hi ven tur. • Fungicide Carbendazim (0.1% emaw 1000ppm) a hun takah pek tur (thlakhat naah leh a seng hma ni 15 ah, chu chu vawi hnih kah tur).
Oil palm	**Vegetative/ harvesting stage**		• Oil palm kung bul chu tihfai a a zar thlak bawk tur. • Leitha chu thlai pakhatah 600:200:100g a pek tur. • Heng micro-nutrients zinc, copper, manganese, iron, boron leh molybdenum te hi an mamawh tawka pek tur, a huan pum a chhiat vek loh nan ven that bawk tur. • Oil palm rah chu a puitlin hunah te, a rawng inthlak hunah leh a thlum leh thur a pai tam hunah seng tur.
Balhla	**Vegetative/ harvesting**		• Balhla kung bul chu tihfai a a zar thlak bawk tur. • Leitha chu thlai pakhatah 600:200:100g a pek tur. • Heng micro-nutrients zinc, copper, manganese, iron, boron leh molybdenum te hi an mamawh tawka pek tur, a huan pum a chhiat vek loh nan ven that bawk tur. • A zar thlak ngun hian rannung leh natna lakah a veng a, chubak ah leitha a hek lova, thlai thar a ti tam bawk ani. • A rah chu a puitlin hunah leh a rawng eng a nih hunah seng tur.
Sapthei	**Nursery stage**		• A chi chu a rah hmin tha atanga lak ni se, ni 15-20 hnuah nursery siam tur.

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			• A hnah 2/3 a rawn awm tan hnu ah polythene bag ah phunsawn tur. • Polythene bag atangin thla ¾ hnu ah huan ah phun sawn leh tur. • Bawngek leitha chu khur khat ah 15g leh NPK 100:50:100g in kumkhat chhungin pek tur.
Lakhuihthei	**A par lai**		• A par chhuah hma nan chemical (Ethrel 10ppm+2% urea+0.04% sodium carbonate) chu pek tur. Tlai ah emaw thlaiin hnah 32 a neih hunah pek tur. • Chemical pek atangin ni 55-60 chhungin a par a chhuah thei ang. • Leitha chu thlai pakhat ah 60:50:60g a pek tur. • Thlai hnah leh a zar thi te chu paihfai a, hnim te tihfai bawk tur.
		Corm borer	• Carbofuran 3G chu hectare khatah 1.5kga.i a pek tur. Hemi hi a zung ah a tuina hnuhma a awmin pek tur
Cucurbitaceous crops	**A rah lai**		• Ni 7 danah tui chu tha taka pek tur. • Huan zau thamah chuan fruitfly leh pumpkin beetle ven nan carbaryl 0.2% leh malathion 0.15% chu chini tui litre khatah 10g a pawlhin kar khat danah leh a par tan tirhah leh a rah tan hunah kah tur. • Thlai pakhatah a par nasat lain urea chu 70g a pek tur.
Bawrhsaiabe	**A chin dan**	**1. Nursery tihfai a tui tlem pek tur.** **2. Phunsawn hnuah tui tha taka pek tur.**	• A kung bulthut ah hnim chheh darh tur. • A khat tawkin tui pek tur.

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			• A tiak phunsawn te chu nil eh ruah lakah hliahkhuh tur.
		1. Aphids	• Surf tuiin thlai chu kah tur. • Heng insecticides Imidacloprid 200SL hi tui litre khatah 0.25ml in emaw Dimethoate 30% EC hi tui litre 10 ah 7ml a kah tur
		2. Flea beetle	• Pangang tui leh a puitling te chu a kung atangin thin thlak tur. • Heng insecticides Imidacloprid 200SL hi tui litre khatah 0.25ml in emaw Dimethoate 30% EC hi tui litre 10 ah 7ml a kah tur.
		3. Epilachna beetle	• A hnah a pangang leh a tui awm chu paihfai tur. • Methyl parathion 0.5% emaw Dimethoate 0.3% a kah tur.
		4. Leaf hopper	• Heng insecticides Imidacloprid 200SL hi tui litre khatah 0.25ml in emaw Dimethoate 30% EC hi tui litre 10 ah 7ml a kah tur.
		Bacterial wilt	• Huan chu fai taka dah a, thlai damlo te chu paihfai bawk tur. • Thlai damlo enkawl nan copper fungicide (2% Bordeaux mixture) a kah tur.bacterial witl chu root knot nematodes tam naah a awm thin a, hemi nematodes control hian bacterial wilt hi a veng thei. • Streptocycline sulphate chu tui litre khatah 0.3g leh Blitox 50 chu tui litre 15 ah 5g a pek tur.
		Damping off	• Thlai chi chu kg khatah Thiram 3g emaw Trichoderma viride4g+Metalaxyl 4g (Apron) a chiah tur. • Bordeaux mixture 1% emaw 2g Captan emaw 3 copper oxychloride chu tui litre khatah pawlhin a chin atanga ni 10-15

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			ah leih tur.
		Leaf spot and leaf blotch	• Dithane M-45 chu tui litre khatah 2.5g emaw Carbendazim 1g chu tui litre khatah pawlhin karkhat danah vawi 2/3 kah tur. • Leaf spot tan Blitox 3g chu tui litre khata pawlhin kah tur.
		Leaf spot leh leaf blotch	• Tui litre khatah Dithane M-45 chu 2.5g emaw Bavistin chu 1g a pawlhin karkhat danah vawi 2/3 kah thin tur. • Leaf spot ah chuan tui litre khatah Blitox chu 3g pawlh a kah thin tur.
French bean	**A par lai**		• Bean hnah, a tang ro leh hnim te chu paihfai vek tur. • Lei chu boruak kal that nan laihphut thin tur. • A chin atanga ni 20-25 ah bean kung chu mau in a zamna siam tur.
		Blister beetle	• Rannung ho chu mankhawmin thah vek tur. • Cypermethrin 2g chu tui litre khata pawlhin kah thin tur
Bawkbawn	**A chin dan**		• Balu leh leitha chu lei nen a chawhpawlh hnu in 75-100cm a zau ah a phunna tur siam tur. A chinna lai chu Blue copper 100g tui litre 40 ah emaw formaldehyde nen a pawlhin leih tur. • A chi chu 5cm a inhlat a tuh in lei pangngai a vur leh tur.
Tomato	**A chin dan**		• Nursery tur chu lei dip tha darh leh tlema pawng tur (0.8m a zau leh 15cm a sei ni se). • Leitha 10kg leh bawngek leitha 15:15:15 leh carbofuran 2.5g chawhpawlh pek tur.

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		Aphids	• Surf tuiin thlai chu kah tur. • Heng insecticides Imidacloprid 200SL hi tui litre khatah 0.25ml in emaw Dimethoate 30% EC hi tui litre 10 ah 7ml a kah tur.
		Epilachna beetle	• Methyl parathion 0.5% emaw Dimethoate 0.3% a kah in flea beetle a veng thei
Buh	**Nursery stage**	**Pre kharif rice**	• A chi tha leh khat tha chauh hman tur. • Tui litre 10 ah chi (salt) 250g pawlhin chutah chuan chiah tur. • Bavistin 50WP @0.1% chu tui litre khatah 2g a pawlhin a chi chu chiah tur.
		Raised bed method	• A chin na tur chu 10m a sei ni se, 1.25m a zau leh tui luanna tur 20-30cm a zau siam tur. Hei hian a chi kal ral mai mai tur a veng. • Leitha pek hnu ah a chi damdawi a chiah te chu theh tur.
Vaimim	**A chin dan**		• Lei chu vawi 2/3 laihphut phawt tur. • A chi chu a line indawt a chin tur • A chi chu kg khatah Thiram 4g a chiah tur. • Hectare khatah buh chi chu 20-25kg hman tur. • Bawngek leitha chu hectare khatah 5-10t chu 80:60:40kg N, P2O5 leh K20 hman tur. Vaimim chin hma in lei nen tihpawlh tur. Nitrogen chu a dose chanve in a chin hnu ah pek tur, a bang 25% chu a hnu thlakhat ah leh a dang 25% chu a par hunah pek tur.
Sawhthing leh Aieng	**Land preparation**		• Thlai hnah, a tang ro leh hnim te chu paihfai vek tur.

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			• Lei chu boruak kal that nan laihphut thin tur. • Nitrogen leitha chu an mamawh taw kanga pek tur.
		Thrips	• Roger emaw Monocrophos chu tui litre khatah 2.5ml a pawlhin kah tur.
		Scales	• Quinalphos emaw Monocrotophos chu tui litre khatah 2.5ml a pawlhin kah tur.
Vawk	**Kumtluanin**	**Porcine Reproductive Respiratory Syndrome (PRRS).**	1. A natna vei vawk te chu thah a phum tur a ni.
	A puitling hun	**Swine fever.**	2. Vawk thla hnih a nihin SF vaccine pek tur a ni a, he vaccine hi thla ruk emaw kumtluanin pek chhunzawm tur
Bawng	**Kumtluanin**	**Foot and Mouth Disease (FMD)**	• Thla16 a upa an rih in FMD vaccine pek tur a nia, thla 6 danah pek chhunzawm tur a ni.

	A naupan lai	**Black Quarter (BQ)**	• Black Quarter Vaccine (BQ)
			  Thla ruk an tlin hunah vaccine lak tan tur.
			  Kumkhat hnu ah vaccine pek leh tur.

Ar	**Kumtluanin**	**Ranikhet Disease.**	1. Ar note an pian hlimin F_1 vaccine pek tur a nia an puitlin hunah R_2B pek leh tur a ni.
		Coccidiosis	2. Amprolium emaw coccidiostat pek tur.

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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: 15- 19 August, 2015**

Bulletin No: -544/2015/ Bulletin/English **Date of issue: 14th August, 2015**

Parameters	15.08.2015	16.08.2015	17.08.2015	18.08.2015	19.08.2015
Rainfall (mm)	5	6	4	9	17
Max Temp (oC)	31	30	30	29	29
Min Temp (oC)	21	22	21	22	22
Cloud Coverage	Mainly cloudy	Mainly cloudy	Partially clear	Mainly cloudy	Partially clear
Max RH (%)	99	99	97	96	95
Min RH (%)	77	70	62	68	70
Wind Speed (KmpH)	4	4	4	6	6
***Wind Direction**	S	S	S-E	S	S

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 MONSOON- July 1-31, 2015 (*Percent of deviation from normal in parenthesis*)

Aizawl- 412.50mm (341.8mm) **Champhai- 105.47mm (250.30mm)** **Saiha- 307.78 mm (87.2mm)** **Kolasib- 331.10mm (380.9mm)**

Lawngtlai-291.28mm (285.5mm) **Lunglei-326.52mm (186.21mm)** **Mamit-204.84mm (442.80mm)** **Serchhip-189.57mm (25.9mm)**

Weather summary of the past three days

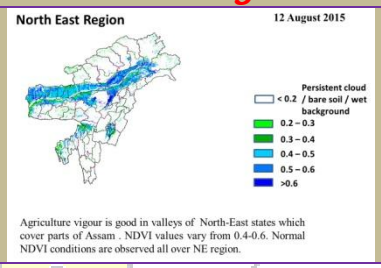
The temperature range for maximum and minimum were 29.8-32.6^{0}C and 17.2-20.5^{0}C respectively. Dense cloudy sky was observed. Wind direction is southeasterly. Maximum RH observed 85-99% & minimum of 45-59%. Rainfall recorded for the past three days is **38.60mm.**

Weather forecast valid from 15th August, 2015 To 19th August, 2015.

There is a chance of moderate to light rainfall during the next 5 days. The maximum and minimum temperatures for the next 5 days may range for 29-31^{0}C and 21-22^{0}C. Maximum relative humidity is expected in the range of 95-99% and minimum may from 62-77%. Wind direction would be southeasterly with the wind speed of 4-6 km per hour. Mainly cloudy sky will prevail during the next five days.

Weekly cumulative rainfall: **38.0 mm**

NDVI for Mizoram



NDVI for Mizoram is less than normal NDVI. Value shown that NDVI is zero. So, it represents "Bare Soil".

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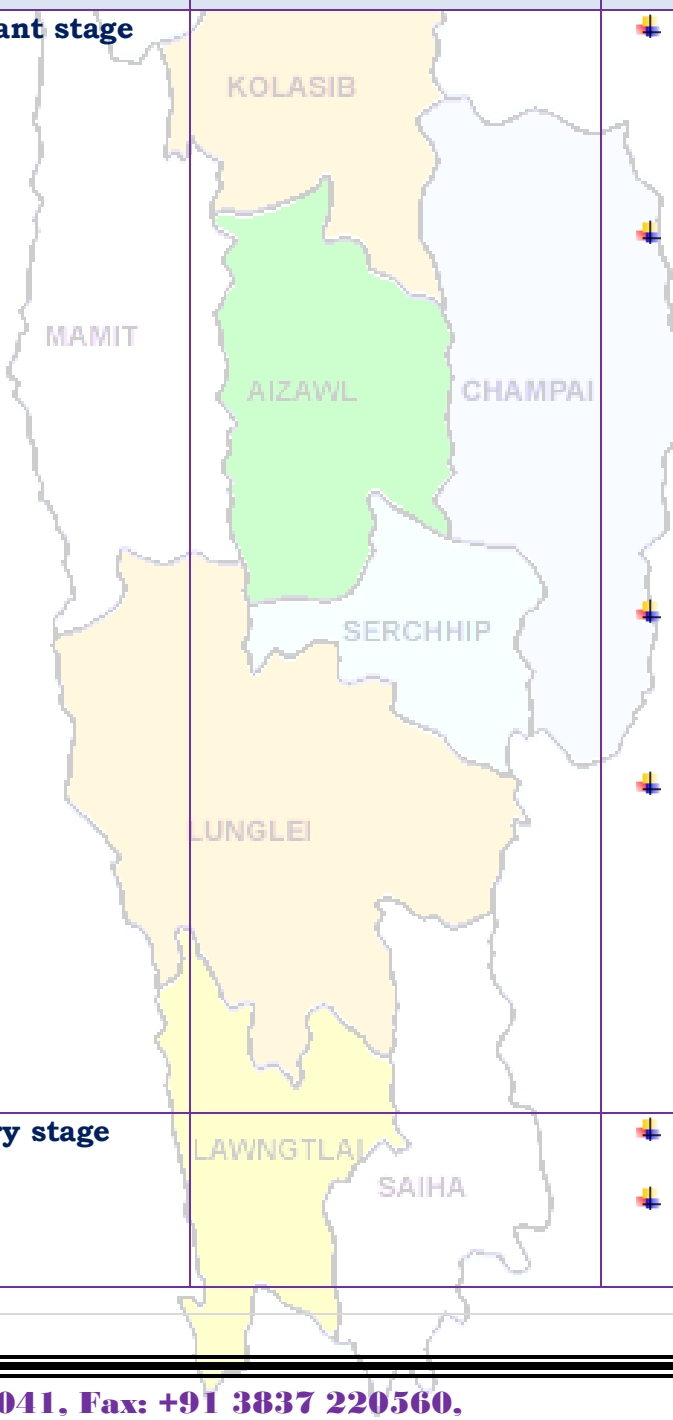
Main Crop/ Animal /Fisheries	Stage	Cultural practices/ Pest/ Diseases	Agricultural / Horticultural/ animal husbandry advisories
Khasi Mandarin and acid lime	**Transplant stage**		▪ Well rotten FYM @ 500g/pit is applied at 15-20 days before planting along with 12 g each of N and K2O/plant and 4 g of P2O5/plant. ▪ This root stock has proved very successful for raising some sweet orange and mandarin orange varieties This root stock is resistant to Tristeza virus but highly susceptible to exocortis. It is also recommended for this region till any other rootstock is found to be promising. ▪ Citrus plantations are seldom put under planned cultivation, and plantations are always kept under sod or raised as mixed crops ▪ Layered plants about one year old, are also selected in case of lemon, lime etc. Vigorous plants are always preferred for better growth. While placing the plants in the pits care should be taken that bud union remains 12-15 cm above the ground level.
Oil plam	**Nursery stage**		▪ Remove the exocarp and mesocarp with knife. ▪ Dry the seeds on concrete or wooden floors under shade for 2 days and stored for 3-9

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		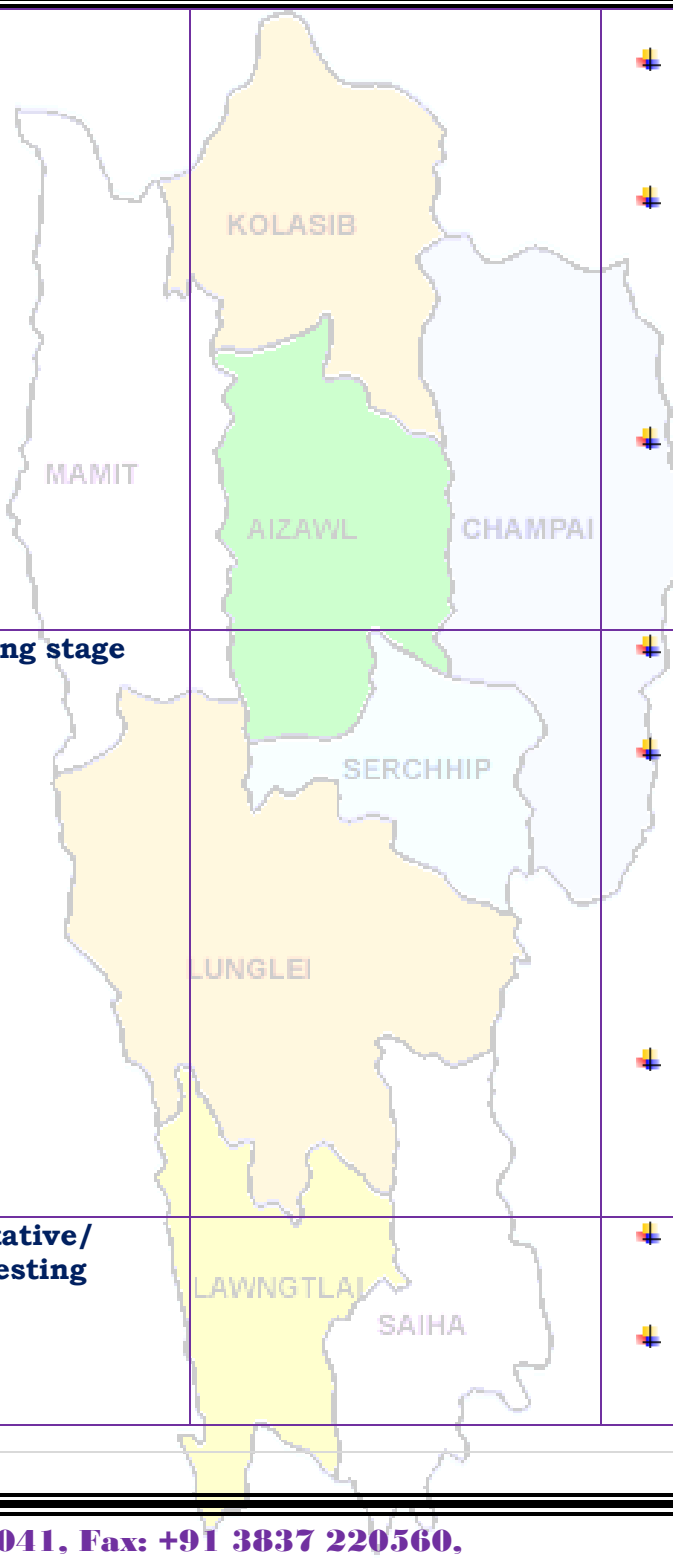	months. • Seeds are soaked in water for 5 days (changing the water daily) and spread out to dry for 24 hours. • Dried seeds are put in 250 gauge and 23 X 13 cm size polythene bags filled with top soil, sand and well decomposed cattle manure in equal proportions and placed for germination. • Germination (90-95 %) starts 10-12 days. Apply fertilizer mixture containing 15:15:6 of NPK @ 8 g in 5 litres of water for 100 seedlings
Oil plam	**Flowering stage**		• 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).

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		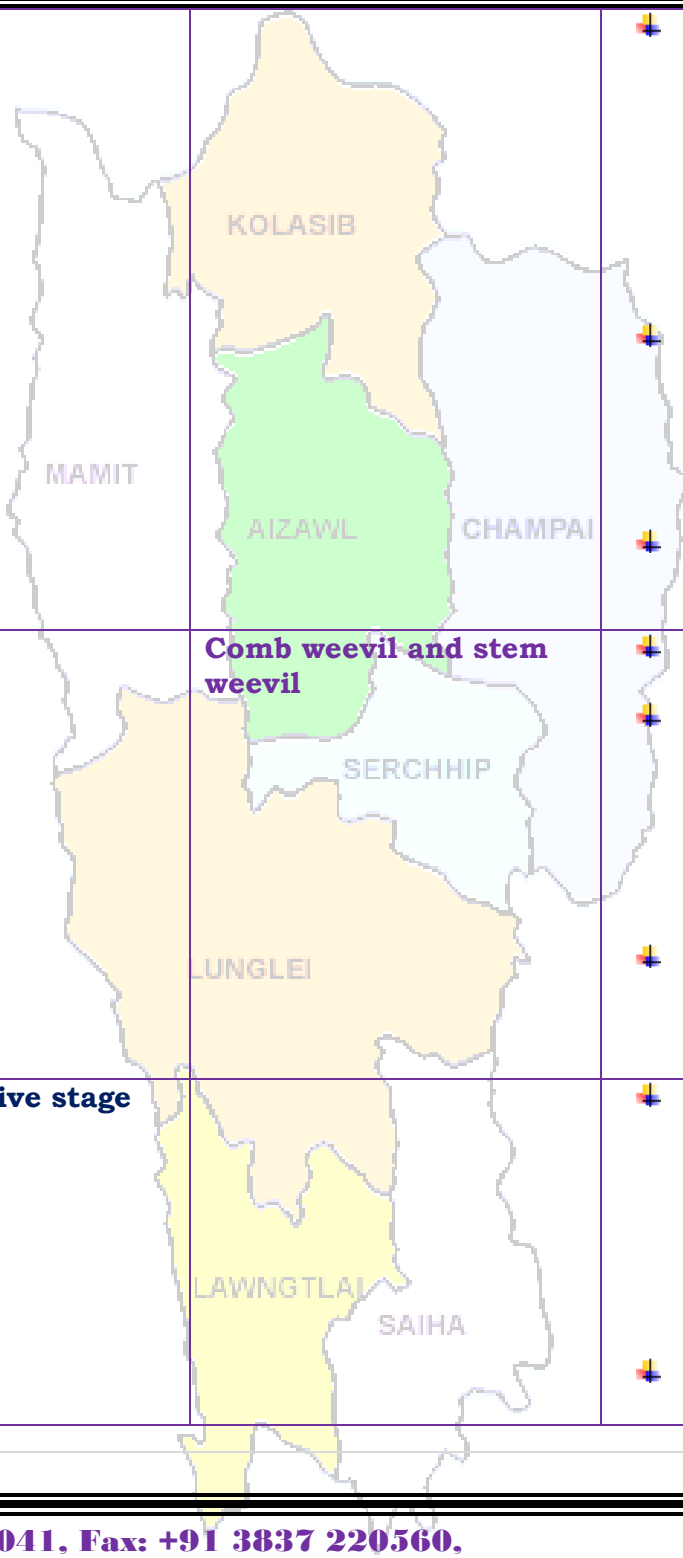	▪ Apply micro-nutrients viz. zinc, copper, manganese, iron, boron and molybdenum are required in ample quantities for supplying nutrients and also reduce serious disorders which may lead to decline of the whole orchard. ▪ Pruning on a regular basis removes unwanted or a sucker, keep production mats in optimum condition, saves fertilizer, reduces pest and disease. ▪ Fruits are harvested when they attain full size, develop attractive yellow colour.
		Comb weevil and stem weevil	▪ Applications of neem powder effectively controlled weevils. ▪ Application of 60 to 100 g of neem seed powder or neem cake at planting and then at 4 months intervals significantly diminished pest damage and increased yields. ▪ Application of over 100 g or neem oil was phytotoxic (harmful to plants) and uneconomical.
Passion Fruit	**Vegetative stage**		▪ Except for a space of about 60-90cm radius around the base of each vine which has to be kept clean weeded at all times, the rest of the plantation maybe allowed to have an undergrowth of grass. ▪ Application of 217gms, 312 gms, 167gms of Urea, Super

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		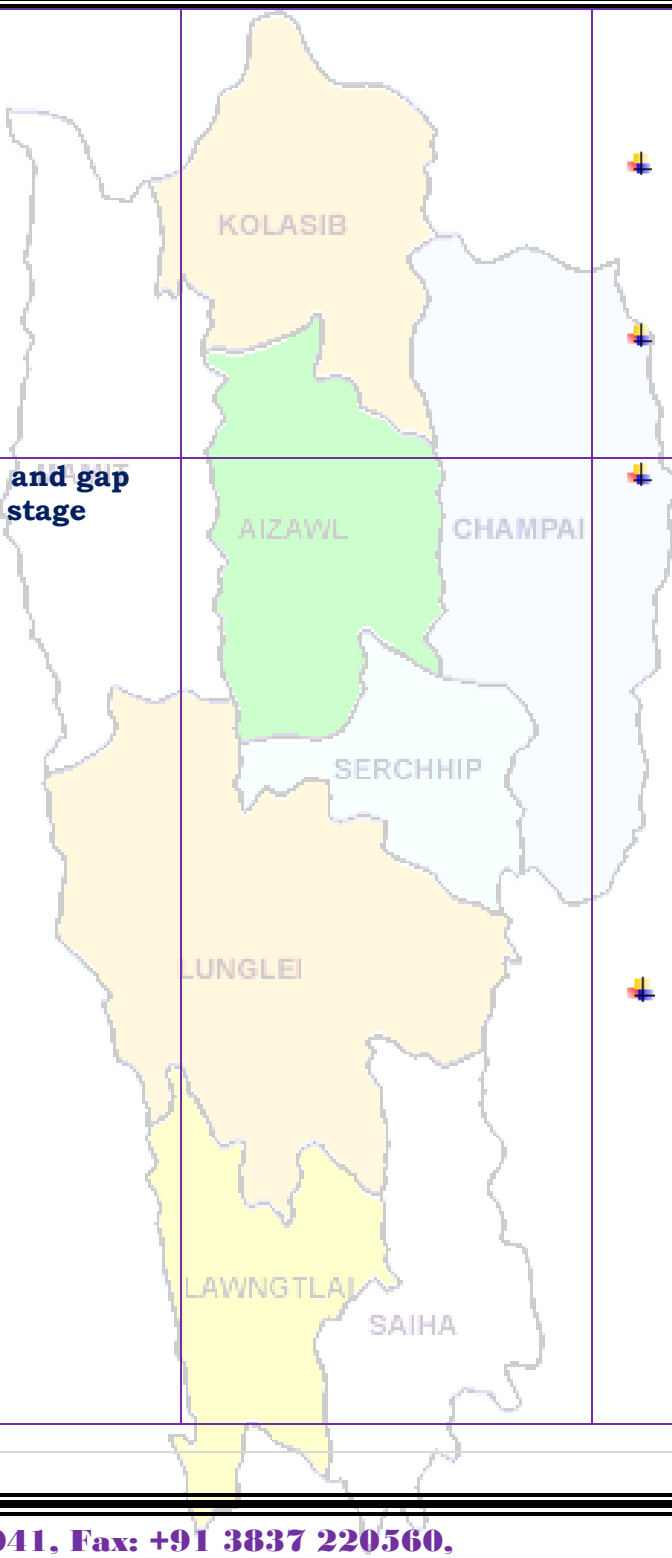	and Potash respectively per vine annually in splits for the purple and the yellow variety. For the Kavari variety 238.7gm, 375gms,167gms of Urea super, Potash respectively per vine per year in split doses. **Trellies making** : Establishment of proper and durable frame work for the purpose is very necessary.
Pineapple	**Planting and gap filling stage**		Double row planting is done by alternating two rows of crops by a wider mound or path. For optimum plant density, particularly in the hills. It is advisable to space two rows of crops at a distance of 60 cm, followed by a mound or flat path of 90 cm width. Within the row plants are spaced 30 cm apart. In this way 43,500 plants can be accommodated in one hectare of land. The pineapple suckers are allowed to dry at least for 25-30 days before planting. In fact, if fresh suckers are planted in moist soil, or if more moisture is available as in rainy season, they may begin to decay. To facilitate better rooting, it is necessary to strip off the scale leaves from the basal portions of the planting materials. After removing

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		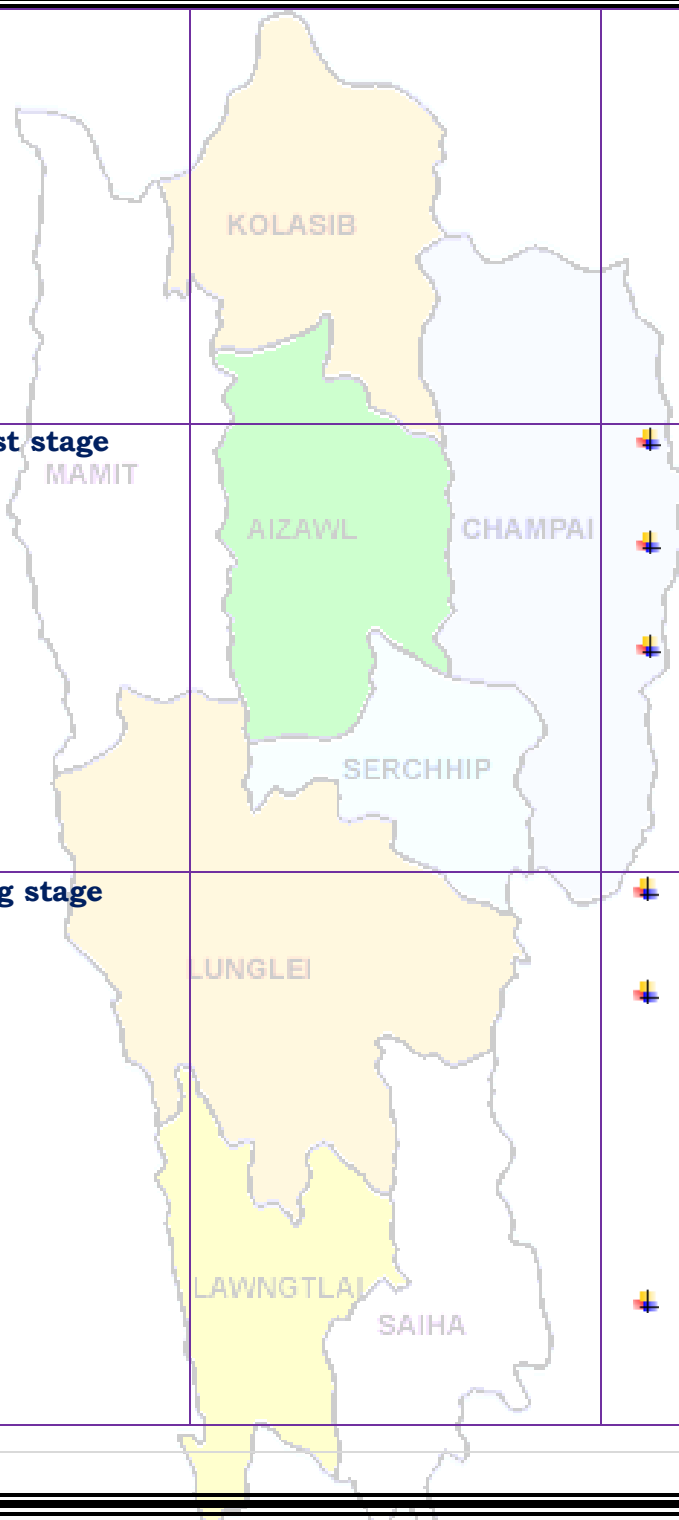	scaly leaves, the planting material should be treated with Difolation (0.2%) solution to avoid heart rot disease. Planting is usually done during monsoon, preferably in the beginning or later part of monsoon such as in August. Periods of heavy rainfall like July should be avoided for pineapple plantation.
Colocasia	**Harvest stage**		✦ Colocasia becomes ready for harvest five to six months after planting. ✦ The mother corms and side tubers are separated after harvest. ✦ The side tubers to be used as planting materials are usually separated from the mother corm and stored. Keep seed tuber in sand spread over the floor to avoid rotting.
French bean	**sowing stage**		✦ Land is ploughed to a fine tilth and divided into plots of convenient size. ✦ Ridges and furrows are prepared by ploughing after a basal dose application of farmyard manure. Field is irrigated once and seeds are sown under optimum moisture condition on side of ridges 2-3 days after irrigation. ✦ Spacing and seed rate vary with varieties. Early varieties are sown at a spacing of 45-60 cm x 10-15 cm and seed

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		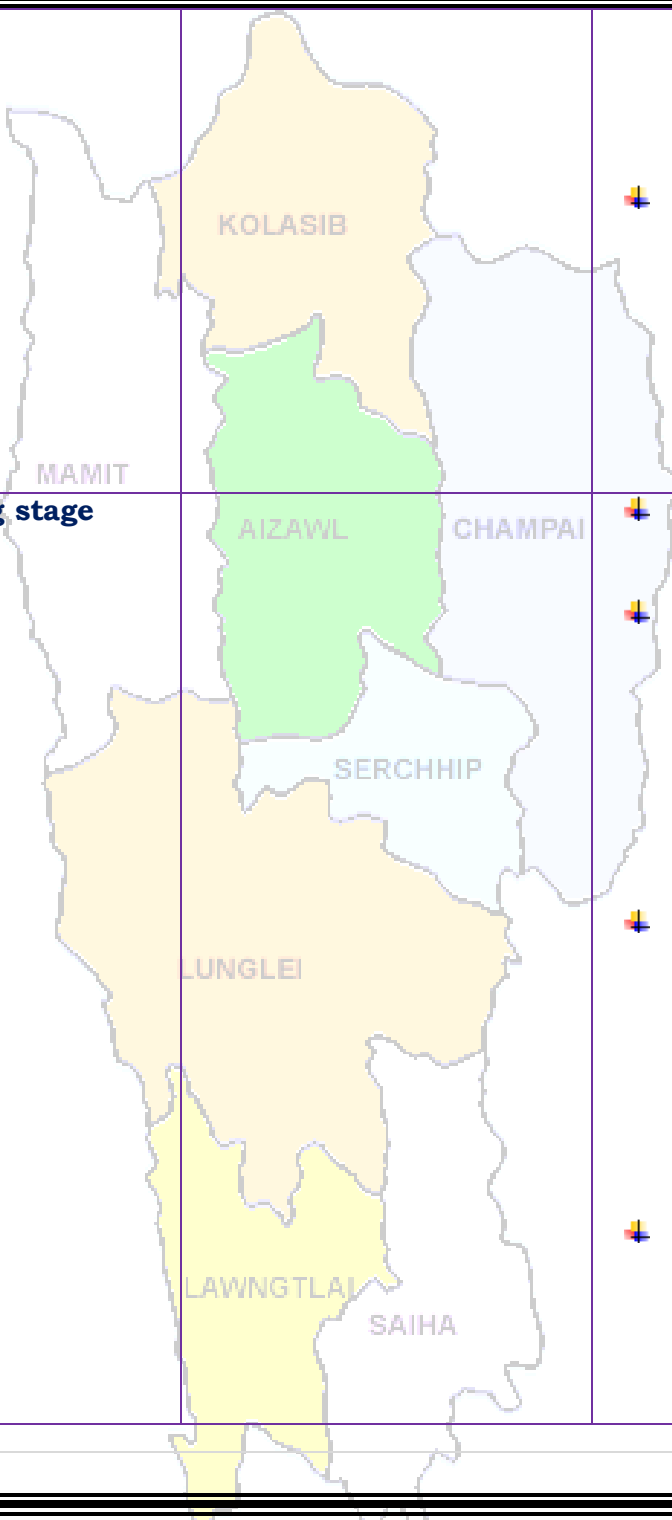	rate required is 80-90 kg / ha. Pole types are sown at 1.0 m apart in hills @ 3-4 plants / hill and seed rate is much less (25-30 kg/ha.). In addition to 20-25 t. of farmyard manure, 50 kg N, 75 kg, P2O5 and 75 kg K2O are recommended. Half of N along with full P and K should be applied as basal dose at the time of making ridges and furrows or one or two weeks after germination.
Cowpea	**sowing stage**		Land is ploughed to a fine tilth and divided into plots of convenient size. Ridges and furrows are prepared by ploughing after a basal dose application of farmyard manure. Field is irrigated once and seeds are sown under optimum moisture condition on side of ridges 2-3 days after irrigation. Spacing and seed rate vary with varieties. Early varieties are sown at a spacing of 45-60 cm x 10-15 cm and seed rate required is 80-90 kg / ha. Pole types are sown at 1.0 m apart in hills @ 3-4 plants / hill and seed rate is much less (25-30 kg/ha.). In addition to 20-25 t. of farmyard manure, 50 kg N, 75 kg, P2O5 and 75 kg K2O are recommended. Half of N along with full P and K should be applied as basal

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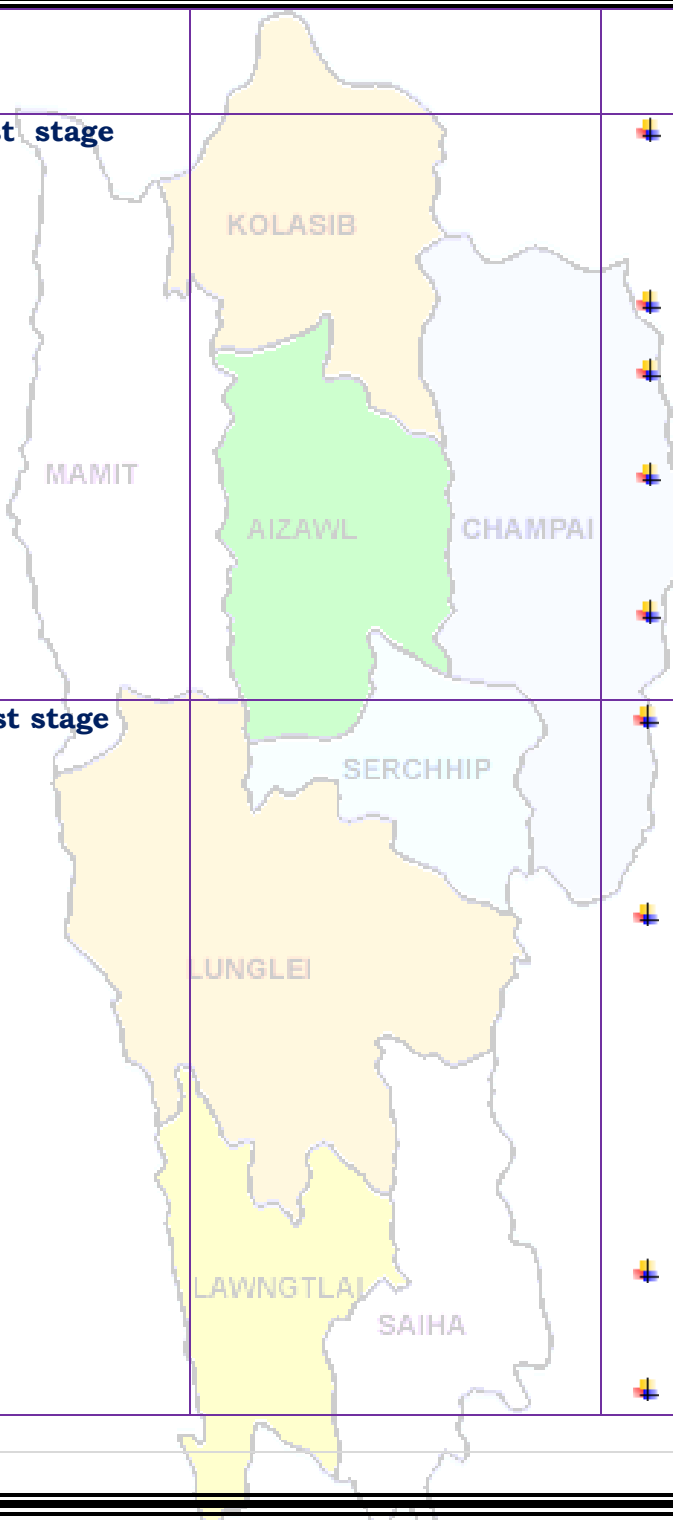
			dose at the time of making ridges and furrows or one or two weeks after germination.
Brinjal	**Harvest stage**		✦ Brinjal fruits are harvested at immature stage after attaining full size, but before loosing its glossy appearance. ✦ Dullness of fruit indicates over maturity. ✦ Usually fruits are harvested along with its stalk with a slight twist by hand. ✦ The harvested fruits are graded and packed in baskets or in loose gunny bags. ✦ Care should be taken to remove the fruits affected by Phomopsis blight.
Tomato	**Harvest stage**		✦ Immature: Before the seeds fully developed and before the jelly-like substances surrounding the seeds were formed. ✦ Mature green: The fully grown fruit with a brownish ring at stemscar. Removal of calyx, light green colour at blossom end changed yellowish green and seeds surrounded by jelly-like substances filling the seed cavity. ✦ Turning: ¼ of the surface at blossom end shows pink (breaker stage). ✦ Pink: ¾ of the surface shows

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			pink - Hard ripe: Nearly all red or pink with firm flesh - Over ripe: Fully coloured and soft.
Rice	**Panicle initiation stage**	**Kharif Rice**	- Apply split dose of nitrogenous fertilizer. - Use cracker or shining rope to resist from the attack of birds. - Remove excess water from the field and make a drain in four corner of the field - Planning for second crop like toria or pea.
Maize	**Harvest stage**		- Cobs which are to be utilized as grain should be harvested when the grains are almost dry or containing roughly 20 % moisture. - The appearance in the grains of composite and high yielding varieties however may be misleading as grains become dry while the stalk and leaves are still green. - The cobs are removed from the standing crop and sun dried before shelling, otherwise retained in their jackets, if kept for seed or to be consumed or utilized at a later stage.
Kharif pulses (Green gram, Black gram and Rajma)	**flowering stage**		- One or two hand hoeing and weeding should be done, depending upon soil type and extent of weed infestation. - Weeds can also be controlled effectively by the application

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			of TOK-E-25 at the rate of 10 ml dissolved in 1 liter of water as pre-emergence spray. Provide irrigation in dry condition or dry spell. Provide 2% urea solution for better growth.
Ginger and turmeric	**Vegetative stage**		Remove unwanted plant near base of the plant and cut dead branches. Pre-emergence application of Atrazine (Atratraf 50 wp, Gesaprim 500 fw) @ of 1.0-1.5 kg a.i ha-1in 600 litre water, Alachlor (Lasso) @ 2-2.5 kg a.i ha-1, Metolachlor (Dual) @ 1.5-2.0 kg a.i ha-1, Pendamethalin (Stomp) @ 1-1.5 kg a.i. ha-1arge effective way for control of many annual and broad leaved weeds. Earting up of soil along with fertilizer mixture.
		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 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

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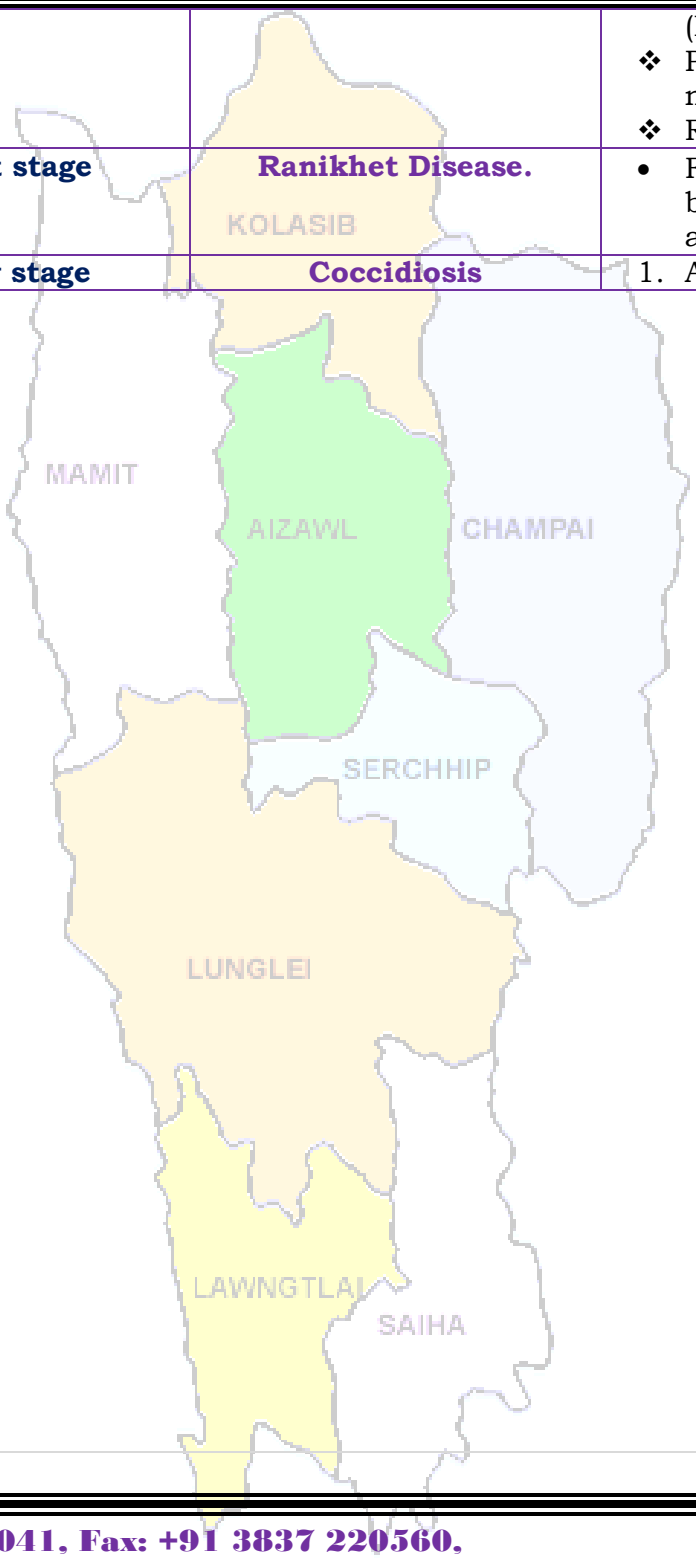
			(BQV). ❖ Primary vaccination 6 month or above ❖ Revaccination annually
Poultry	**Adult stage**	**Ranikhet Disease.**	• F1 vaccine at (1-6) days of birth and R_2B vaccine for adult birds.
	Early stage	**Coccidiosis**	1. Amprolium or coccidiostat



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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: Kolasib **Period: 15- 19 August, 2015**

Bulletin No: -544/2015/ Bulletin/Mizo **Date of issue: 14th August, 2015**

Parameters	15.08.2015	16.08.2015	17.08.2015	18.08.2015	19.08.2015
Rainfall (mm)	5	6	4	9	17
Max Temp (oC)	31	30	30	29	29
Min Temp (oC)	21	22	21	22	22
Cloud Coverage	Mainly cloudy	Mainly cloudy	Partially clear	Mainly cloudy	Partially clear
Max RH (%)	99	99	97	96	95
Min RH (%)	77	70	62	68	70
Wind Speed (KmpH)	4	4	4	6	6
***Wind Direction**	S	S	S-E	S	S

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 MONSOON- July 1-31, 2015 (*Percent of deviation from normal in parenthesis*)

Aizawl- 412.50mm (341.8mm)	**Champhai- 105.47mm (250.30mm)**	**Saiha- 307.78 mm (87.2mm)**	**Kolasib- 331.10mm (380.9mm)**
Lawngtlai-291.28mm (285.5mm)	**Lunglei-326.52mm (186.21mm)**	**Mamit-204.84mm (442.80mm)**	**Serchhip-189.57mm (25.9mm)**

Ni thum kaltha sik leh sa dinhmun tlangpui

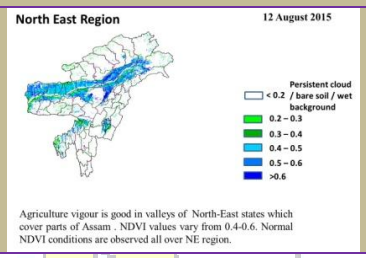
Khua a lum lai berin 29.8-32.6^{0}C leh a vawh lai berin 17.2-20.5^{0}C ani ang a. Chhum tlem a lan beisei ani. Thli tleh dan kawng zawng chu chhim thlang atangin ani a. Maximum RH san lai berin observed 85-99% leh a hniam lai 45-59% ani ang. Ni 3 kal ta chhung a ruah tla zatchu **38.60mm** ani.

August 15, 2015 atanga August 19, 2015 sik leh sa dinhmun hmuhlawk dan

Ni 5 lo awm turah hian ruahtui a tlak beisei a ni. Khua a lum lai berin 29-31^{0}C a ni ang a.A vawh lai ber in 21-22^{0}C ni tur ah beisei a ni.RH san lai berin 95-99% leh a hniam lai berin 62-77% ni tur a beisei niin. Thli tleh dan kawng zawng chu chhimchhak lam atangin a nat zawng chu darkar 4-6 km ni tur a beisei niin. Ni nga chhung lo awm tur ah hian ch hum tlem a lan beisei a ni.

Weekly cumulative rainfall: **38.0mm**

NDVI for Mizoram



NDVI for Mizoram is less than normal NDVI. Value shown that NDVI is zero. So, it represents "Bare Soil".

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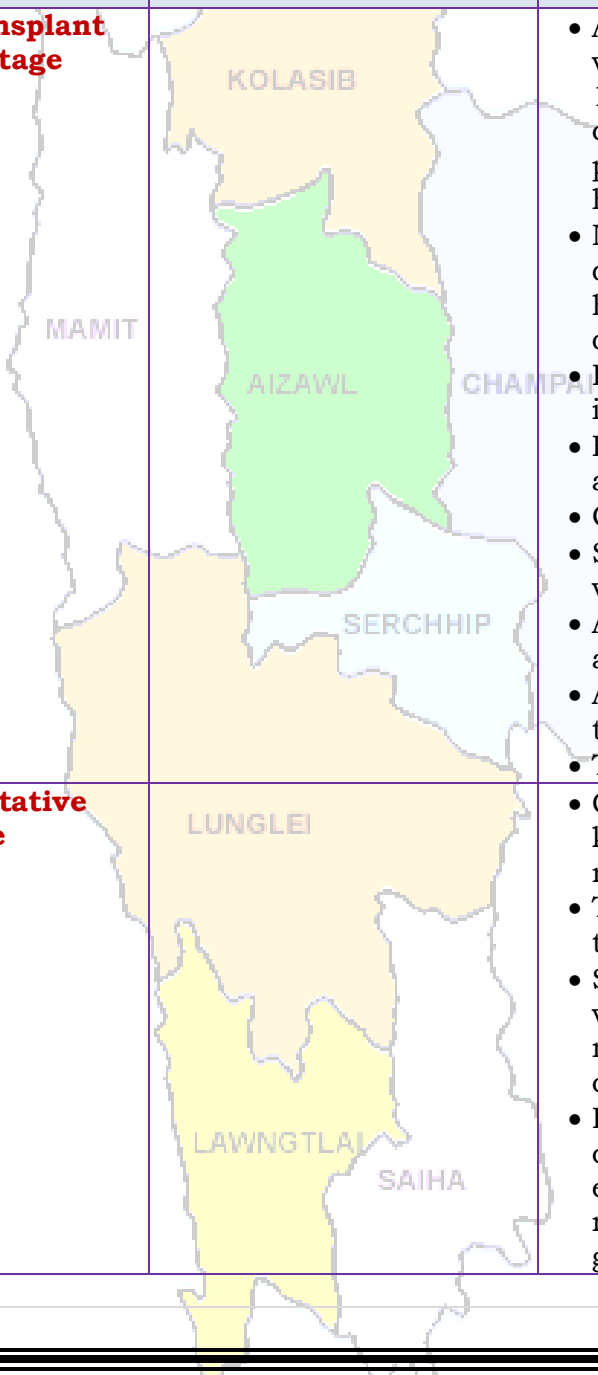
SPI for Mizoram		Moderate rain will occur in Mizoram.	
Thlai/ ran /sangha	**Spat zawng**	**Hmalakna tur/ rannung leh natna hrik awm thei te**	**Agricultural/Horticultural/ animal husbandry atana thurawn**
Khasi Mandarin and acid lime	**Transplant stage**		• A chi: A chi chu lakchhuah anih veleh nurseey ah a thuk zawng 1.5-2cm leh 10X5cm a inhlat a chin tur. A rawn chawr chu polythene bag ah hnah 4-6 a neih hunah phun sawn tur. • Nursery chu rannung leh a damlohna dang laka ven nan ser huan atanga meter 500 a hla ah dah tur. • Lei, balu leh bawngek leitha chu a inzat theuha pawlhin pek tur. • Bawngek leitha chu thlai pakhat ah 600:200:100g a pek tur. • Certified thlai chi chauh hman tur. • Ser kung bula tuitling chu paihfai vek tur. • A tiak inchen tlang chauh phun atan hman tur. • A zar tliak leh hnip chu paih fai zel tur. • Thlai chu hrisel taka enkawl tur.
	Vegetative stage		• Gibberellins (10ppm) chu a rah khal that nan te, a rawng insiam nan te kah tur. • Thlai in tui tha taka an hmuh theih nan drip irrigation hman tur. • Ser rah tla hi ser kung khatah vawi 2 a thleng thin a, hemi ven nan hian GA3, urea, benomyl leh carbendazim a hun takah pek tur, • Heng rannung blackfly(kolshi), citrus psylla, leaf miner, bark eating caterpillar, fruit sucking moth, mites, twing blight, gummosis, root rot leh collar rot te

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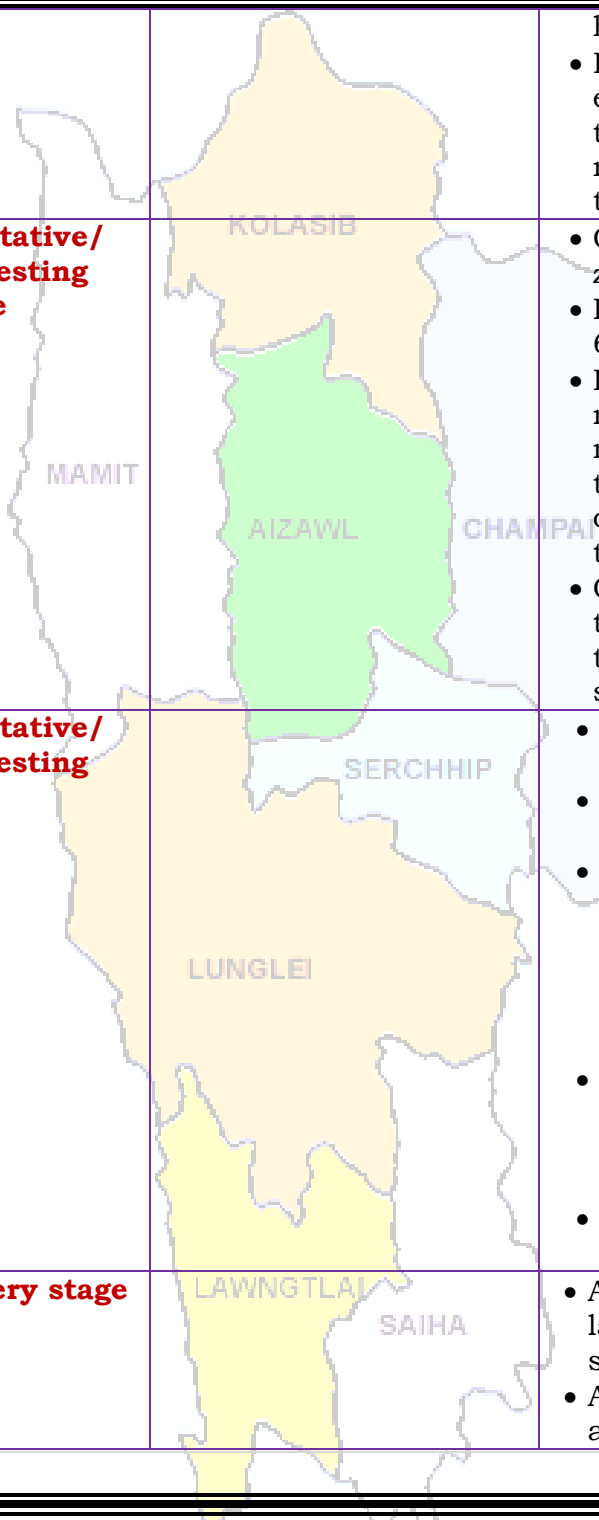
			hi ven tur. • Fungicide Carbendazim (0.1% emaw 1000ppm) a hun takah pek tur (thlakhat naah leh a seng hma ni 15 ah, chu chu vawi hnih kah tur).
Oil palm	**Vegetative/ harvesting stage**		• Oil palm kung bul chu tihfai a a zar thlak bawk tur. • Leitha chu thlai pakhatah 600:200:100g a pek tur. • Heng micro-nutrients zinc, copper, manganese, iron, boron leh molybdenum te hi an mamawh tawka pek tur, a huan pum a chhiat vek loh nan ven that bawk tur. • Oil palm rah chu a puitlin hunah te, a rawng inthlak hunah leh a thlum leh thur a pai tam hunah seng tur.
Balhla	**Vegetative/ harvesting**		• Balhla kung bul chu tihfai a a zar thlak bawk tur. • Leitha chu thlai pakhatah 600:200:100g a pek tur. • Heng micro-nutrients zinc, copper, manganese, iron, boron leh molybdenum te hi an mamawh tawka pek tur, a huan pum a chhiat vek loh nan ven that bawk tur. • A zar thlak ngun hian rannung leh natna lakah a veng a, chubak ah leitha a hek lova, thlai thar a ti tam bawk ani. • A rah chu a puitlin hunah leh a rawng eng a nih hunah seng tur.
Sapthei	**Nursery stage**		• A chi chu a rah hmin tha atanga lak ni se, ni 15-20 hnuah nursery siam tur. • A hnah 2/3 a rawn awm tan hnu ah polythene bag ah phunsawn

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			tur. • Polythene bag atangin thla ¾ hnu ah huan ah phun sawn leh tur. • Bawngek leitha chu khur khat ah 15g leh NPK 100:50:100g in kumkhat chhungin pek tur.
Lakhuihthei	**A par lai**		• A par chhuah hma nan chemical (Ethrel 10ppm+2% urea+0.04% sodium carbonate) chu pek tur. Tlai ah emaw thlaiin hnah 32 a neih hunah pek tur. • Chemical pek atangin ni 55-60 chhungin a par a chhuah thei ang. • Leitha chu thlai pakhat ah 60:50:60g a pek tur. • Thlai hnah leh a zar thi te chu paihfai a, hnim te tihfai bawk tur.
		Corm borer	• Carbofuran 3G chu hectare khatah 1.5kga.i a pek tur. Hemi hi a zung ah a tuina hnuhma a awmin pek tur
Cucurbitaceous crops	**A rah lai**		• Ni 7 danah tui chu tha taka pek tur. • Huan zau thamah chuan fruitfly leh pumpkin beetle ven nan carbaryl 0.2% leh malathion 0.15% chu chini tui litre khatah 10g a pawlhin kar khat danah leh a par tan tirhah leh a rah tan hunah kah tur. • Thlai pakhatah a par nasat lain urea chu 70g a pek tur.
Bawrhsaiabe	**A chin dan**	**1. Nursery tihfai a tui tlem pek tur.** **2. Phunsawn hnuah tui tha taka pek tur.**	• A kung bulthut ah hnim chheh darh tur. • A khat tawkin tui pek tur. • A tiak phunsawn te chu nil eh ruah lakah hliahkhuh tur.
		1. Aphids	• Surf tuiin thlai chu kah tur. • Heng insecticides Imidacloprid 200SL hi tui litre khatah 0.25ml in

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			emaw Dimethoate 30% EC hi tui litre 10 ah 7ml a kah tur
		2. Flea beetle	• Pangang tui leh a puitling te chu a kung atangin thin thlak tur. • Heng insecticides Imidacloprid 200SL hi tui litre khatah 0.25ml in emaw Dimethoate 30% EC hi tui litre 10 ah 7ml a kah tur.
		3. Epilachna beetle	• A hnah a pangang leh a tui awm chu paihfai tur. • Methyl parathion 0.5% emaw Dimethoate 0.3% a kah tur.
		4. Leaf hopper	• Heng insecticides Imidacloprid 200SL hi tui litre khatah 0.25ml in emaw Dimethoate 30% EC hi tui litre 10 ah 7ml a kah tur.
		Bacterial wilt	• Huan chu fai taka dah a, thlai damlo te chu paihfai bawk tur. • Thlai damlo enkawl nan copper fungicide (2% Bordeaux mixture) a kah tur.bacterial witl chu root knot nematodes tam naah a awm thin a, hemi nematodes control hian bacterial wilt hi a veng thei. • Streptocycline sulphate chu tui litre khatah 0.3g leh Blitox 50 chu tui litre 15 ah 5g a pek tur.
		Damping off	• Thlai chi chu kg khatah Thiram 3g emaw Trichoderma viride4g+Metalaxyl 4g (Apron) a chiah tur. • Bordeaux mixture 1% emaw 2g Captan emaw 3 copper oxychloride chu tui litre khatah pawlhin a chin atanga ni 10-15 ah leih tur.
		Leaf spot and leaf blotch	• Dithane M-45 chu tui litre khatah 2.5g emaw Carbendazim 1g chu tui litre khatah pawlhin karkhat danah vawi 2/3 kah tur. • Leaf spot tan Blitox 3g chu tui litre

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			khata pawlhin kah tur.
		Leaf spot leh leaf blotch	• Tui litre khatah Dithane M-45 chu 2.5g emaw Bavistin chu 1g a pawlhin karkhat danah vawi 2/3 kah thin tur. • Leaf spot ah chuan tui litre khatah Blitox chu 3g pawlh a kah thin tur.
French bean	**A par lai**		• Bean hnah, a tang ro leh hnim te chu paihfai vek tur. • Lei chu boruak kal that nan laihphut thin tur. • A chin atanga ni 20-25 ah bean kung chu mau in a zamna siam tur.
		Blister beetle	• Rannung ho chu mankhawmin thah vek tur. • Cypermethrin 2g chu tui litre khata pawlhin kah thin tur
Bawkbawn	**A chin dan**		• Balu leh leitha chu lei nen a chawhpawlh hnu in 75-100cm a zau ah a phunna tur siam tur. A chinna lai chu Blue copper 100g tui litre 40 ah emaw formaldehyde nen a pawlhin leih tur. • A chi chu 5cm a inhlat a tuh in lei pangngai a vur leh tur.
Tomato	**A chin dan**		• Nursery tur chu lei dip tha darh leh tlema pawng tur (0.8m a zau leh 15cm a sei ni se). • Leitha 10kg leh bawngek leitha 15:15:15 leh carbofuran 2.5g chawhpawlh pek tur.
		Aphids	• Surf tuiin thlai chu kah tur. • Heng insecticides Imidacloprid 200SL hi tui litre khatah 0.25ml in emaw Dimethoate 30% EC hi tui litre 10 ah 7ml a kah tur.
		Epilachna beetle	• Methyl parathion 0.5% emaw Dimethoate 0.3% a kah in flea beetle a veng thei

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Buh	**Nursery stage**	**Pre kharif rice**	• A chi tha leh khat tha chauh hman tur. • Tui litre 10 ah chi (salt) 250g pawlhin chutah chuan chiah tur. • Bavistin 50WP @0.1% chu tui litre khatah 2g a pawlhin a chi chu chiah tur.
		Raised bed method	• A chin na tur chu 10m a sei ni se, 1.25m a zau leh tui luanna tur 20-30cm a zau siam tur. Hei hian a chi kal ral mai mai tur a veng. • Leitha pek hnu ah a chi damdawi a chiah te chu theh tur.
Vaimim	**A chin dan**		• Lei chu vawi 2/3 laihphut phawt tur. • A chi chu a line indawt a chin tur • A chi chu kg khatah Thiram 4g a chiah tur. • Hectare khatah buh chi chu 20-25kg hman tur. • Bawngek leitha chu hectare khatah 5-10t chu 80:60:40kg N, P2O5 leh K20 hman tur. Vaimim chin hma in lei nen tihpawlh tur. Nitrogen chu a dose chanve in a chin hnu ah pek tur, a bang 25% chu a hnu thlakhat ah leh a dang 25% chu a par hunah pek tur.
Sawhthing leh Aieng	**Land preparation**		• Thlai hnah, a tang ro leh hnim te chu paihfai vek tur. • Lei chu boruak kal that nan laihphut thin tur. • Nitrogen leitha chu an mamawh taw kanga pek tur.
		Thrips	• Roger emaw Monocrophos chu tui litre khatah 2.5ml a pawlhin kah tur.
		Scales	• Quinalphos emaw Monocrotophos chu tui litre khatah 2.5ml a

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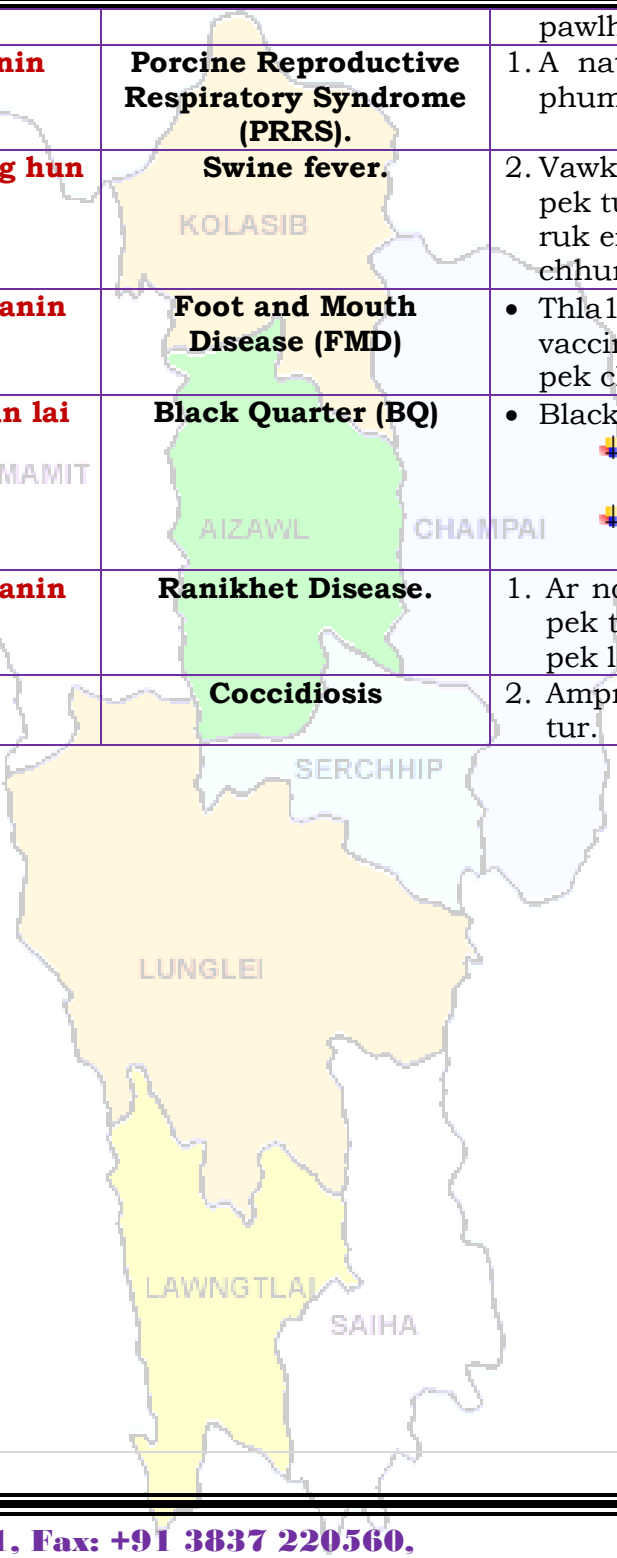
			pawlhin kah tur.
Vawk	**Kumtluanin**	**Porcine Reproductive Respiratory Syndrome (PRRS).**	1. A natna vei vawk te chu thah a phum tur a ni.
	A puitling hun	**Swine fever.**	2. Vawk thla hnih a nihin SF vaccine pek tur a ni a, he vaccine hi thla ruk emaw kumtluanin pek chhunzawm tur
Bawng	**Kumtluanin**	**Foot and Mouth Disease (FMD)**	• Thla16 a upa an rih in FMD vaccine pek tur a nia, thla 6 danah pek chhunzawm tur a ni.
	A naupan lai	**Black Quarter (BQ)**	• Black Quarter Vaccine (BQ) ✚ Thla ruk an tlin hunah vaccine lak tan tur. ✚ Kumkhat hnu ah vaccine pek leh tur.
Ar	**Kumtluanin**	**Ranikhet Disease.**	1. Ar note an pian hlimin F_1 vaccine pek tur a nia an puitlin hunah R_2B pek leh tur a ni.
		Coccidiosis	2. Amprolium emaw coccidiostat pek tur.



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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: Lawngtlai **Period:** 15- 19 August, 2015

Bulletin No: -544/2015/ Bulletin/English **Date of issue:** 14th August, 2015

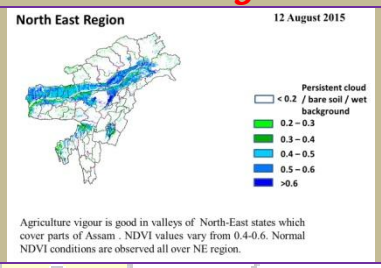
Parameters	15.08.2015	16.08.2015	17.08.2015	18.08.2015	19.08.2015
Rainfall (mm)	4	6	7	9	23
Max Temp (oC)	31	30	29	28	25
Min Temp (oC)	21	22	21	21	21
Cloud Coverage	Partially clear	Mainly cloudy	Partially clear	Mainly cloudy	Mainly cloudy
Max RH (%)	96	96	96	95	96
Min RH (%)	60	69	65	71	84
Wind Speed (KmpH)	4	4	6	6	6
***Wind Direction**	E	S-E	S-E	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 MONSOON- July 1-31, 2015 (*Percent of deviation from normal in parenthesis*)

Aizawl- 412.50mm (341.8mm)	Champhai- 105.47mm (250.30mm)	Saiha- 307.78 mm (87.2mm)	Kolasib- 331.10mm (380.9mm)
Lawngtlai-291.28mm (285.5mm)	Lunglei-326.52mm (186.21mm)	Mamit-204.84mm (442.80mm)	Serchhip-189.57mm (25.9mm)

Weather summary of the past three days	Weather forecast valid from 15th August, 2015 To 19th August, 2015.
	There is a chance of moderate to light rainfall during the next 5 days. The maximum and minimum temperatures for the next 5 days may range for 25-31^{0}C and 21-22^{0}C. Maximum relative humidity is expected in the range of 95-96% and minimum may from 60-84%. Wind direction would be easterly to southeasterly with the wind speed of 4-6 km per hour. Mainly cloudy sky will prevail during the next five days. ***Weekly cumulative rainfall:*** **49.0 mm**

NDVI for Mizoram		
		NDVI for Mizoram is less than normal NDVI. Value shown that NDVI is zero. So, it represents "Bare Soil".

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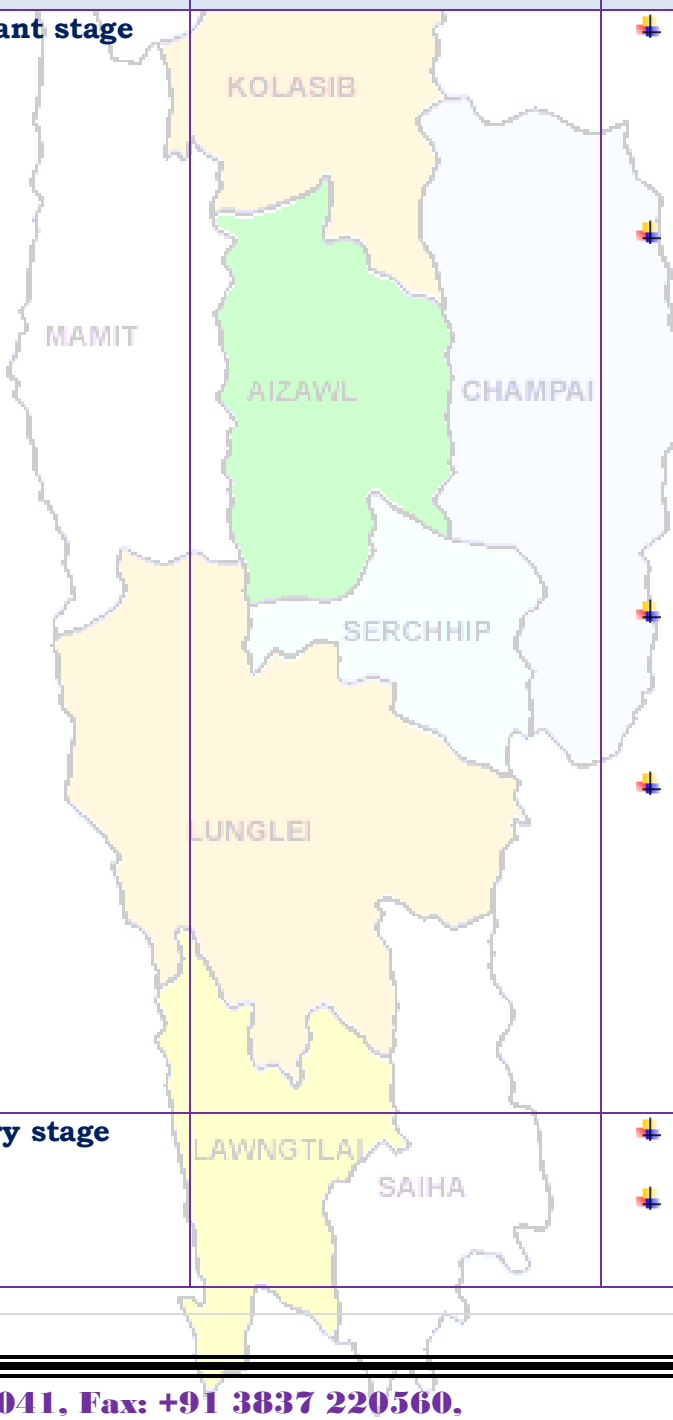
Main Crop/ Animal /Fisheries	Stage	Cultural practices/ Pest/ Diseases	Agricultural / Horticultural/ animal husbandry advisories
Khasi Mandarin and acid lime	**Transplant stage**		▪ Well rotten FYM @ 500g/pit is applied at 15-20 days before planting along with 12 g each of N and K2O/plant and 4 g of P2O5/plant. ▪ This root stock has proved very successful for raising some sweet orange and mandarin orange varieties This root stock is resistant to Tristeza virus but highly susceptible to exocortis. It is also recommended for this region till any other rootstock is found to be promising. ▪ Citrus plantations are seldom put under planned cultivation, and plantations are always kept under sod or raised as mixed crops ▪ Layered plants about one year old, are also selected in case of lemon, lime etc. Vigorous plants are always preferred for better growth. While placing the plants in the pits care should be taken that bud union remains 12-15 cm above the ground level.
Oil plam	**Nursery stage**		▪ Remove the exocarp and mesocarp with knife. ▪ Dry the seeds on concrete or wooden floors under shade for 2 days and stored for 3-9

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		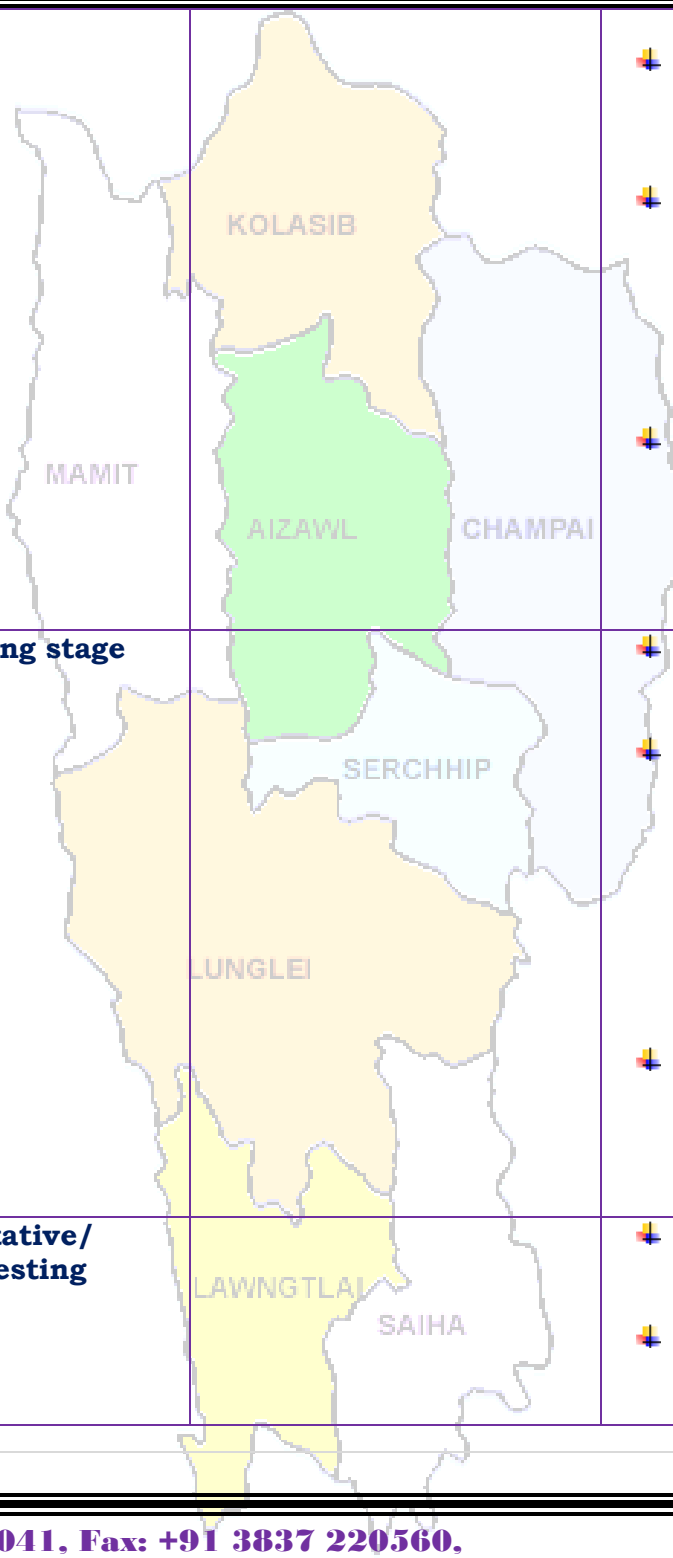	months. • Seeds are soaked in water for 5 days (changing the water daily) and spread out to dry for 24 hours. • Dried seeds are put in 250 gauge and 23 X 13 cm size polythene bags filled with top soil, sand and well decomposed cattle manure in equal proportions and placed for germination. • Germination (90-95 %) starts 10-12 days. Apply fertilizer mixture containing 15:15:6 of NPK @ 8 g in 5 litres of water for 100 seedlings
Oil plam	**Flowering stage**		• 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).

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		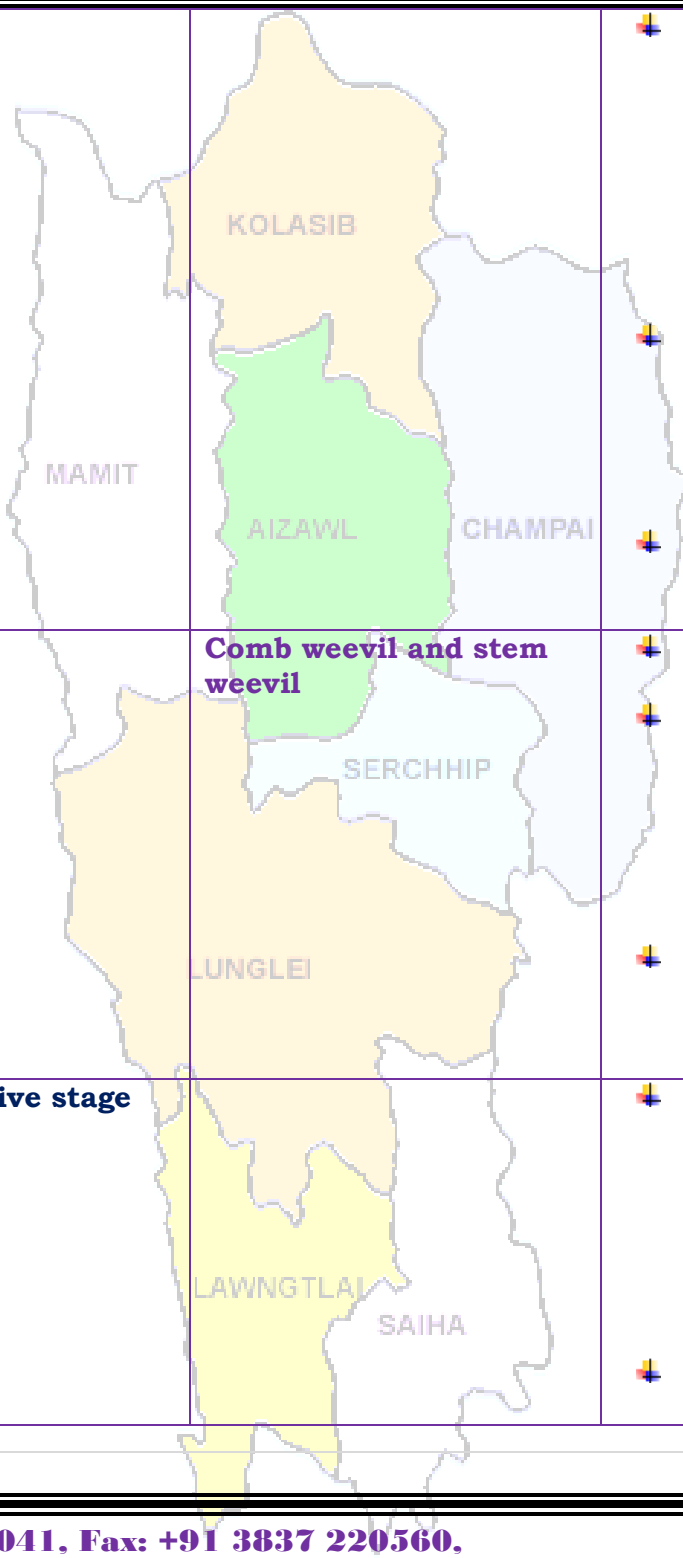	▪ Apply micro-nutrients viz. zinc, copper, manganese, iron, boron and molybdenum are required in ample quantities for supplying nutrients and also reduce serious disorders which may lead to decline of the whole orchard. ▪ Pruning on a regular basis removes unwanted or a sucker, keep production mats in optimum condition, saves fertilizer, reduces pest and disease. ▪ Fruits are harvested when they attain full size, develop attractive yellow colour.
		Comb weevil and stem weevil	▪ Applications of neem powder effectively controlled weevils. ▪ Application of 60 to 100 g of neem seed powder or neem cake at planting and then at 4 months intervals significantly diminished pest damage and increased yields. ▪ Application of over 100 g or neem oil was phytotoxic (harmful to plants) and uneconomical.
Passion Fruit	**Vegetative stage**		▪ Except for a space of about 60-90cm radius around the base of each vine which has to be kept clean weeded at all times, the rest of the plantation maybe allowed to have an undergrowth of grass. ▪ Application of 217gms, 312 gms, 167gms of Urea, Super

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		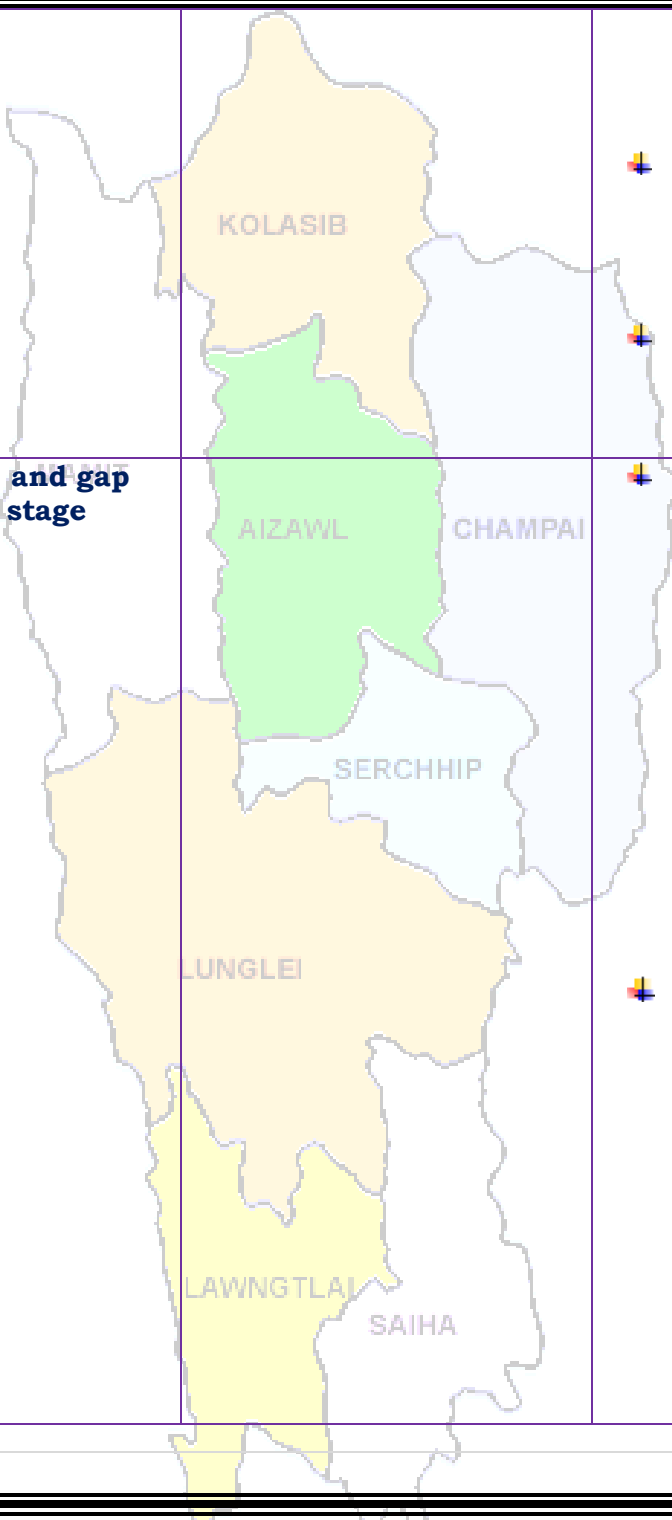	and Potash respectively per vine annually in splits for the purple and the yellow variety. For the Kavari variety 238.7gm, 375gms,167gms of Urea super, Potash respectively per vine per year in split doses. **Trellies making** : Establishment of proper and durable frame work for the purpose is very necessary.
Pineapple	**Planting and gap filling stage**		Double row planting is done by alternating two rows of crops by a wider mound or path. For optimum plant density, particularly in the hills. It is advisable to space two rows of crops at a distance of 60 cm, followed by a mound or flat path of 90 cm width. Within the row plants are spaced 30 cm apart. In this way 43,500 plants can be accommodated in one hectare of land. The pineapple suckers are allowed to dry at least for 25-30 days before planting. In fact, if fresh suckers are planted in moist soil, or if more moisture is available as in rainy season, they may begin to decay. To facilitate better rooting, it is necessary to strip off the scale leaves from the basal portions of the planting materials. After removing

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		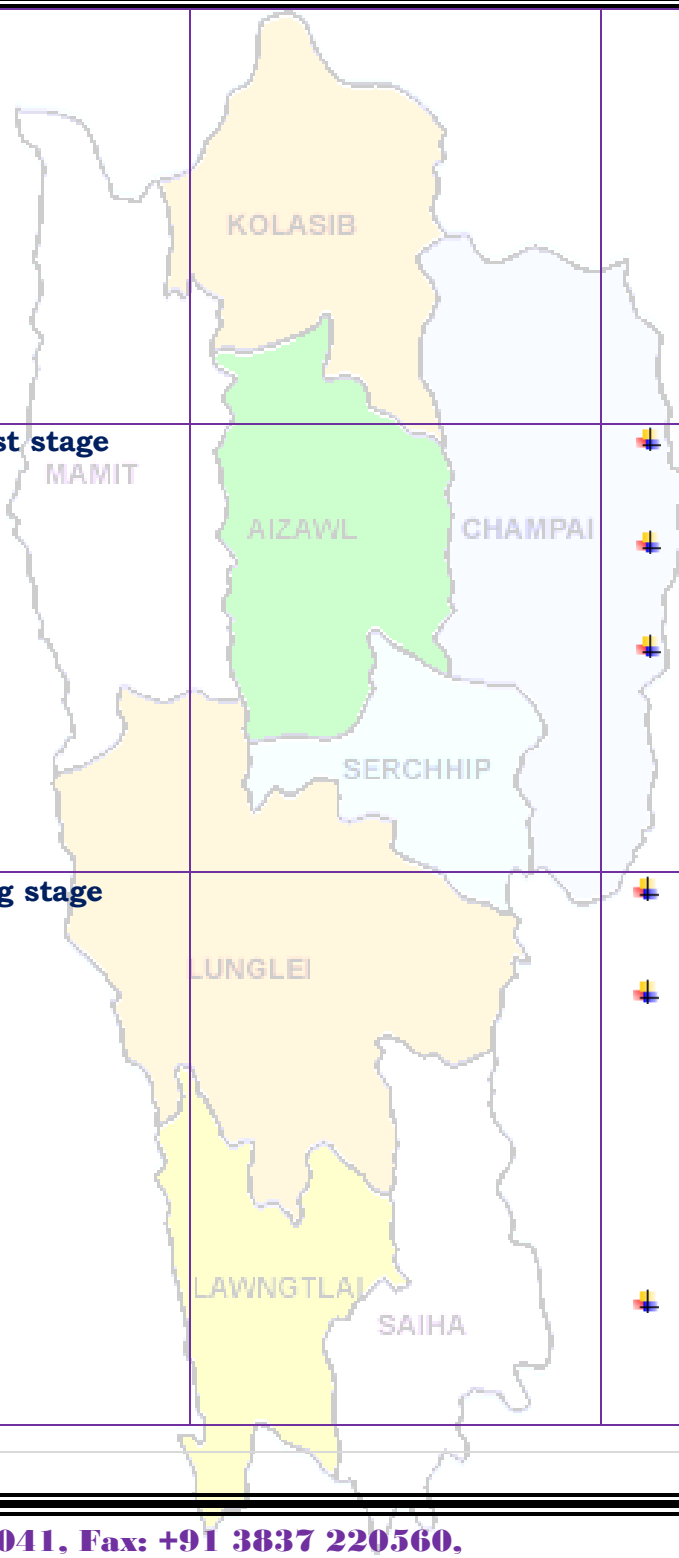	scaly leaves, the planting material should be treated with Difolation (0.2%) solution to avoid heart rot disease. Planting is usually done during monsoon, preferably in the beginning or later part of monsoon such as in August. Periods of heavy rainfall like July should be avoided for pineapple plantation.
Colocasia	**Harvest stage**		✦ Colocasia becomes ready for harvest five to six months after planting. ✦ The mother corms and side tubers are separated after harvest. ✦ The side tubers to be used as planting materials are usually separated from the mother corm and stored. Keep seed tuber in sand spread over the floor to avoid rotting.
French bean	**sowing stage**		✦ Land is ploughed to a fine tilth and divided into plots of convenient size. ✦ Ridges and furrows are prepared by ploughing after a basal dose application of farmyard manure. Field is irrigated once and seeds are sown under optimum moisture condition on side of ridges 2-3 days after irrigation. ✦ Spacing and seed rate vary with varieties. Early varieties are sown at a spacing of 45-60 cm x 10-15 cm and seed

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		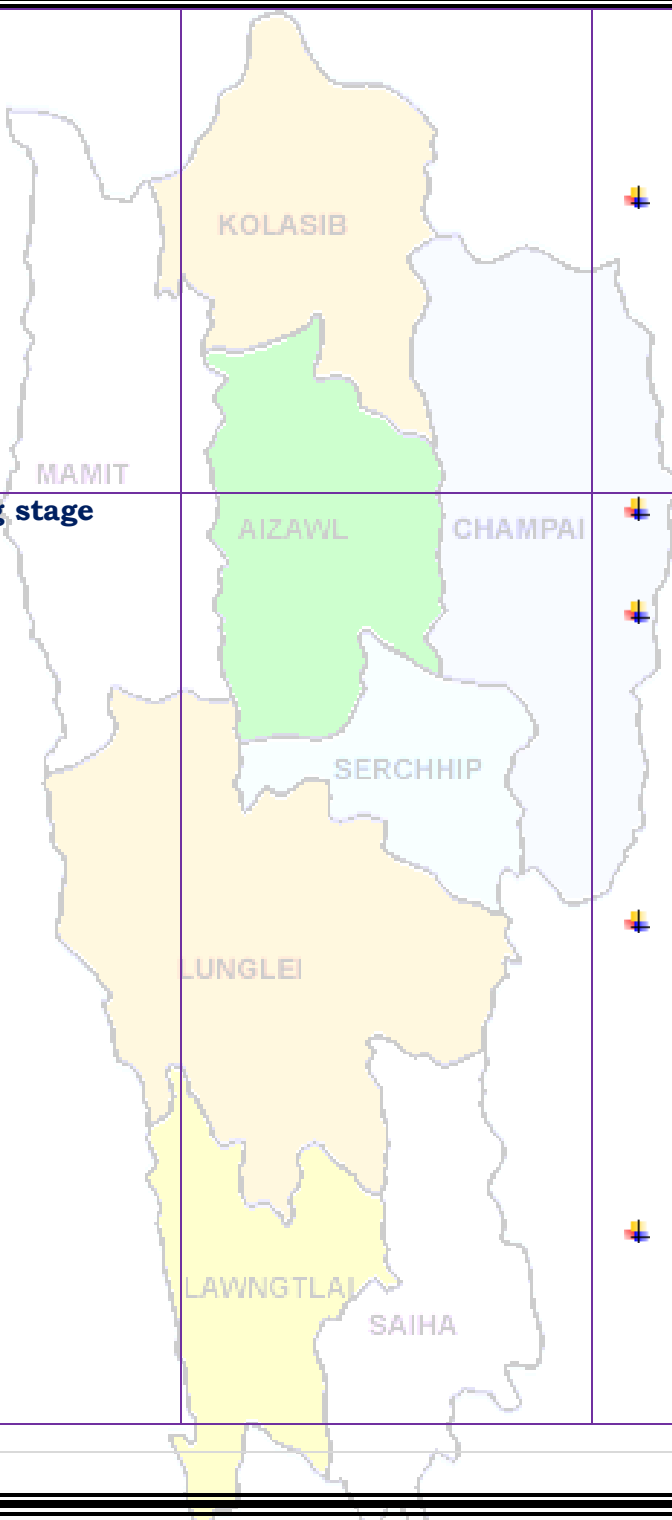	rate required is 80-90 kg / ha. Pole types are sown at 1.0 m apart in hills @ 3-4 plants / hill and seed rate is much less (25-30 kg/ha.). In addition to 20-25 t. of farmyard manure, 50 kg N, 75 kg, P2O5 and 75 kg K2O are recommended. Half of N along with full P and K should be applied as basal dose at the time of making ridges and furrows or one or two weeks after germination.
Cowpea	**sowing stage**		Land is ploughed to a fine tilth and divided into plots of convenient size. Ridges and furrows are prepared by ploughing after a basal dose application of farmyard manure. Field is irrigated once and seeds are sown under optimum moisture condition on side of ridges 2-3 days after irrigation. Spacing and seed rate vary with varieties. Early varieties are sown at a spacing of 45-60 cm x 10-15 cm and seed rate required is 80-90 kg / ha. Pole types are sown at 1.0 m apart in hills @ 3-4 plants / hill and seed rate is much less (25-30 kg/ha.). In addition to 20-25 t. of farmyard manure, 50 kg N, 75 kg, P2O5 and 75 kg K2O are recommended. Half of N along with full P and K should be applied as basal

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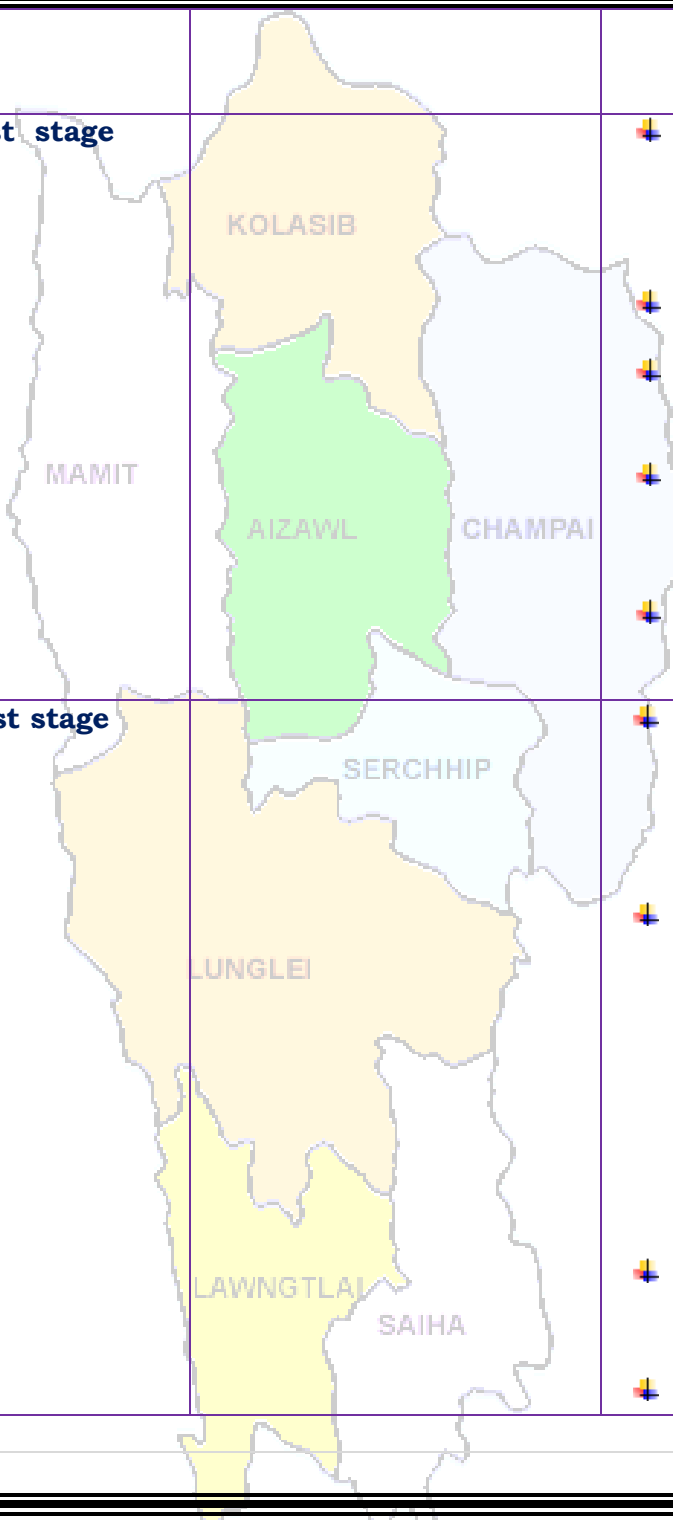
			dose at the time of making ridges and furrows or one or two weeks after germination.
Brinjal	**Harvest stage**		✦ Brinjal fruits are harvested at immature stage after attaining full size, but before loosing its glossy appearance. ✦ Dullness of fruit indicates over maturity. ✦ Usually fruits are harvested along with its stalk with a slight twist by hand. ✦ The harvested fruits are graded and packed in baskets or in loose gunny bags. ✦ Care should be taken to remove the fruits affected by Phomopsis blight.
Tomato	**Harvest stage**		✦ Immature: Before the seeds fully developed and before the jelly-like substances surrounding the seeds were formed. ✦ Mature green: The fully grown fruit with a brownish ring at stemscar. Removal of calyx, light green colour at blossom end changed yellowish green and seeds surrounded by jelly-like substances filling the seed cavity. ✦ Turning: ¼ of the surface at blossom end shows pink (breaker stage). ✦ Pink: ¾ of the surface shows

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			pink Hard ripe: Nearly all red or pink with firm flesh Over ripe: Fully coloured and soft.
Rice	**Panicle initiation stage**	**Kharif Rice**	Apply split dose of nitrogenous fertilizer. Use cracker or shining rope to resist from the attack of birds. Remove excess water from the field and make a drain in four corner of the field Planning for second crop like toria or pea.
Maize	**Harvest stage**		Cobs which are to be utilized as grain should be harvested when the grains are almost dry or containing roughly 20 % moisture. The appearance in the grains of composite and high yielding varieties however may be misleading as grains become dry while the stalk and leaves are still green. The cobs are removed from the standing crop and sun dried before shelling, otherwise retained in their jackets, if kept for seed or to be consumed or utilized at a later stage.
Kharif pulses (Green gram, Black gram and Rajma)	**flowering stage**		One or two hand hoeing and weeding should be done, depending upon soil type and extent of weed infestation. Weeds can also be controlled effectively by the application

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			of TOK-E-25 at the rate of 10 ml dissolved in 1 liter of water as pre-emergence spray. ➢ Provide irrigation in dry condition or dry spell. ➢ Provide 2% urea solution for better growth.
Ginger and turmeric	**Vegetative stage**		➢ Remove unwanted plant near base of the plant and cut dead branches. ➢ Pre-emergence application of Atrazine (Atratraf 50 wp, Gesaprim 500 fw) @ of 1.0-1.5 kg a.i ha-1in 600 litre water, Alachlor (Lasso) @ 2-2.5 kg a.i ha-1, Metolachlor (Dual) @ 1.5-2.0 kg a.i ha-1, Pendamethalin (Stomp) @ 1-1.5 kg a.i. ha-1large effective way for control of many annual and broad leaved weeds. ➢ Earting up of soil along with fertilizer mixture.
		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 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

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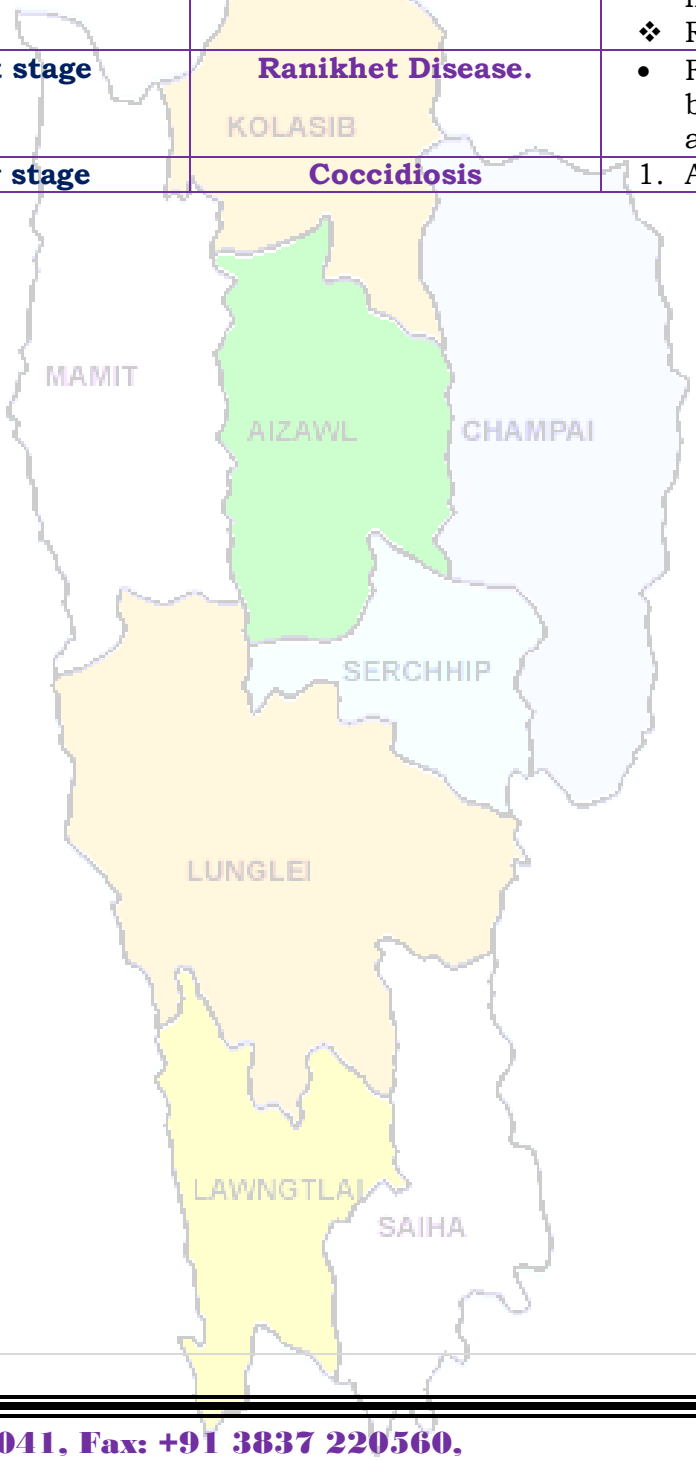
			(BQV). ❖ Primary vaccination 6 month or above ❖ Revaccination annually
Poultry	**Adult stage**	**Ranikhet Disease.**	• F1 vaccine at (1-6) days of birth and R_2B vaccine for adult birds.
	Early stage	**Coccidiosis**	1. Amprolium or coccidiostat



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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: Lawngtlai **Period:** 15- 19 August, 2015

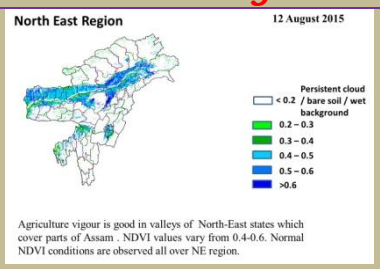
Bulletin No: -544/2015/ Bulletin/Mizo **Date of issue:** 14th August, 2015

Parameters	15.08.2015	16.08.2015	17.08.2015	18.08.2015	19.08.2015
Rainfall (mm)	4	6	7	9	23
Max Temp (oC)	31	30	29	28	25
Min Temp (oC)	21	22	21	21	21
Cloud Coverage	Partially clear	Mainly cloudy	Partially clear	Mainly cloudy	Mainly cloudy
Max RH (%)	96	96	96	95	96
Min RH (%)	60	69	65	71	84
Wind Speed (KmpH)	4	4	6	6	6
*Wind Direction	E	S-E	S-E	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 MONSOON- July 1-31, 2015 (*Percent of deviation from normal in parenthesis*)

Aizawl- 412.50mm (341.8mm) Lawngtlai-291.28mm (285.5mm)	Aizawl- 412.50mm (341.8mm) Lawngtlai-291.28mm (285.5mm)	Aizawl- 412.50mm (341.8mm) Lawngtlai-291.28mm (285.5mm)	Aizawl- 412.50mm (341.8mm) Lawngtlai-291.28mm (285.5mm)

Ni thum kaltha sik leh sa dinhmun tlangpui	August 15, 2015 atanga August 19, 2015 sik leh sa dinhmun hmuhlawk dan
	Ni 5 lo awm turah hian ruahtui a tlak beisei a ni. Khua a lum lai berin 25-31^{0}C a ni ang a. A vawh lai ber in 21-22^{0}C ni tur ah beisei a ni.RH san lai berin 95-96% leh a hniam lai berin 60-84% ni tur a beisei niin. Thli tleh dan kawng zawng chu chhimchhak lam atangin a nat zawng chu darkar 4-6 km ni tur a beisei niin. Ni nga chhung lo awm tur ah hian chhum tlem a lan beisei a ni. ***Weekly cumulative rainfall:*** **49.0mm**
NDVI for Mizoram and SPI	 NDVI for Mizoram is less than normal NDVI. Value shown that NDVI is zero. So, it represents "Bare Soil".

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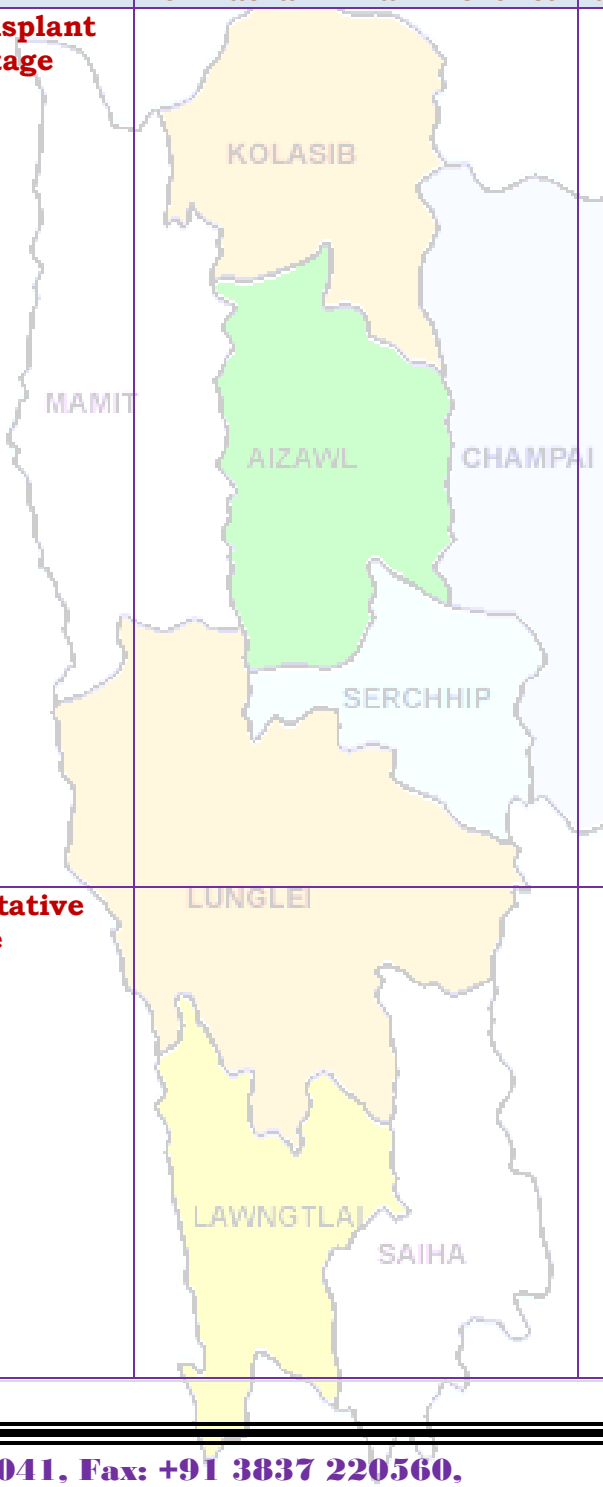
Thlai/ ran /sangha	Spat zawng	Hmalakna tur/ rannung leh natna hrik awm thei te	Agricultural/Horticultural/ animal husbandry atana thurawn
Khasi Mandarin and acid lime	**Transplant stage**		• A chi: A chi chu lakchhuah anih veleh nurseey ah a thuk zawng 1.5-2cm leh 10X5cm a inhlat a chin tur. A rawn chawr chu polythene bag ah hnah 4-6 a neih hunah phun sawn tur. • Nursery chu rannung leh a damlohna dang laka ven nan ser huan atanga meter 500 a hla ah dah tur. • Lei, balu leh bawngek leitha chu a inzat theuha pawlhin pek tur. • Bawngek leitha chu thlai pakhat ah 600:200:100g a pek tur. • Certified thlai chi chauh hman tur. • Ser kung bula tuitling chu paihfai vek tur. • A tiak inchen tlang chauh phun atan hman tur. • A zar tliak leh hnip chu paih fai zel tur. • Thlai chu hrisel taka enkawl tur.
	Vegetative stage		• Gibberellins (10ppm) chu a rah khal that nan te, a rawng insiam nan te kah tur. • Thlai in tui tha taka an hmuh theih nan drip irrigation hman tur. • Ser rah tla hi ser kung khatah vawi 2 a thleng thin a, hemi ven nan hian GA3, urea, benomyl leh carbendazim a hun takah pek tur, • Heng rannung blackfly(kolshi), citrus psylla, leaf miner, bark eating caterpillar, fruit sucking

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		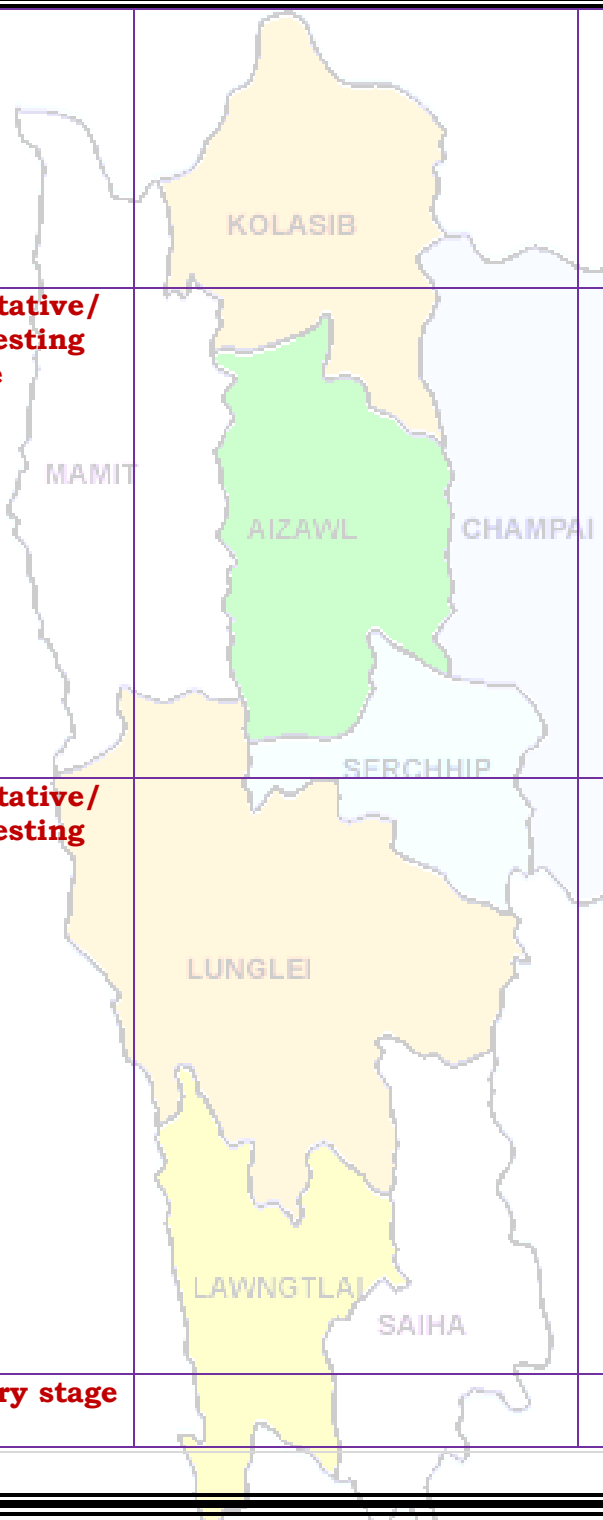	moth, mites, twing blight, gummosis, root rot leh collar rot te hi ven tur. • Fungicide Carbendazim (0.1% emaw 1000ppm) a hun takah pek tur (thlakhat naah leh a seng hma ni 15 ah, chu chu vawi hnih kah tur).
Oil palm	**Vegetative/ harvesting stage**		• Oil palm kung bul chu tihfai a a zar thlak bawk tur. • Leitha chu thlai pakhatah 600:200:100g a pek tur. • Heng micro-nutrients zinc, copper, manganese, iron, boron leh molybdenum te hi an mamawh tawka pek tur, a huan pum a chhiat vek loh nan ven that bawk tur. • Oil palm rah chu a puitlin hunah te, a rawng inthlak hunah leh a thlum leh thur a pai tam hunah seng tur.
Balhla	**Vegetative/ harvesting**		• Balhla kung bul chu tihfai a a zar thlak bawk tur. • Leitha chu thlai pakhatah 600:200:100g a pek tur. • Heng micro-nutrients zinc, copper, manganese, iron, boron leh molybdenum te hi an mamawh tawka pek tur, a huan pum a chhiat vek loh nan ven that bawk tur. • A zar thlak ngun hian rannung leh natna lakah a veng a, chubak ah leitha a hek lova, thlai thar a ti tam bawk ani. • A rah chu a puitlin hunah leh a rawng eng a nih hunah seng tur.
Sapthei	**Nursery stage**		• A chi chu a rah hmin tha atanga lak ni se, ni 15-20 hnuah

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			nursery siam tur. • A hnah 2/3 a rawn awm tan hnu ah polythene bag ah phunsawn tur. • Polythene bag atangin thla ¾ hnu ah huan ah phun sawn leh tur. • Bawngek leitha chu khur khat ah 15g leh NPK 100:50:100g in kumkhat chhungin pek tur.
Lakhuihthei	**A par lai**		• A par chhuah hma nan chemical (Ethrel 10ppm+2% urea+0.04% sodium carbonate) chu pek tur. Tlai ah emaw thlaiin hnah 32 a neih hunah pek tur. • Chemical pek atangin ni 55-60 chhungin a par a chhuah thei ang. • Leitha chu thlai pakhat ah 60:50:60g a pek tur. • Thlai hnah leh a zar thi te chu paihfai a, hnim te tihfai bawk tur.
		Corm borer	• Carbofuran 3G chu hectare khatah 1.5kga.i a pek tur. Hemi hi a zung ah a tuina hnuhma a awmin pek tur
Cucurbitaceous crops	**A rah lai**		• Ni 7 danah tui chu tha taka pek tur. • Huan zau thamah chuan fruitfly leh pumpkin beetle ven nan carbaryl 0.2% leh malathion 0.15% chu chini tui litre khatah 10g a pawlhin kar khat danah leh a par tan tirhah leh a rah tan hunah kah tur. • Thlai pakhatah a par nasat lain urea chu 70g a pek tur.
Bawrhsaiabe	**A chin dan**	**1. Nursery tihfai a tui tlem pek tur.** **2. Phunsawn hnuah tui**	• A kung bulthut ah hnim chheh darh tur.

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		tha taka pek tur.	• A khat tawkin tui pek tur. • A tiak phunsawn te chu nil eh ruah lakah hliahkhuh tur.
		1. Aphids	• Surf tuiin thlai chu kah tur. • Heng insecticides Imidacloprid 200SL hi tui litre khatah 0.25ml in emaw Dimethoate 30% EC hi tui litre 10 ah 7ml a kah tur
		2. Flea beetle	• Pangang tui leh a puitling te chu a kung atangin thin thlak tur. • Heng insecticides Imidacloprid 200SL hi tui litre khatah 0.25ml in emaw Dimethoate 30% EC hi tui litre 10 ah 7ml a kah tur.
		3. Epilachna beetle	• A hnah a pangang leh a tui awm chu paihfai tur. • Methyl parathion 0.5% emaw Dimethoate 0.3% a kah tur.
		4. Leaf hopper	• Heng insecticides Imidacloprid 200SL hi tui litre khatah 0.25ml in emaw Dimethoate 30% EC hi tui litre 10 ah 7ml a kah tur.
		Bacterial wilt	• Huan chu fai taka dah a, thlai damlo te chu paihfai bawk tur. • Thlai damlo enkawl nan copper fungicide (2% Bordeaux mixture) a kah tur.bacterial witl chu root knot nematodes tam naah a awm thin a, hemi nematodes control hian bacterial wilt hi a veng thei. • Streptocycline sulphate chu tui litre khatah 0.3g leh Blitox 50 chu tui litre 15 ah 5g a pek tur.
		Damping off	• Thlai chi chu kg khatah Thiram 3g emaw Trichoderma viride4g+Metalaxyl 4g (Apron) a chiah tur. • Bordeaux mixture 1% emaw 2g Captan emaw 3 copper

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			oxychloride chu tui litre khatah pawlhin a chin atanga ni 10-15 ah leih tur.
		Leaf spot and leaf blotch	• Dithane M-45 chu tui litre khatah 2.5g emaw Carbendazim 1g chu tui litre khatah pawlhin karkhat danah vawi 2/3 kah tur. • Leaf spot tan Blitox 3g chu tui litre khata pawlhin kah tur.
		Leaf spot leh leaf blotch	• Tui litre khatah Dithane M-45 chu 2.5g emaw Bavistin chu 1g a pawlhin karkhat danah vawi 2/3 kah thin tur. • Leaf spot ah chuan tui litre khatah Blitox chu 3g pawlh a kah thin tur.
French bean	**A par lai**		• Bean hnah, a tang ro leh hnim te chu paihfai vek tur. • Lei chu boruak kal that nan laihphut thin tur. • A chin atanga ni 20-25 ah bean kung chu mau in a zamna siam tur.
		Blister beetle	• Rannung ho chu mankhawmin thah vek tur. • Cypermethrin 2g chu tui litre khata pawlhin kah thin tur
Bawkbawn	**A chin dan**		• Balu leh leitha chu lei nen a chawhpawlh hnu in 75-100cm a zau ah a phunna tur siam tur. A chinna lai chu Blue copper 100g tui litre 40 ah emaw formaldehyde nen a pawlhin leih tur. • A chi chu 5cm a inhlat a tuh in lei pangngai a vur leh tur.
Tomato	**A chin dan**		• Nursery tur chu lei dip tha darh leh tlema pawng tur (0.8m a zau leh 15cm a sei ni se).

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			• Leitha 10kg leh bawngek leitha 15:15:15 leh carbofuran 2.5g chawhpawlh pek tur.
		Aphids	• Surf tuiin thlai chu kah tur. • Heng insecticides Imidacloprid 200SL hi tui litre khatah 0.25ml in emaw Dimethoate 30% EC hi tui litre 10 ah 7ml a kah tur.
		Epilachna beetle	• Methyl parathion 0.5% emaw Dimethoate 0.3% a kah in flea beetle a veng thei
Buh	**Nursery stage**	**Pre kharif rice**	• A chi tha leh khat tha chauh hman tur. • Tui litre 10 ah chi (salt) 250g pawlhin chutah chuan chiah tur. • Bavistin 50WP @0.1% chu tui litre khatah 2g a pawlhin a chi chu chiah tur.
		Raised bed method	• A chin na tur chu 10m a sei ni se, 1.25m a zau leh tui luanna tur 20-30cm a zau siam tur. Hei hian a chi kal ral mai mai tur a veng. • Leitha pek hnu ah a chi damdawi a chiah te chu theh tur.
Vaimim	**A chin dan**		• Lei chu vawi 2/3 laihphut phawt tur. • A chi chu a line indawt a chin tur • A chi chu kg khatah Thiram 4g a chiah tur. • Hectare khatah buh chi chu 20-25kg hman tur. • Bawngek leitha chu hectare khatah 5-10t chu 80:60:40kg N, P2O5 leh K20 hman tur. Vaimim chin hma in lei nen tihpawlh tur. Nitrogen chu a dose chanve

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			in a chin hnu ah pek tur, a bang 25% chu a hnu thlakhat ah leh a dang 25% chu a par hunah pek tur.
Sawhthing leh Aieng	**Land preparation**		• Thlai hnah, a tang ro leh hnim te chu paihfai vek tur. • Lei chu boruak kal that nan laihphut thin tur. • Nitrogen leitha chu an mamawh taw kanga pek tur.
		Thrips	• Roger emaw Monocrophos chu tui litre khatah 2.5ml a pawlhin kah tur.
		Scales	• Quinalphos emaw Monocrotophos chu tui litre khatah 2.5ml a pawlhin kah tur.
Vawk	**Kumtluanin**	**Porcine Reproductive Respiratory Syndrome (PRRS).**	1. A natna vei vawk te chu thah a phum tur a ni.
	A puitling hun	**Swine fever.**	2. Vawk thla hnih a nihin SF vaccine pek tur a ni a, he vaccine hi thla ruk emaw kumtluanin pek chhunzawm tur
Bawng	**Kumtluanin**	**Foot and Mouth Disease (FMD)**	• Thla16 a upa an rih in FMD vaccine pek tur a nia, thla 6 danah pek chhunzawm tur a ni.

	A naupan lai	**Black Quarter (BQ)**	• Black Quarter Vaccine (BQ)
			  Thla ruk an tlin hunah vaccine lak tan tur.
			  Kumkhat hnu ah vaccine pek leh tur.

Ar	**Kumtluanin**	**Ranikhet Disease.**	1. Ar note an pian hlimin F_1 vaccine pek tur a nia an puitlin hunah R_2B pek leh tur a ni.
		Coccidiosis	2. Amprolium emaw coccidiostat pek tur.

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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: 15- 19 August, 2015**

Bulletin No: -544/2015/ Bulletin/English **Date of issue: 14th August, 2015**

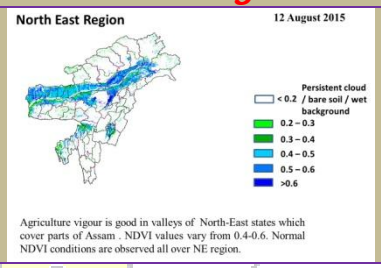
Parameters	15.08.2015	16.08.2015	17.08.2015	18.08.2015	19.08.2015
Rainfall (mm)	4	3	3	6	16
Max Temp (oC)	30	29	29	28	26
Min Temp (oC)	21	21	20	21	21
Cloud Coverage	Mainly cloudy	Mainly cloudy	Mainly cloudy	Mainly cloudy	Mainly cloudy
Max RH (%)	98	99	98	97	98
Min RH (%)	61	69	68	71	86
Wind Speed (KmpH)	3	2	4	4	5
***Wind Direction**	S-E	S-E	S-E	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 MONSOON- July 1-31, 2015 (*Percent of deviation from normal in parenthesis*)

Aizawl- 412.50mm (341.8mm)	**Champhai- 105.47mm (250.30mm)**	**Saiha- 307.78 mm (87.2mm)**	**Kolasib- 331.10mm (380.9mm)**
Lawngtlai-291.28mm (285.5mm)	**Lunglei-326.52mm (186.21mm)**	**Mamit-204.84mm (442.80mm)**	**Serchhip-189.57mm (25.9mm)**

Weather summary of the past three days	Weather forecast valid from 15th August, 2015 To 19th August, 2015.
	There is a chance of moderate to light rainfall during the next 5 days. The maximum and minimum temperatures for the next 5 days may range for 26-30^{0}C and 20-21^{0}C. Maximum relative humidity is expected in the range of 97-98% and minimum may from 68-86%. Wind direction would be southeasterly with the wind speed of 2-5 km per hour. Mainly cloudy sky will prevail during the next five days. ***Weekly cumulative rainfall:*** **32.0 mm**

NDVI for Mizoram		NDVI for Mizoram is less than normal NDVI. Value shown that NDVI is zero. So, it represents "Bare Soil".

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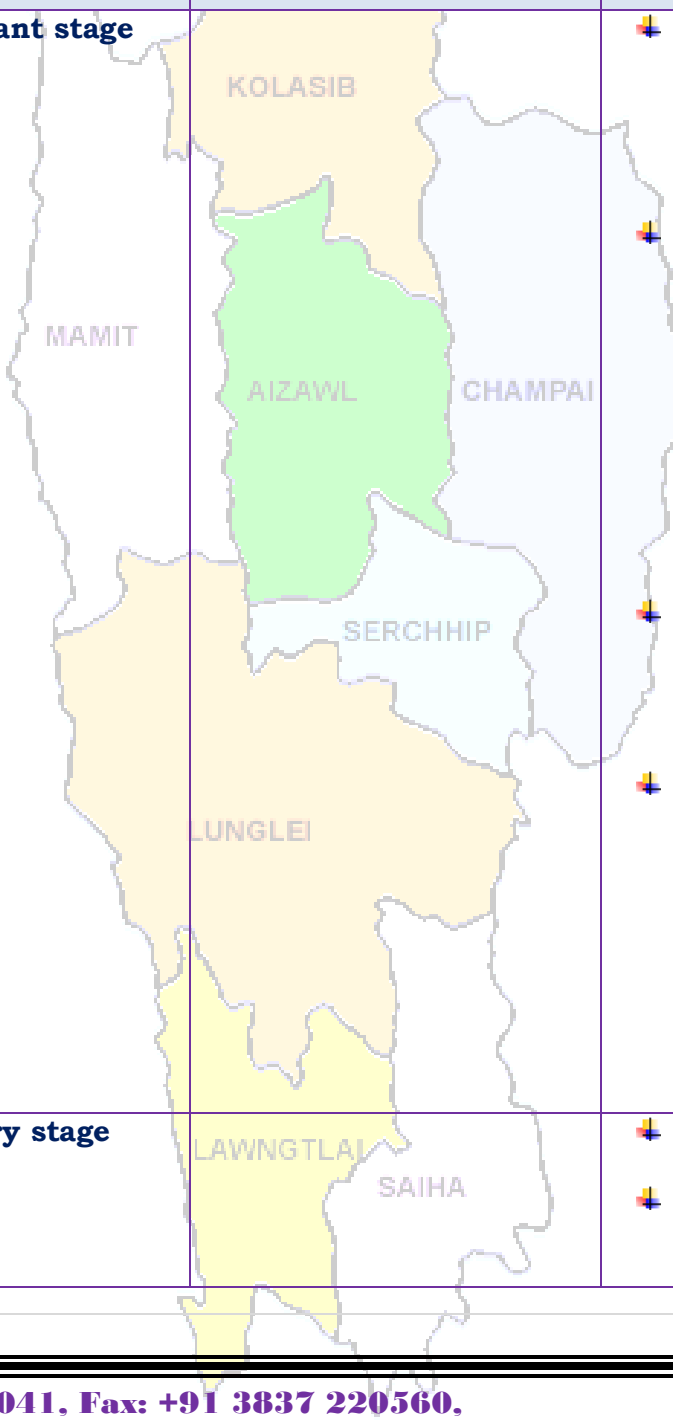
Main Crop/ Animal /Fisheries	Stage	Cultural practices/ Pest/ Diseases	Agricultural / Horticultural/ animal husbandry advisories
Khasi Mandarin and acid lime	**Transplant stage**		▪ Well rotten FYM @ 500g/pit is applied at 15-20 days before planting along with 12 g each of N and K2O/plant and 4 g of P2O5/plant. ▪ This root stock has proved very successful for raising some sweet orange and mandarin orange varieties This root stock is resistant to Tristeza virus but highly susceptible to exocortis. It is also recommended for this region till any other rootstock is found to be promising. ▪ Citrus plantations are seldom put under planned cultivation, and plantations are always kept under sod or raised as mixed crops ▪ Layered plants about one year old, are also selected in case of lemon, lime etc. Vigorous plants are always preferred for better growth. While placing the plants in the pits care should be taken that bud union remains 12-15 cm above the ground level.
Oil plam	**Nursery stage**		▪ Remove the exocarp and mesocarp with knife. ▪ Dry the seeds on concrete or wooden floors under shade for 2 days and stored for 3-9

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		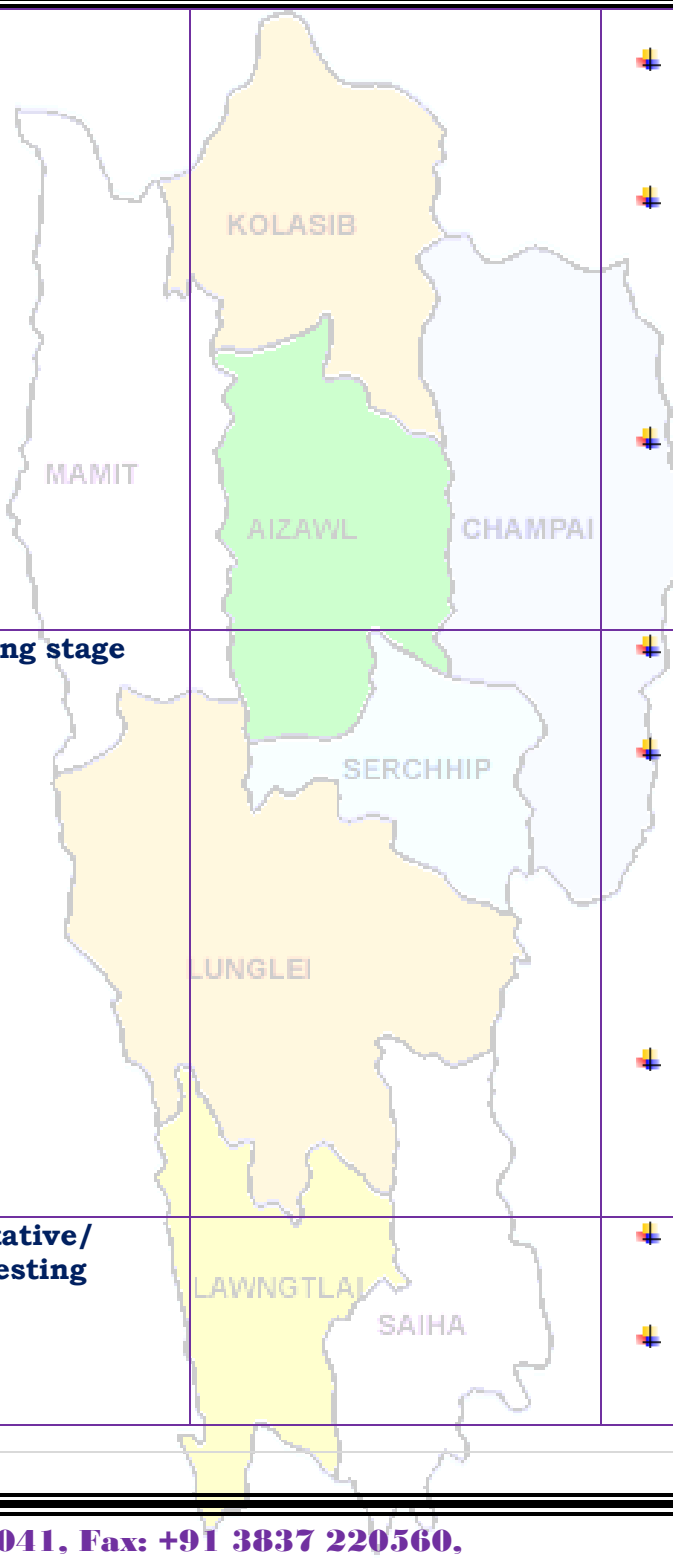	months. • Seeds are soaked in water for 5 days (changing the water daily) and spread out to dry for 24 hours. • Dried seeds are put in 250 gauge and 23 X 13 cm size polythene bags filled with top soil, sand and well decomposed cattle manure in equal proportions and placed for germination. • Germination (90-95 %) starts 10-12 days. Apply fertilizer mixture containing 15:15:6 of NPK @ 8 g in 5 litres of water for 100 seedlings
Oil plam	**Flowering stage**		• 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).

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		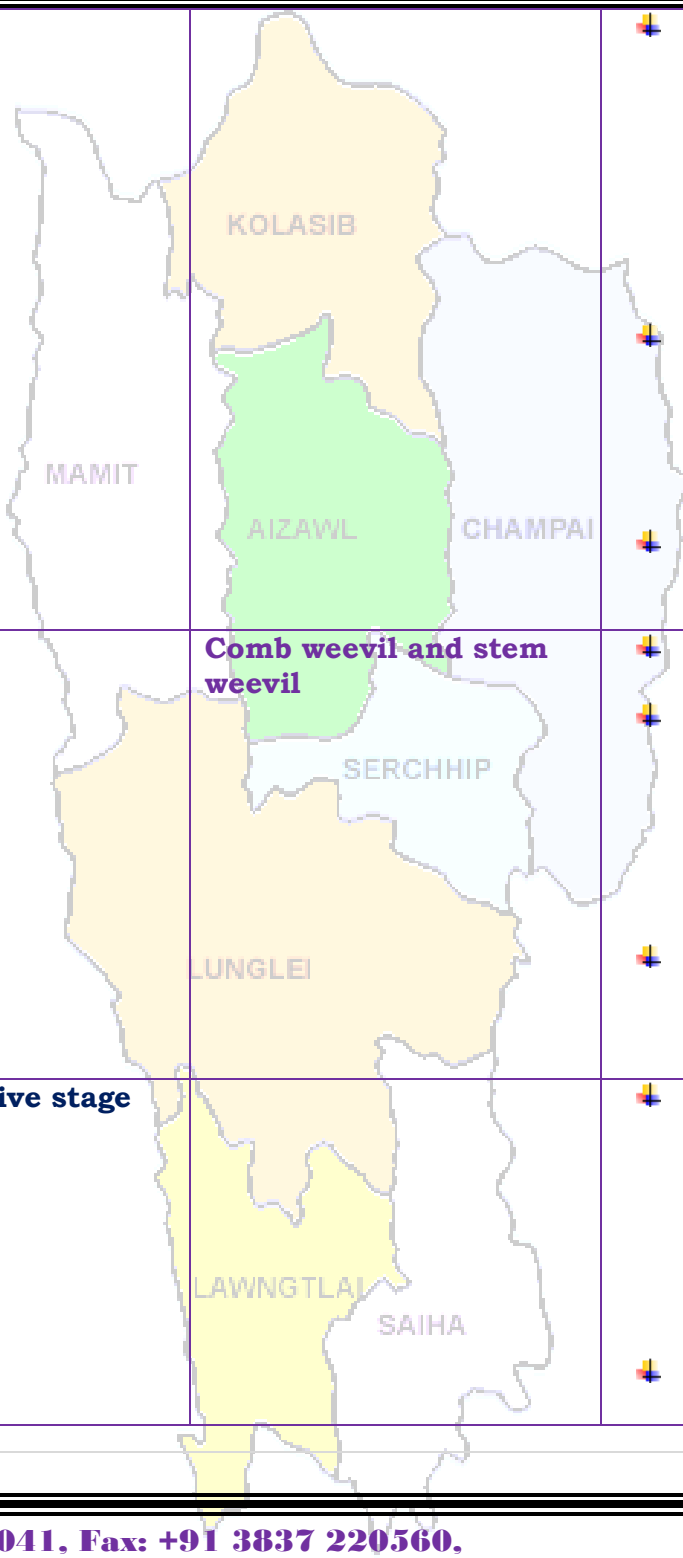	▪ Apply micro-nutrients viz. zinc, copper, manganese, iron, boron and molybdenum are required in ample quantities for supplying nutrients and also reduce serious disorders which may lead to decline of the whole orchard. ▪ Pruning on a regular basis removes unwanted or a sucker, keep production mats in optimum condition, saves fertilizer, reduces pest and disease. ▪ Fruits are harvested when they attain full size, develop attractive yellow colour.
		Comb weevil and stem weevil	▪ Applications of neem powder effectively controlled weevils. ▪ Application of 60 to 100 g of neem seed powder or neem cake at planting and then at 4 months intervals significantly diminished pest damage and increased yields. ▪ Application of over 100 g or neem oil was phytotoxic (harmful to plants) and uneconomical.
Passion Fruit	**Vegetative stage**		▪ Except for a space of about 60-90cm radius around the base of each vine which has to be kept clean weeded at all times, the rest of the plantation maybe allowed to have an undergrowth of grass. ▪ Application of 217gms, 312 gms, 167gms of Urea, Super

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		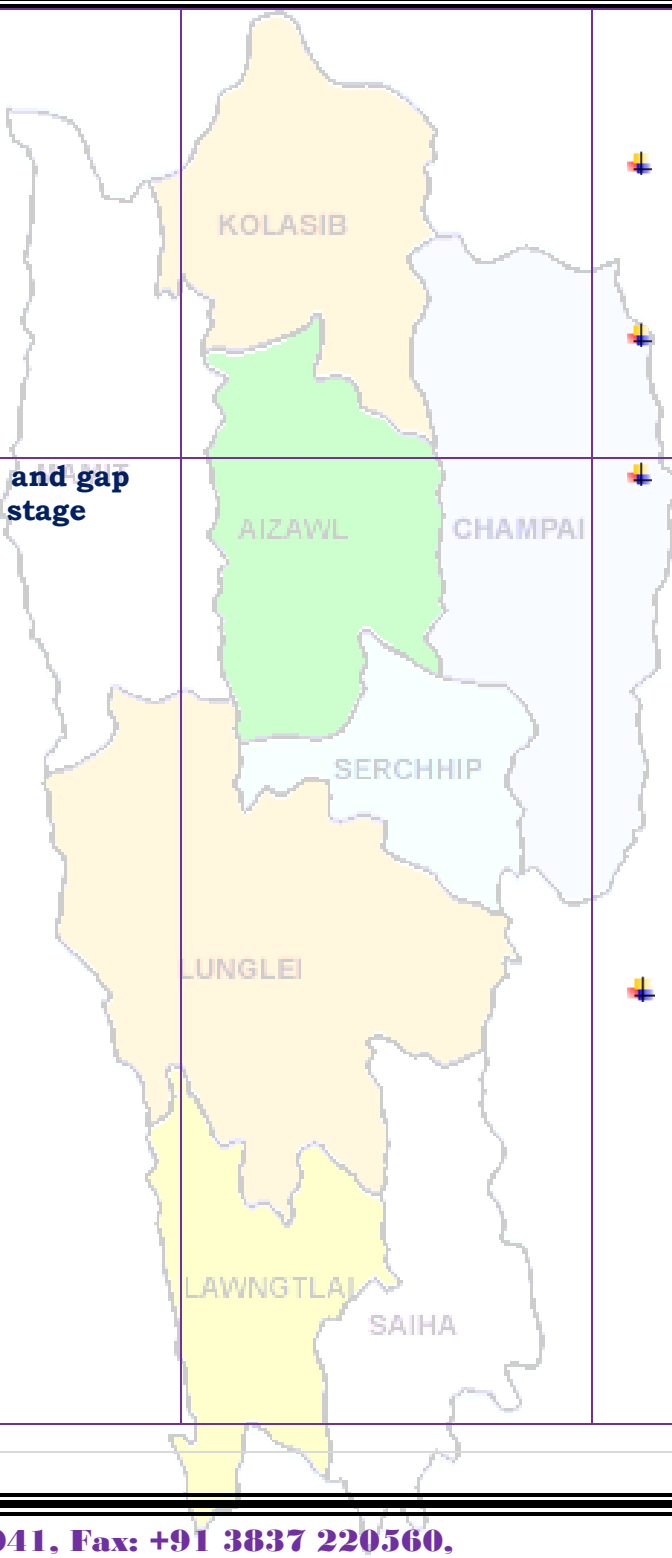	and Potash respectively per vine annually in splits for the purple and the yellow variety. For the Kavari variety 238.7gm, 375gms,167gms of Urea super, Potash respectively per vine per year in split doses. **Trellies making** : Establishment of proper and durable frame work for the purpose is very necessary.
Pineapple	**Planting and gap filling stage**		Double row planting is done by alternating two rows of crops by a wider mound or path. For optimum plant density, particularly in the hills. It is advisable to space two rows of crops at a distance of 60 cm, followed by a mound or flat path of 90 cm width. Within the row plants are spaced 30 cm apart. In this way 43,500 plants can be accommodated in one hectare of land. The pineapple suckers are allowed to dry at least for 25-30 days before planting. In fact, if fresh suckers are planted in moist soil, or if more moisture is available as in rainy season, they may begin to decay. To facilitate better rooting, it is necessary to strip off the scale leaves from the basal portions of the planting materials. After removing

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		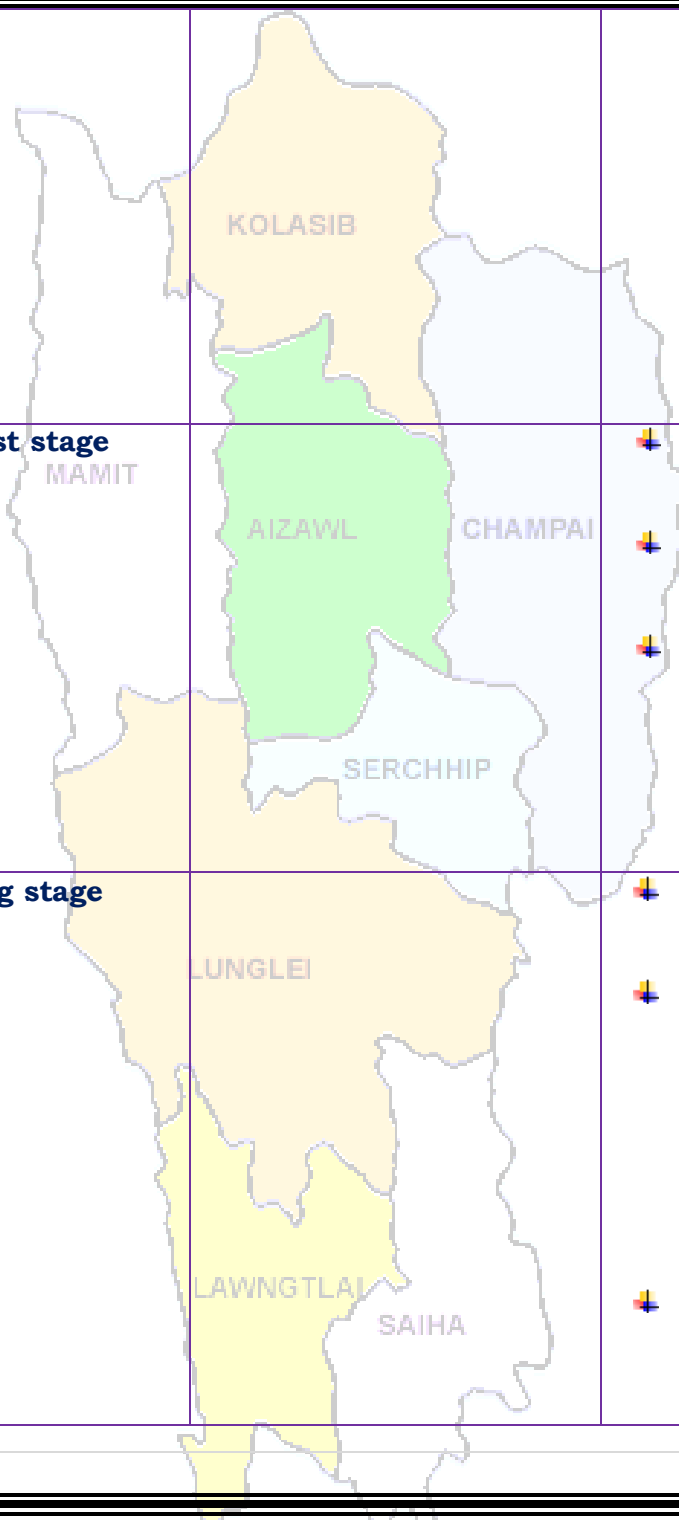	scaly leaves, the planting material should be treated with Difolation (0.2%) solution to avoid heart rot disease. Planting is usually done during monsoon, preferably in the beginning or later part of monsoon such as in August. Periods of heavy rainfall like July should be avoided for pineapple plantation.
Colocasia	**Harvest stage**		✦ Colocasia becomes ready for harvest five to six months after planting. ✦ The mother corms and side tubers are separated after harvest. ✦ The side tubers to be used as planting materials are usually separated from the mother corm and stored. Keep seed tuber in sand spread over the floor to avoid rotting.
French bean	**sowing stage**		✦ Land is ploughed to a fine tilth and divided into plots of convenient size. ✦ Ridges and furrows are prepared by ploughing after a basal dose application of farmyard manure. Field is irrigated once and seeds are sown under optimum moisture condition on side of ridges 2-3 days after irrigation. ✦ Spacing and seed rate vary with varieties. Early varieties are sown at a spacing of 45-60 cm x 10-15 cm and seed

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		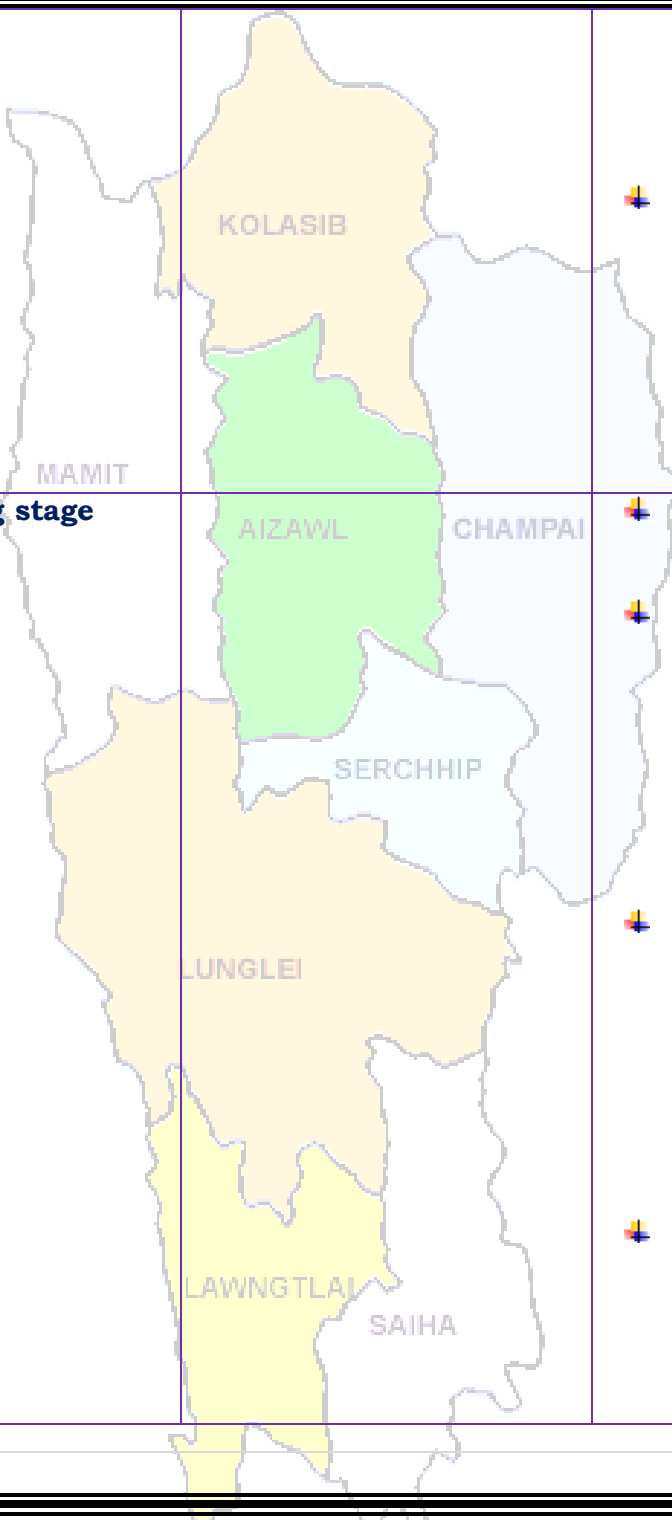	rate required is 80-90 kg / ha. Pole types are sown at 1.0 m apart in hills @ 3-4 plants / hill and seed rate is much less (25-30 kg/ha.). In addition to 20-25 t. of farmyard manure, 50 kg N, 75 kg, P2O5 and 75 kg K2O are recommended. Half of N along with full P and K should be applied as basal dose at the time of making ridges and furrows or one or two weeks after germination.
Cowpea	**sowing stage**		Land is ploughed to a fine tilth and divided into plots of convenient size. Ridges and furrows are prepared by ploughing after a basal dose application of farmyard manure. Field is irrigated once and seeds are sown under optimum moisture condition on side of ridges 2-3 days after irrigation. Spacing and seed rate vary with varieties. Early varieties are sown at a spacing of 45-60 cm x 10-15 cm and seed rate required is 80-90 kg / ha. Pole types are sown at 1.0 m apart in hills @ 3-4 plants / hill and seed rate is much less (25-30 kg/ha.). In addition to 20-25 t. of farmyard manure, 50 kg N, 75 kg, P2O5 and 75 kg K2O are recommended. Half of N along with full P and K should be applied as basal

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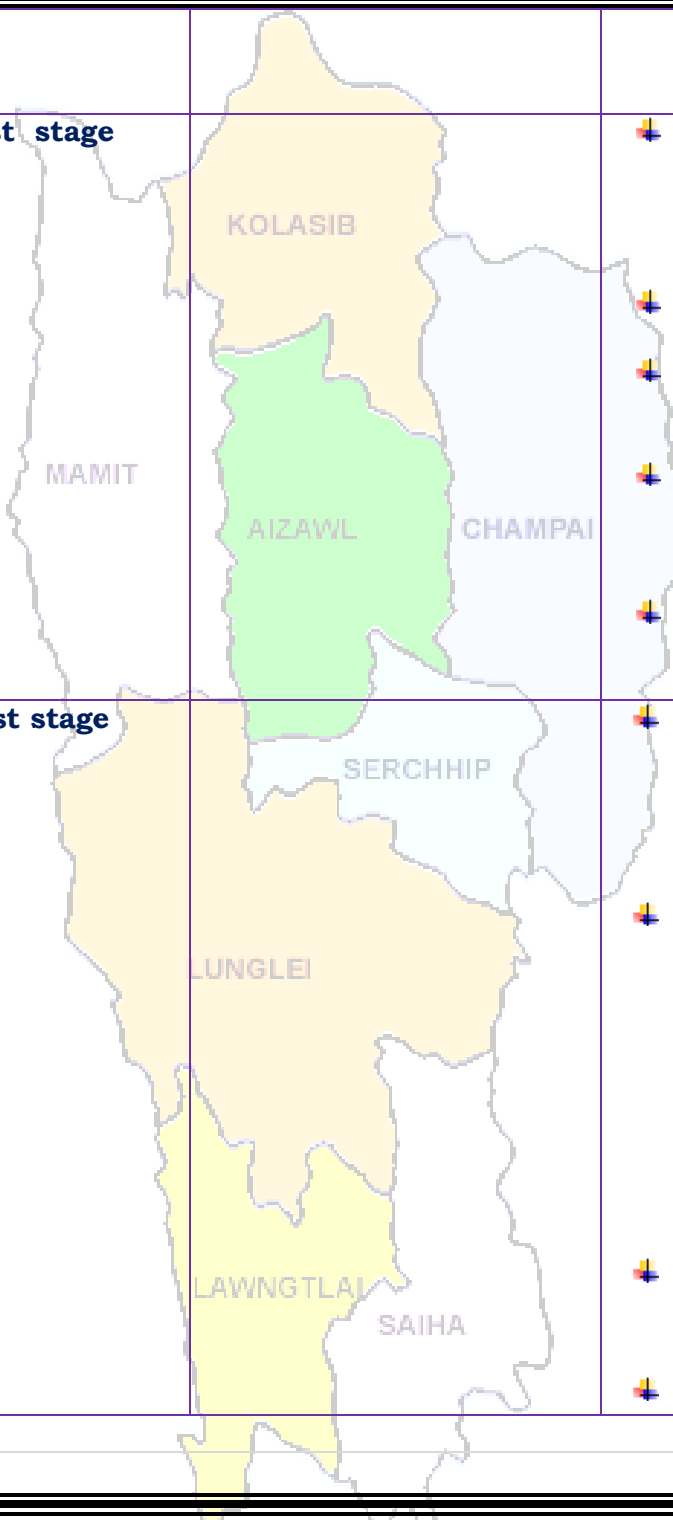
			dose at the time of making ridges and furrows or one or two weeks after germination.
Brinjal	**Harvest stage**		✦ Brinjal fruits are harvested at immature stage after attaining full size, but before loosing its glossy appearance. ✦ Dullness of fruit indicates over maturity. ✦ Usually fruits are harvested along with its stalk with a slight twist by hand. ✦ The harvested fruits are graded and packed in baskets or in loose gunny bags. ✦ Care should be taken to remove the fruits affected by Phomopsis blight.
Tomato	**Harvest stage**		✦ Immature: Before the seeds fully developed and before the jelly-like substances surrounding the seeds were formed. ✦ Mature green: The fully grown fruit with a brownish ring at stemscar. Removal of calyx, light green colour at blossom end changed yellowish green and seeds surrounded by jelly-like substances filling the seed cavity. ✦ Turning: ¼ of the surface at blossom end shows pink (breaker stage). ✦ Pink: ¾ of the surface shows

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			pink - Hard ripe: Nearly all red or pink with firm flesh - Over ripe: Fully coloured and soft.
Rice	**Panicle initiation stage**	**Kharif Rice**	- Apply split dose of nitrogenous fertilizer. - Use cracker or shining rope to resist from the attack of birds. - Remove excess water from the field and make a drain in four corner of the field - Planning for second crop like toria or pea.
Maize	**Harvest stage**		- Cobs which are to be utilized as grain should be harvested when the grains are almost dry or containing roughly 20 % moisture. - The appearance in the grains of composite and high yielding varieties however may be misleading as grains become dry while the stalk and leaves are still green. - The cobs are removed from the standing crop and sun dried before shelling, otherwise retained in their jackets, if kept for seed or to be consumed or utilized at a later stage.
Kharif pulses (Green gram, Black gram and Rajma)	**flowering stage**		- One or two hand hoeing and weeding should be done, depending upon soil type and extent of weed infestation. - Weeds can also be controlled effectively by the application

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			of TOK-E-25 at the rate of 10 ml dissolved in 1 liter of water as pre-emergence spray. Provide irrigation in dry condition or dry spell. Provide 2% urea solution for better growth.
Ginger and turmeric	**Vegetative stage**		Remove unwanted plant near base of the plant and cut dead branches. Pre-emergence application of Atrazine (Atratraf 50 wp, Gesaprim 500 fw) @ of 1.0-1.5 kg a.i ha-1in 600 litre water, Alachlor (Lasso) @ 2-2.5 kg a.i ha-1, Metolachlor (Dual) @ 1.5-2.0 kg a.i ha-1, Pendamethalin (Stomp) @ 1-1.5 kg a.i. ha-1arge effective way for control of many annual and broad leaved weeds. Earting up of soil along with fertilizer mixture.
		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 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

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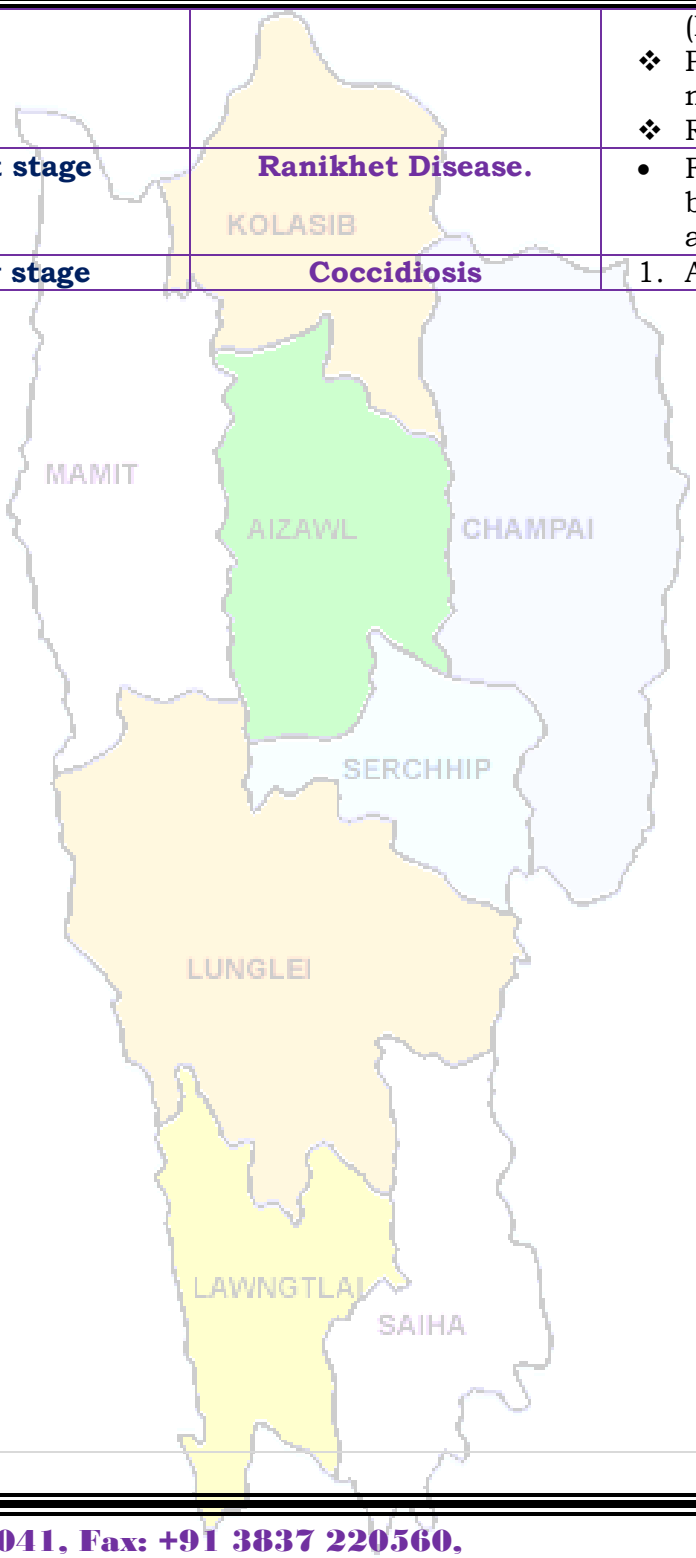
			(BQV). ❖ Primary vaccination 6 month or above ❖ Revaccination annually
Poultry	**Adult stage**	**Ranikhet Disease.**	• F1 vaccine at (1-6) days of birth and R_2B vaccine for adult birds.
	Early stage	**Coccidiosis**	1. Amprolium or coccidiostat



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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: 15- 19 August, 2015**

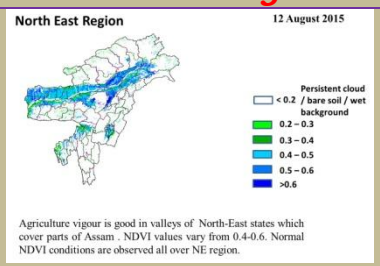
Bulletin No: -544/2015/ Bulletin/Mizo **Date of issue: 14th August, 2015**

Parameters	15.08.2015	16.08.2015	17.08.2015	18.08.2015	19.08.2015
Rainfall (mm)	4	3	3	6	16
Max Temp (oC)	30	29	29	28	26
Min Temp (oC)	21	21	20	21	21
Cloud Coverage	Mainly cloudy	Mainly cloudy	Mainly cloudy	Mainly cloudy	Mainly cloudy
Max RH (%)	98	99	98	97	98
Min RH (%)	61	69	68	71	86
Wind Speed (KmpH)	3	2	4	4	5
***Wind Direction**	S-E	S-E	S-E	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 MONSOON- July 1-31, 2015 (*Percent of deviation from normal in parenthesis*)

Aizawl- 412.50mm (341.8mm)	Champhai- 105.47mm (250.30mm)	Saiha- 307.78 mm (87.2mm)	Kolasib- 331.10mm (380.9mm)
Lawngtlai-291.28mm (285.5mm)	Lunglei-326.52mm (186.21mm)	Mamit-204.84mm (442.80mm)	Serchhip-189.57mm (25.9mm)

Ni thum kaltha sik leh sa dinhmun tlangpui	August 15, 2015 atanga August 19, 2015 sik leh sa dinhmun hmuhlawk dan	
	Ni 5 lo awm turah hian ruahtui a tlak beisei a ni. Khua a lum lai berin 26-30^{0}C a ni ang a.A vawh lai ber in 20-21^{0}C ni tur ah beisei a ni.RH san lai berin 97-98% leh a hniam lai berin 68-86% ni tur a beisei niin. Thli tleh dan kawng zawng chu chhimchhak lam atangin a nat zawng chu darkar 2-5 km ni tur a beisei niin. Ni nga chhung lo awm tur ah hian chhum tlem a lan beisei a ni. ***Weekly cumulative rainfall:*** **32.0mm**	
NDVI for Mizoram and SPI		NDVI for Mizoram is less than normal NDVI. Value shown that NDVI is zero. So, it represents "Bare Soil".

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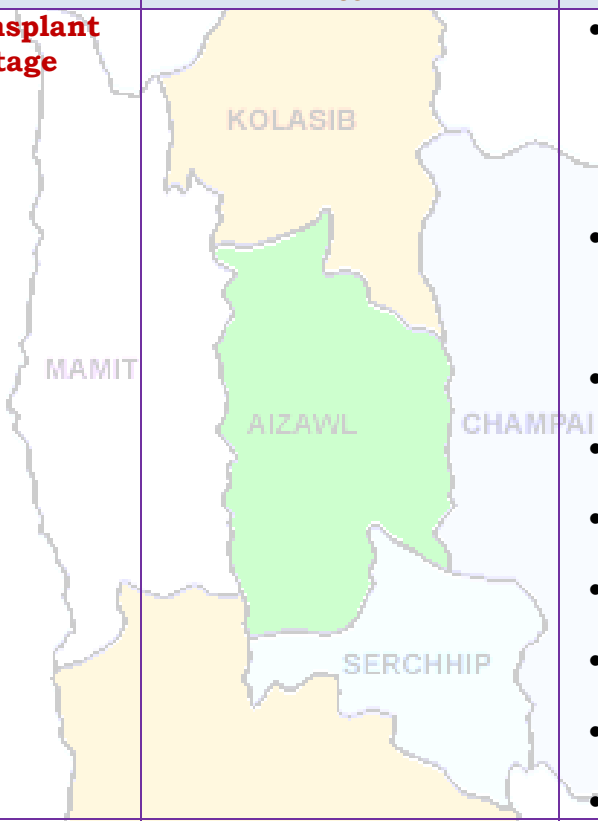
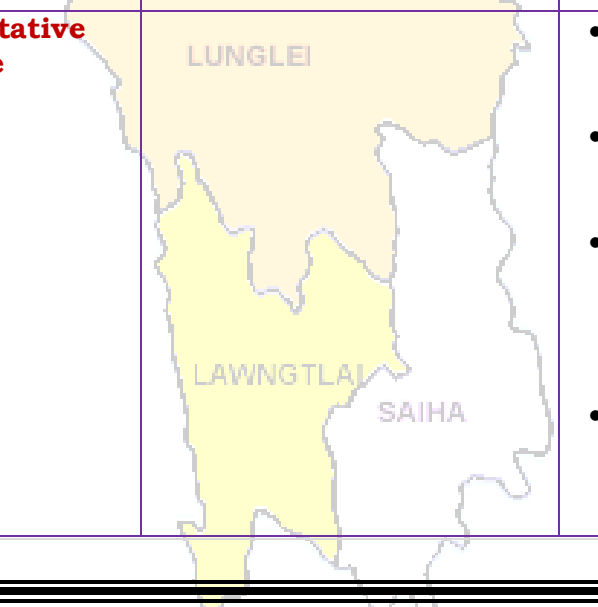
Thlai/ ran /sangha	Spat zawng	Hmalakna tur/ rannung leh natna hrik awm thei te	Agricultural/Horticultural/ animal husbandry atana thurawn
Khasi Mandarin and acid lime	**Transplant stage**		• A chi: A chi chu lakchhuah anih veleh nurseey ah a thuk zawng 1.5-2cm leh 10X5cm a inhlat a chin tur. A rawn chawr chu polythene bag ah hnah 4-6 a neih hunah phun sawn tur. • Nursery chu rannung leh a damlohna dang laka ven nan ser huan atanga meter 500 a hla ah dah tur. • Lei, balu leh bawngek leitha chu a inzat theuha pawlhin pek tur. • Bawngek leitha chu thlai pakhat ah 600:200:100g a pek tur. • Certified thlai chi chauh hman tur. • Ser kung bula tuitling chu paihfai vek tur. • A tiak inchen tlang chauh phun atan hman tur. • A zar tliak leh hnip chu paih fai zel tur. • Thlai chu hrisel taka enkawl tur.
	Vegetative stage		• Gibberellins (10ppm) chu a rah khal that nan te, a rawng insiam nan te kah tur. • Thlai in tui tha taka an hmuh theih nan drip irrigation hman tur. • Ser rah tla hi ser kung khatah vawi 2 a thleng thin a, hemi ven nan hian GA3, urea, benomyl leh carbendazim a hun takah pek tur, • Heng rannung blackfly(kolshi), citrus psylla, leaf miner, bark eating caterpillar, fruit sucking moth, mites, twing blight,

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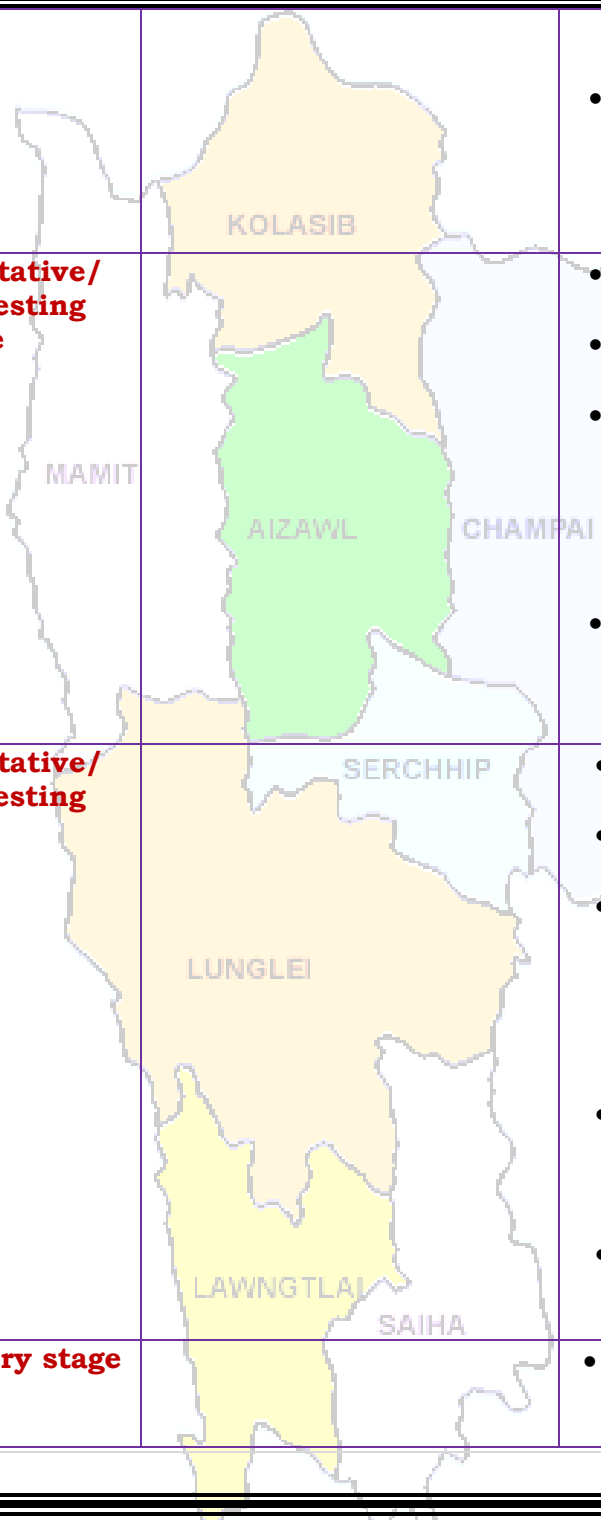
			gummosis, root rot leh collar rot te hi ven tur. • Fungicide Carbendazim (0.1% emaw 1000ppm) a hun takah pek tur (thlakhat naah leh a seng hma ni 15 ah, chu chu vawi hnih kah tur).
Oil palm	**Vegetative/ harvesting stage**		• Oil palm kung bul chu tihfai a a zar thlak bawk tur. • Leitha chu thlai pakhatah 600:200:100g a pek tur. • Heng micro-nutrients zinc, copper, manganese, iron, boron leh molybdenum te hi an mamawh tawka pek tur, a huan pum a chhiat vek loh nan ven that bawk tur. • Oil palm rah chu a puitlin hunah te, a rawng inthlak hunah leh a thlum leh thur a pai tam hunah seng tur.
Balhla	**Vegetative/ harvesting**		• Balhla kung bul chu tihfai a a zar thlak bawk tur. • Leitha chu thlai pakhatah 600:200:100g a pek tur. • Heng micro-nutrients zinc, copper, manganese, iron, boron leh molybdenum te hi an mamawh tawka pek tur, a huan pum a chhiat vek loh nan ven that bawk tur. • A zar thlak ngun hian rannung leh natna lakah a veng a, chubak ah leitha a hek lova, thlai thar a ti tam bawk ani. • A rah chu a puitlin hunah leh a rawng eng a nih hunah seng tur.
Sapthei	**Nursery stage**		• A chi chu a rah hmin tha atanga lak ni se, ni 15-20 hnuah nursery siam tur.

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			• A hnah 2/3 a rawn awm tan hnu ah polythene bag ah phunsawn tur. • Polythene bag atangin thla ¾ hnu ah huan ah phun sawn leh tur. • Bawngek leitha chu khur khat ah 15g leh NPK 100:50:100g in kumkhat chhungin pek tur.
Lakhuihthei	**A par lai**		• A par chhuah hma nan chemical (Ethrel 10ppm+2% urea+0.04% sodium carbonate) chu pek tur. Tlai ah emaw thlaiin hnah 32 a neih hunah pek tur. • Chemical pek atangin ni 55-60 chhungin a par a chhuah thei ang. • Leitha chu thlai pakhat ah 60:50:60g a pek tur. • Thlai hnah leh a zar thi te chu paihfai a, hnim te tihfai bawk tur.
		Corm borer	• Carbofuran 3G chu hectare khatah 1.5kga.i a pek tur. Hemi hi a zung ah a tuina hnuhma a awmin pek tur
Cucurbitaceous crops	**A rah lai**		• Ni 7 danah tui chu tha taka pek tur. • Huan zau thamah chuan fruitfly leh pumpkin beetle ven nan carbaryl 0.2% leh malathion 0.15% chu chini tui litre khatah 10g a pawlhin kar khat danah leh a par tan tirhah leh a rah tan hunah kah tur. • Thlai pakhatah a par nasat lain urea chu 70g a pek tur.
Bawrhsaiabe	**A chin dan**	**1. Nursery tihfai a tui tlem pek tur.** **2. Phunsawn hnuah tui tha taka pek tur.**	• A kung bulthut ah hnim chheh darh tur. • A khat tawkin tui pek tur. • A tiak phunsawn te chu nil eh ruah lakah hliahkhuh tur.

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		1. Aphids	• Surf tuiin thlai chu kah tur. • Heng insecticides Imidacloprid 200SL hi tui litre khatah 0.25ml in emaw Dimethoate 30% EC hi tui litre 10 ah 7ml a kah tur
		2. Flea beetle	• Pangang tui leh a puitling te chu a kung atangin thin thlak tur. • Heng insecticides Imidacloprid 200SL hi tui litre khatah 0.25ml in emaw Dimethoate 30% EC hi tui litre 10 ah 7ml a kah tur.
		3. Epilachna beetle	• A hnah a pangang leh a tui awm chu paihfai tur. • Methyl parathion 0.5% emaw Dimethoate 0.3% a kah tur.
		4. Leaf hopper	• Heng insecticides Imidacloprid 200SL hi tui litre khatah 0.25ml in emaw Dimethoate 30% EC hi tui litre 10 ah 7ml a kah tur.
		Bacterial wilt	• Huan chu fai taka dah a, thlai damlo te chu paihfai bawk tur. • Thlai damlo enkawl nan copper fungicide (2% Bordeaux mixture) a kah tur.bacterial witl chu root knot nematodes tam naah a awm thin a, hemi nematodes control hian bacterial wilt hi a veng thei. • Streptocycline sulphate chu tui litre khatah 0.3g leh Blitox 50 chu tui litre 15 ah 5g a pek tur.
		Damping off	• Thlai chi chu kg khatah Thiram 3g emaw Trichoderma viride4g+Metalaxyl 4g (Apron) a chiah tur. • Bordeaux mixture 1% emaw 2g Captan emaw 3 copper oxychloride chu tui litre khatah pawlhin a chin atanga ni 10-15 ah leih tur.
		Leaf spot and leaf blotch	• Dithane M-45 chu tui litre khatah

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			2.5g emaw Carbendazim 1g chu tui litre khatah pawlhin karkhat danah vawi 2/3 kah tur. • Leaf spot tan Blitox 3g chu tui litre khata pawlhin kah tur.
		Leaf spot leh leaf blotch	• Tui litre khatah Dithane M-45 chu 2.5g emaw Bavistin chu 1g a pawlhin karkhat danah vawi 2/3 kah thin tur. • Leaf spot ah chuan tui litre khatah Blitox chu 3g pawlh a kah thin tur.
French bean	**A par lai**		• Bean hnah, a tang ro leh hnim te chu paihfai vek tur. • Lei chu boruak kal that nan laihphut thin tur. • A chin atanga ni 20-25 ah bean kung chu mau in a zamna siam tur.
		Blister beetle	• Rannung ho chu mankhawmin thah vek tur. • Cypermethrin 2g chu tui litre khata pawlhin kah thin tur
Bawkbawn	**A chin dan**		• Balu leh leitha chu lei nen a chawhpawlh hnu in 75-100cm a zau ah a phunna tur siam tur. A chinna lai chu Blue copper 100g tui litre 40 ah emaw formaldehyde nen a pawlhin leih tur. • A chi chu 5cm a inhlat a tuh in lei pangngai a vur leh tur.
Tomato	**A chin dan**		• Nursery tur chu lei dip tha darh leh tlema pawng tur (0.8m a zau leh 15cm a sei ni se). • Leitha 10kg leh bawngek leitha 15:15:15 leh carbofuran 2.5g chawhpawlh pek tur.
		Aphids	• Surf tuiin thlai chu kah tur. • Heng insecticides Imidacloprid

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			200SL hi tui litre khatah 0.25ml in emaw Dimethoate 30% EC hi tui litre 10 ah 7ml a kah tur.
		Epilachna beetle	• Methyl parathion 0.5% emaw Dimethoate 0.3% a kah in flea beetle a veng thei
Buh	**Nursery stage**	**Pre kharif rice**	• A chi tha leh khat tha chauh hman tur. • Tui litre 10 ah chi (salt) 250g pawlhin chutah chuan chiah tur. • Bavistin 50WP @0.1% chu tui litre khatah 2g a pawlhin a chi chu chiah tur.
		Raised bed method	• A chin na tur chu 10m a sei ni se, 1.25m a zau leh tui luanna tur 20-30cm a zau siam tur. Hei hian a chi kal ral mai mai tur a veng. • Leitha pek hnu ah a chi damdawi a chiah te chu theh tur.
Vaimim	**A chin dan**		• Lei chu vawi 2/3 laihphut phawt tur. • A chi chu a line indawt a chin tur • A chi chu kg khatah Thiram 4g a chiah tur. • Hectare khatah buh chi chu 20-25kg hman tur. • Bawngek leitha chu hectare khatah 5-10t chu 80:60:40kg N, P2O5 leh K20 hman tur. Vaimim chin hma in lei nen tihpawlh tur. Nitrogen chu a dose chanve in a chin hnu ah pek tur, a bang 25% chu a hnu thlakhat ah leh a dang 25% chu a par hunah pek tur.
Sawhthing leh Aieng	**Land preparation**		• Thlai hnah, a tang ro leh hnim te chu paihfai vek tur. • Lei chu boruak kal that nan laihphut thin tur. • Nitrogen leitha chu an mamawh taw kanga pek tur.

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		Thrips	• Roger emaw Monocrophos chu tui litre khatah 2.5ml a pawlhin kah tur.
		Scales	• Quinalphos emaw Monocrotophos chu tui litre khatah 2.5ml a pawlhin kah tur.
Vawk	**Kumtluanin**	**Porcine Reproductive Respiratory Syndrome (PRRS).**	1. A natna vei vawk te chu thah a phum tur a ni.
	A puitling hun	**Swine fever.**	2. Vawk thla hnih a nihin SF vaccine pek tur a ni a, he vaccine hi thla ruk emaw kumtluanin pek chhunzawm tur
Bawng	**Kumtluanin**	**Foot and Mouth Disease (FMD)**	• Thla16 a upa an rih in FMD vaccine pek tur a nia, thla 6 danah pek chhunzawm tur a ni.

	A naupan lai	**Black Quarter (BQ)**	• Black Quarter Vaccine (BQ)
			  Thla ruk an tlin hunah vaccine lak tan tur.
			  Kumkhat hnu ah vaccine pek leh tur.

Ar	**Kumtluanin**	**Ranikhet Disease.**	1. Ar note an pian hlimin F_1 vaccine pek tur a nia an puitlin hunah R_2B pek leh tur a ni.
		Coccidiosis	2. Amprolium emaw coccidiostat pek tur.

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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: 15- 19 August, 2015**

Bulletin No: -544/2015/ Bulletin/English **Date of issue: 14th August, 2015**

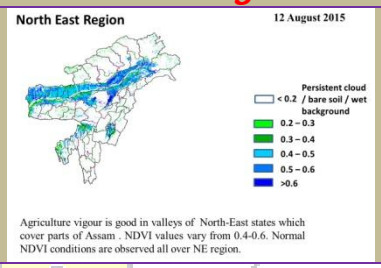
Parameters	15.08.2015	16.08.2015	17.08.2015	18.08.2015	19.08.2015
Rainfall (mm)	3	4	3	5	22
Max Temp (oC)	31	31	31	30	29
Min Temp (oC)	22	22	22	22	23
Cloud Coverage	Mainly cloudy	Mainly cloudy	Mainly cloudy	Mainly cloudy	Partially clear
Max RH (%)	98	99	96	92	93
Min RH (%)	76	68	62	66	70
Wind Speed (KmpH)	4	4	4	7	8
***Wind Direction**	S-E	S	S-E	S	S

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 MONSOON- July 1-31, 2015 (*Percent of deviation from normal in parenthesis*)

Aizawl- 412.50mm (341.8mm)	Champhai- 105.47mm (250.30mm)	Saiha- 307.78 mm (87.2mm)	Kolasib- 331.10mm (380.9mm)
Lawngtlai-291.28mm (285.5mm)	Lunglei-326.52mm (186.21mm)	Mamit-204.84mm (442.80mm)	Serchhip-189.57mm (25.9mm)

Weather summary of the past three days	Weather forecast valid from 15th August, 2015 To 19th August, 2015.
	There is a chance of moderate to light rainfall during the next 5 days. The maximum and minimum temperatures for the next 5 days may range for 29-31^{0}C and 22-23^{0}C. Maximum relative humidity is expected in the range of 92-99% and minimum may from 62-76%. Wind direction would be southeasterly with the wind speed of 4-8 km per hour. Mainly cloudy sky will prevail during the next five days. ***Weekly cumulative rainfall:*** **37.0 mm**

NDVI for Mizoram		
		NDVI for Mizoram is less than normal NDVI. Value shown that NDVI is zero. So, it represents "Bare Soil".

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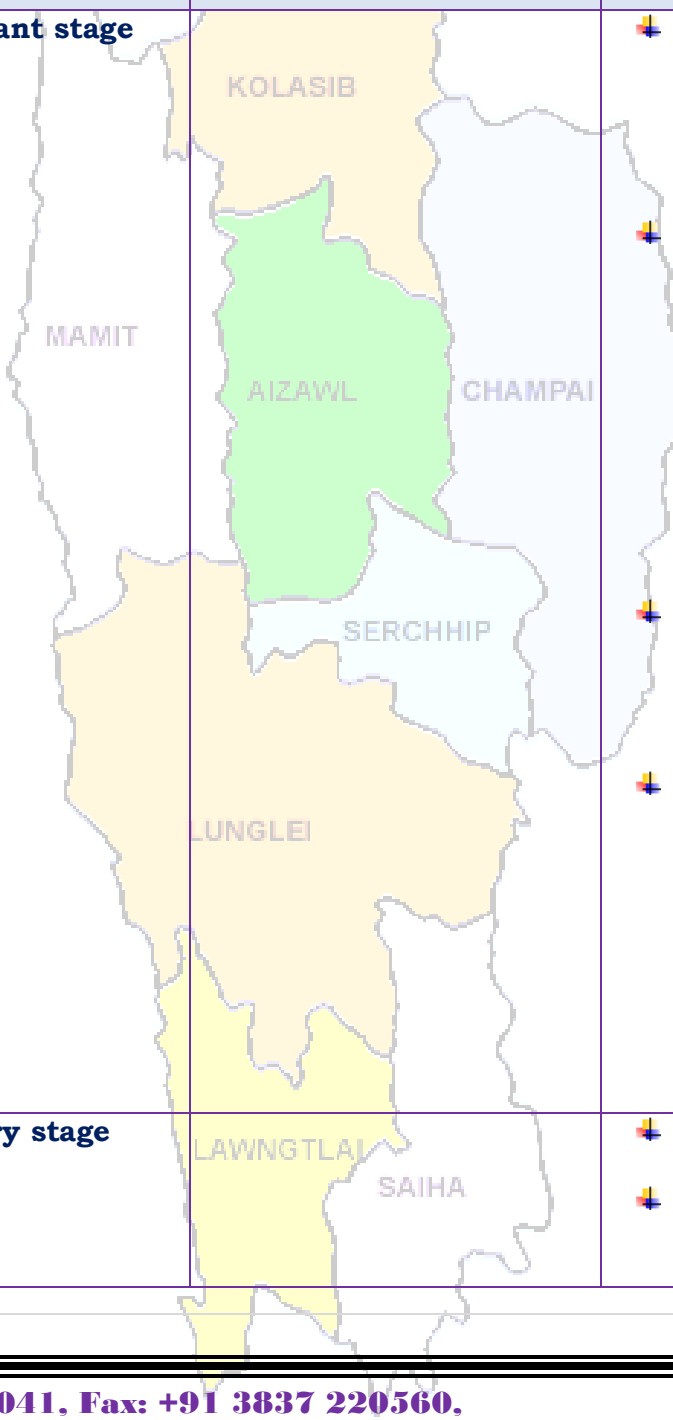
Main Crop/ Animal /Fisheries	Stage	Cultural practices/ Pest/ Diseases	Agricultural / Horticultural/ animal husbandry advisories
Khasi Mandarin and acid lime	**Transplant stage**		▪ Well rotten FYM @ 500g/pit is applied at 15-20 days before planting along with 12 g each of N and K2O/plant and 4 g of P2O5/plant. ▪ This root stock has proved very successful for raising some sweet orange and mandarin orange varieties This root stock is resistant to Tristeza virus but highly susceptible to exocortis. It is also recommended for this region till any other rootstock is found to be promising. ▪ Citrus plantations are seldom put under planned cultivation, and plantations are always kept under sod or raised as mixed crops ▪ Layered plants about one year old, are also selected in case of lemon, lime etc. Vigorous plants are always preferred for better growth. While placing the plants in the pits care should be taken that bud union remains 12-15 cm above the ground level.
Oil plam	**Nursery stage**		▪ Remove the exocarp and mesocarp with knife. ▪ Dry the seeds on concrete or wooden floors under shade for 2 days and stored for 3-9

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		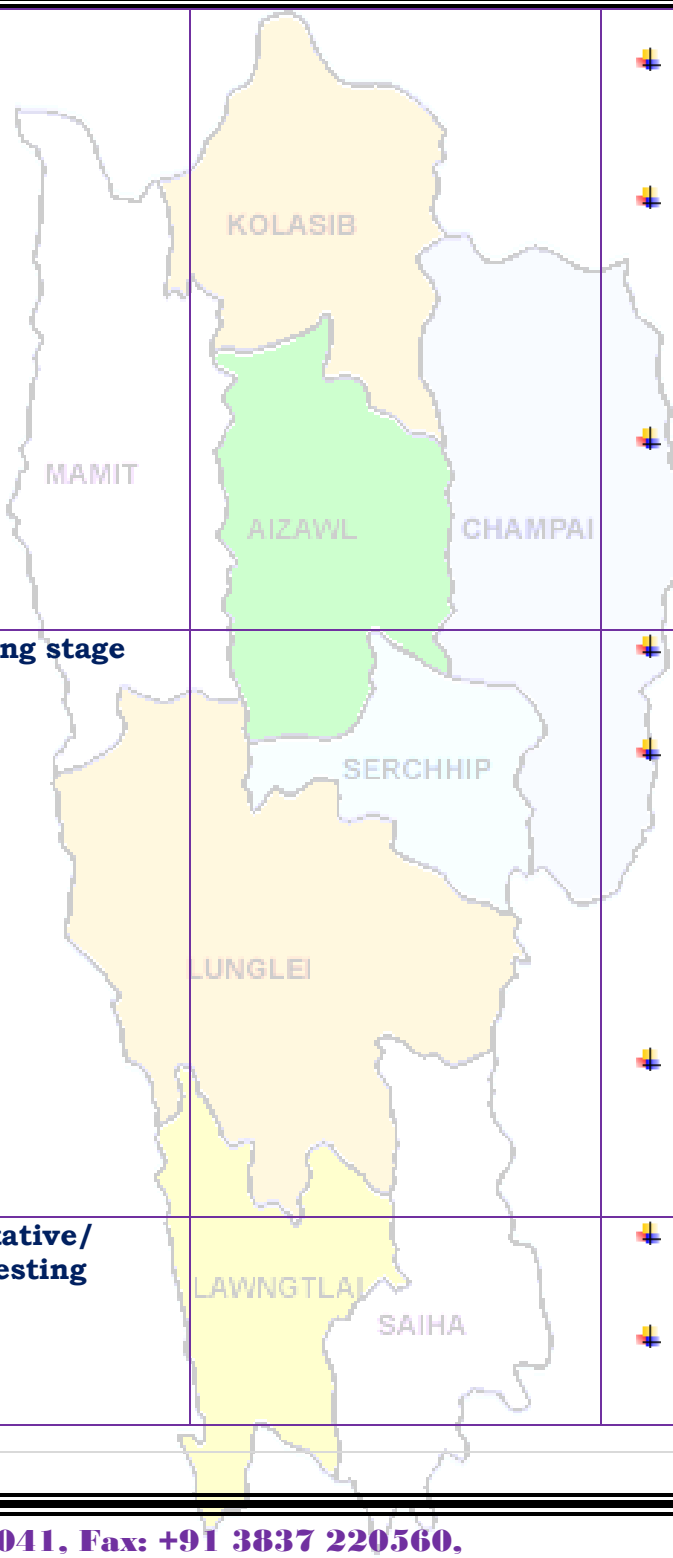	months. • Seeds are soaked in water for 5 days (changing the water daily) and spread out to dry for 24 hours. • Dried seeds are put in 250 gauge and 23 X 13 cm size polythene bags filled with top soil, sand and well decomposed cattle manure in equal proportions and placed for germination. • Germination (90-95 %) starts 10-12 days. Apply fertilizer mixture containing 15:15:6 of NPK @ 8 g in 5 litres of water for 100 seedlings
Oil plam	**Flowering stage**		• 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).

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		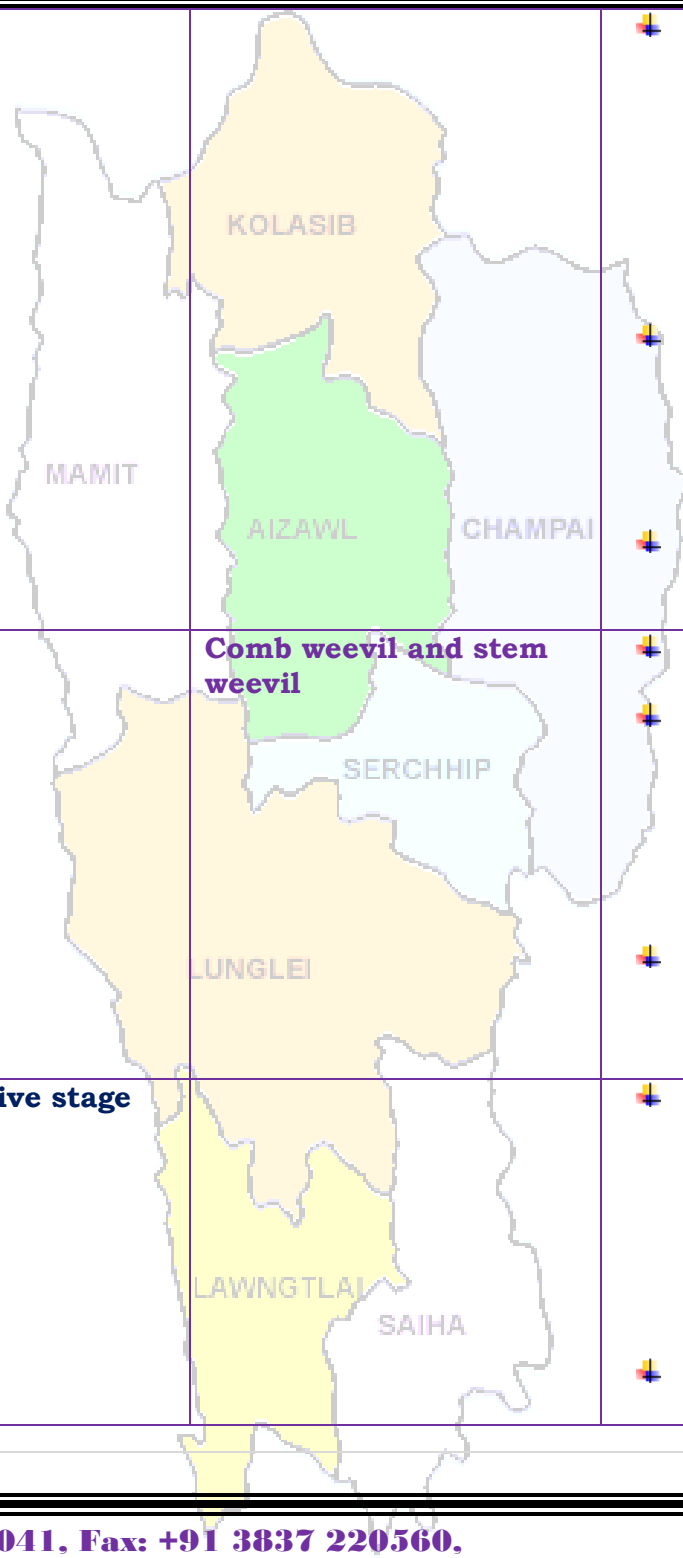	▪ Apply micro-nutrients viz. zinc, copper, manganese, iron, boron and molybdenum are required in ample quantities for supplying nutrients and also reduce serious disorders which may lead to decline of the whole orchard. ▪ Pruning on a regular basis removes unwanted or a sucker, keep production mats in optimum condition, saves fertilizer, reduces pest and disease. ▪ Fruits are harvested when they attain full size, develop attractive yellow colour.
		Comb weevil and stem weevil	▪ Applications of neem powder effectively controlled weevils. ▪ Application of 60 to 100 g of neem seed powder or neem cake at planting and then at 4 months intervals significantly diminished pest damage and increased yields. ▪ Application of over 100 g or neem oil was phytotoxic (harmful to plants) and uneconomical.
Passion Fruit	**Vegetative stage**		▪ Except for a space of about 60-90cm radius around the base of each vine which has to be kept clean weeded at all times, the rest of the plantation maybe allowed to have an undergrowth of grass. ▪ Application of 217gms, 312 gms, 167gms of Urea, Super

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		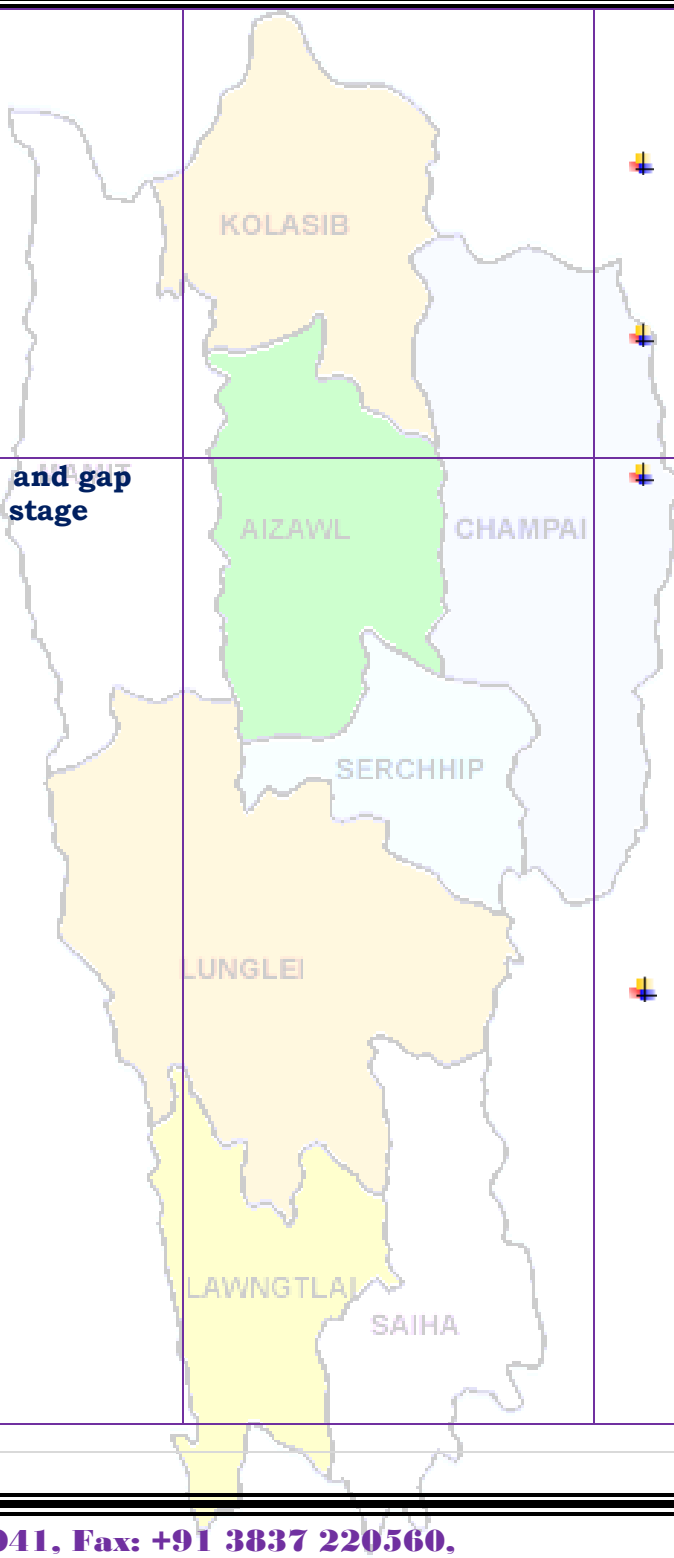	and Potash respectively per vine annually in splits for the purple and the yellow variety. For the Kavari variety 238.7gm, 375gms,167gms of Urea super, Potash respectively per vine per year in split doses. **Trellies making** : Establishment of proper and durable frame work for the purpose is very necessary.
Pineapple	**Planting and gap filling stage**		Double row planting is done by alternating two rows of crops by a wider mound or path. For optimum plant density, particularly in the hills. It is advisable to space two rows of crops at a distance of 60 cm, followed by a mound or flat path of 90 cm width. Within the row plants are spaced 30 cm apart. In this way 43,500 plants can be accommodated in one hectare of land. The pineapple suckers are allowed to dry at least for 25-30 days before planting. In fact, if fresh suckers are planted in moist soil, or if more moisture is available as in rainy season, they may begin to decay. To facilitate better rooting, it is necessary to strip off the scale leaves from the basal portions of the planting materials. After removing

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		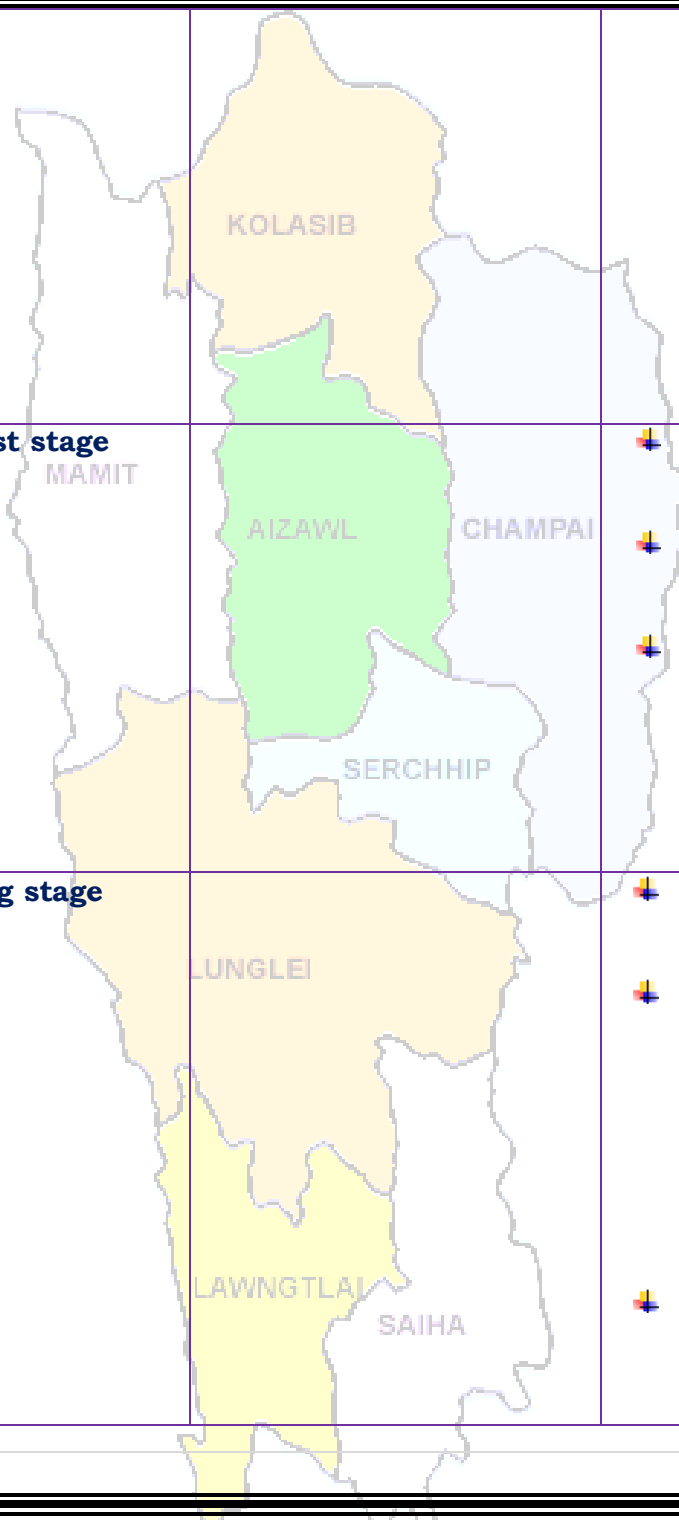	scaly leaves, the planting material should be treated with Difolation (0.2%) solution to avoid heart rot disease. Planting is usually done during monsoon, preferably in the beginning or later part of monsoon such as in August. Periods of heavy rainfall like July should be avoided for pineapple plantation.
Colocasia	**Harvest stage**		✦ Colocasia becomes ready for harvest five to six months after planting. ✦ The mother corms and side tubers are separated after harvest. ✦ The side tubers to be used as planting materials are usually separated from the mother corm and stored. Keep seed tuber in sand spread over the floor to avoid rotting.
French bean	**sowing stage**		✦ Land is ploughed to a fine tilth and divided into plots of convenient size. ✦ Ridges and furrows are prepared by ploughing after a basal dose application of farmyard manure. Field is irrigated once and seeds are sown under optimum moisture condition on side of ridges 2-3 days after irrigation. ✦ Spacing and seed rate vary with varieties. Early varieties are sown at a spacing of 45-60 cm x 10-15 cm and seed

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		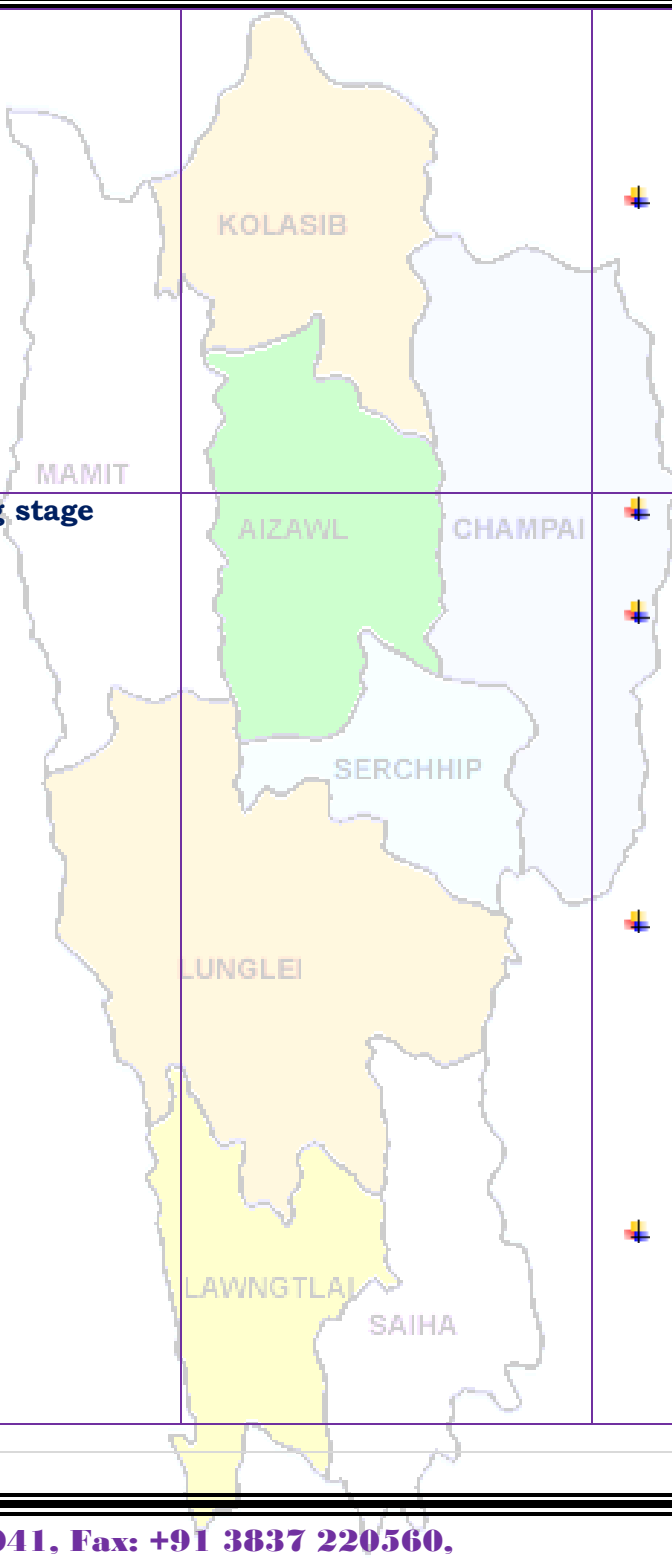	rate required is 80-90 kg / ha. Pole types are sown at 1.0 m apart in hills @ 3-4 plants / hill and seed rate is much less (25-30 kg/ha.). In addition to 20-25 t. of farmyard manure, 50 kg N, 75 kg, P2O5 and 75 kg K2O are recommended. Half of N along with full P and K should be applied as basal dose at the time of making ridges and furrows or one or two weeks after germination.
Cowpea	**sowing stage**		Land is ploughed to a fine tilth and divided into plots of convenient size. Ridges and furrows are prepared by ploughing after a basal dose application of farmyard manure. Field is irrigated once and seeds are sown under optimum moisture condition on side of ridges 2-3 days after irrigation. Spacing and seed rate vary with varieties. Early varieties are sown at a spacing of 45-60 cm x 10-15 cm and seed rate required is 80-90 kg / ha. Pole types are sown at 1.0 m apart in hills @ 3-4 plants / hill and seed rate is much less (25-30 kg/ha.). In addition to 20-25 t. of farmyard manure, 50 kg N, 75 kg, P2O5 and 75 kg K2O are recommended. Half of N along with full P and K should be applied as basal

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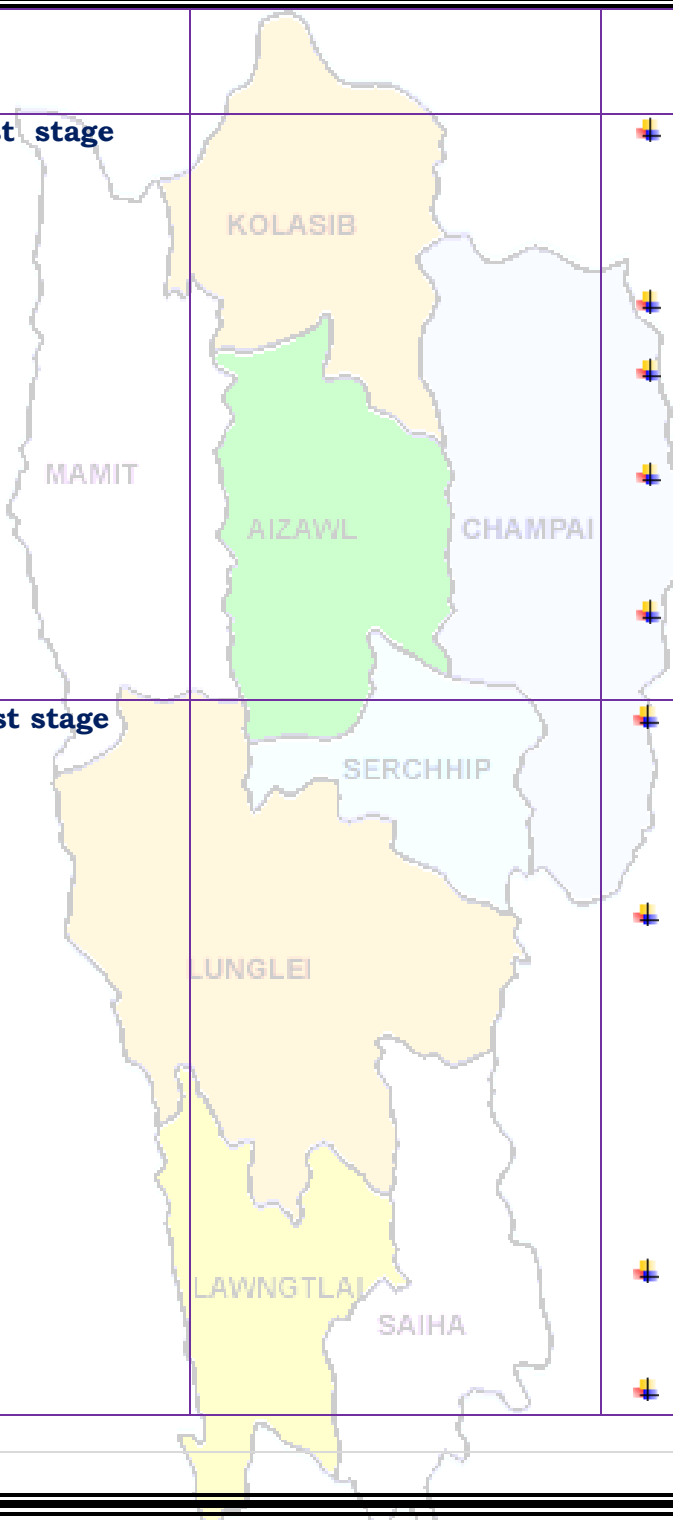
			dose at the time of making ridges and furrows or one or two weeks after germination.
Brinjal	**Harvest stage**		✦ Brinjal fruits are harvested at immature stage after attaining full size, but before loosing its glossy appearance. ✦ Dullness of fruit indicates over maturity. ✦ Usually fruits are harvested along with its stalk with a slight twist by hand. ✦ The harvested fruits are graded and packed in baskets or in loose gunny bags. ✦ Care should be taken to remove the fruits affected by Phomopsis blight.
Tomato	**Harvest stage**		✦ Immature: Before the seeds fully developed and before the jelly-like substances surrounding the seeds were formed. ✦ Mature green: The fully grown fruit with a brownish ring at stemscar. Removal of calyx, light green colour at blossom end changed yellowish green and seeds surrounded by jelly-like substances filling the seed cavity. ✦ Turning: ¼ of the surface at blossom end shows pink (breaker stage). ✦ Pink: ¾ of the surface shows

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			pink Hard ripe: Nearly all red or pink with firm flesh Over ripe: Fully coloured and soft.
Rice	**Panicle initiation stage**	**Kharif Rice**	Apply split dose of nitrogenous fertilizer. Use cracker or shining rope to resist from the attack of birds. Remove excess water from the field and make a drain in four corner of the field Planning for second crop like toria or pea.
Maize	**Harvest stage**		Cobs which are to be utilized as grain should be harvested when the grains are almost dry or containing roughly 20 % moisture. The appearance in the grains of composite and high yielding varieties however may be misleading as grains become dry while the stalk and leaves are still green. The cobs are removed from the standing crop and sun dried before shelling, otherwise retained in their jackets, if kept for seed or to be consumed or utilized at a later stage.
Kharif pulses (Green gram, Black gram and Rajma)	**flowering stage**		One or two hand hoeing and weeding should be done, depending upon soil type and extent of weed infestation. Weeds can also be controlled effectively by the application

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			of TOK-E-25 at the rate of 10 ml dissolved in 1 liter of water as pre-emergence spray. ➢ Provide irrigation in dry condition or dry spell. ➢ Provide 2% urea solution for better growth.
Ginger and turmeric	**Vegetative stage**		➢ Remove unwanted plant near base of the plant and cut dead branches. ➢ Pre-emergence application of Atrazine (Atratraf 50 wp, Gesaprim 500 fw) @ of 1.0-1.5 kg a.i ha-1in 600 litre water, Alachlor (Lasso) @ 2-2.5 kg a.i ha-1, Metolachlor (Dual) @ 1.5-2.0 kg a.i ha-1, Pendamethalin (Stomp) @ 1-1.5 kg a.i. ha-1arge effective way for control of many annual and broad leaved weeds. ➢ Earting up of soil along with fertilizer mixture.
		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 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

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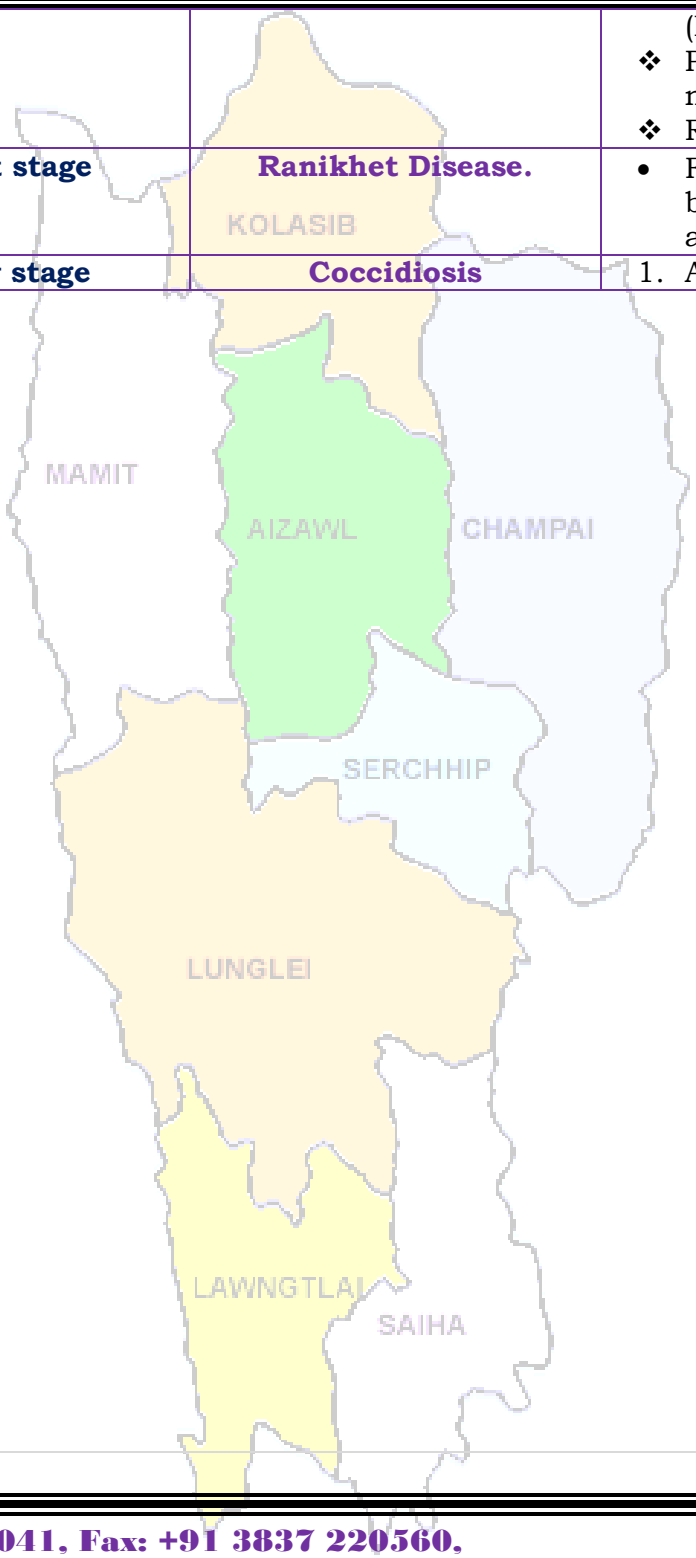
			(BQV). ❖ Primary vaccination 6 month or above ❖ Revaccination annually
Poultry	**Adult stage**	**Ranikhet Disease.**	• F1 vaccine at (1-6) days of birth and R_2B vaccine for adult birds.
	Early stage	**Coccidiosis**	1. Amprolium or coccidiostat



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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:** 15- 19 August, 2015

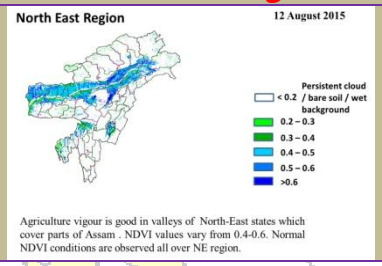
Bulletin No: -544/2015/ Bulletin/Mizo **Date of issue:** 14th August, 2015

Parameters	15.08.2015	16.08.2015	17.08.2015	18.08.2015	19.08.2015
Rainfall (mm)	3	4	3	5	22
Max Temp (oC)	31	31	31	30	29
Min Temp (oC)	22	22	22	22	23
Cloud Coverage	Mainly cloudy	Mainly cloudy	Mainly cloudy	Mainly cloudy	Partially clear
Max RH (%)	98	99	96	92	93
Min RH (%)	76	68	62	66	70
Wind Speed (KmpH)	4	4	4	7	8
*Wind Direction	S-E	S	S-E	S	S

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 MONSOON- July 1-31, 2015 (*Percent of deviation from normal in parenthesis*)

Aizawl- 412.50mm (341.8mm)	Champhai- 105.47mm (250.30mm)	Saiha- 307.78 mm (87.2mm)	Kolasib- 331.10mm (380.9mm)
Lawngtlai-291.28mm (285.5mm)	Lunglei-326.52mm (186.21mm)	Mamit-204.84mm (442.80mm)	Serchhip-189.57mm (25.9mm)

Ni thum kaltha sik leh sa dinhmun tlangpui	August 15, 2015 atanga August 19, 2015 sik leh sa dinhmun hmuhlawk dan	
	Ni 5 lo awm turah hian ruahtui a tlak beisei a ni. Khua a lum lai berin 29-31^{0}C a ni ang a.A vawh lai ber in 22-23^{0}C ni tur ah beisei a ni.RH san lai berin 92-99% leh a hniam lai berin 62-76% ni tur a beisei niin. Thli tleh dan kawng zawng chu chhimchhak lam atangin a nat zawng chu darkar 4-8 km ni tur a beisei niin. Ni nga chhung lo awm tur ah hian chhum tlem a lan beisei a ni. ***Weekly cumulative rainfall:*** **37.0mm**	
NDVI for Mizoram and SPI		NDVI for Mizoram is less than normal NDVI. Value shown that NDVI is zero. So, it represents "Bare Soil".

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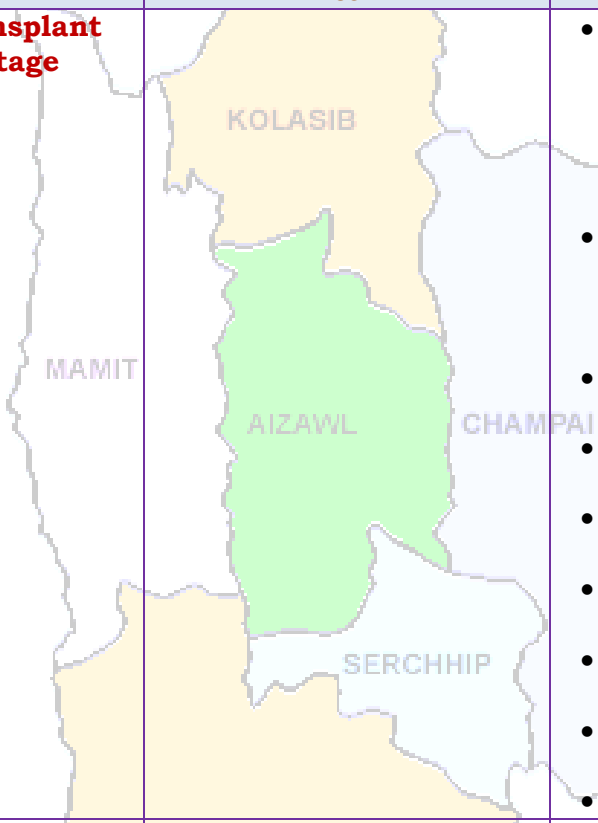
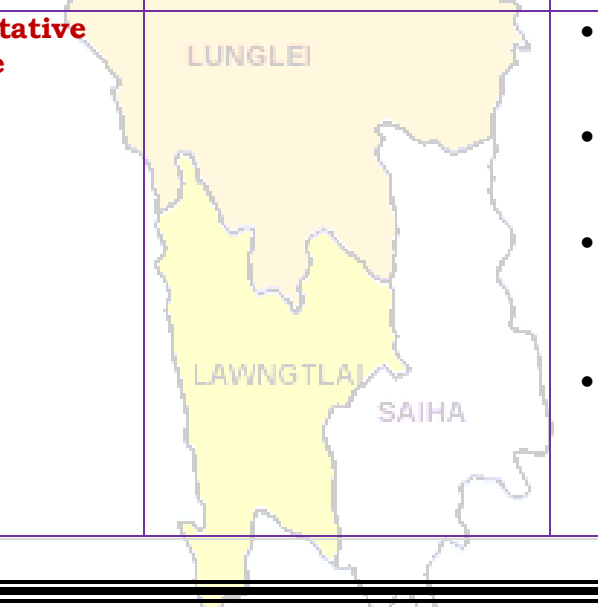
Thlai/ ran /sangha	Spat zawng	Hmalakna tur/ rannung leh natna hrik awm thei te	Agricultural/Horticultural/ animal husbandry atana thurawn
Khasi Mandarin and acid lime	**Transplant stage**		• A chi: A chi chu lakchhuah anih veleh nurseey ah a thuk zawng 1.5-2cm leh 10X5cm a inhlat a chin tur. A rawn chawr chu polythene bag ah hnah 4-6 a neih hunah phun sawn tur. • Nursery chu rannung leh a damlohna dang laka ven nan ser huan atanga meter 500 a hla ah dah tur. • Lei, balu leh bawngek leitha chu a inzat theuha pawlhin pek tur. • Bawngek leitha chu thlai pakhat ah 600:200:100g a pek tur. • Certified thlai chi chauh hman tur. • Ser kung bula tuitling chu paihfai vek tur. • A tiak inchen tlang chauh phun atan hman tur. • A zar tliak leh hnip chu paih fai zel tur. • Thlai chu hrisel taka enkawl tur.
	Vegetative stage		• Gibberellins (10ppm) chu a rah khal that nan te, a rawng insiam nan te kah tur. • Thlai in tui tha taka an hmuh theih nan drip irrigation hman tur. • Ser rah tla hi ser kung khatah vawi 2 a thleng thin a, hemi ven nan hian GA3, urea, benomyl leh carbendazim a hun takah pek tur, • Heng rannung blackfly(kolshi), citrus psylla, leaf miner, bark eating caterpillar, fruit sucking moth, mites, twing blight, gummosis, root rot leh collar rot

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		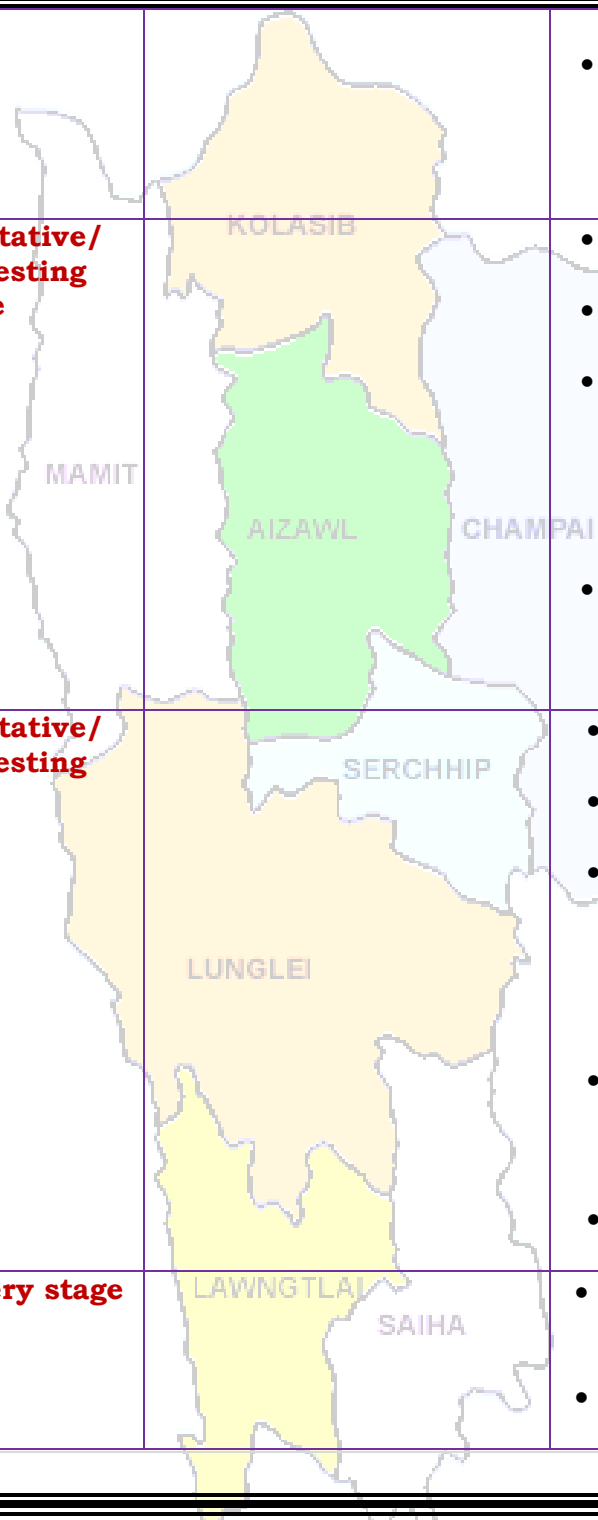	te hi ven tur. • Fungicide Carbendazim (0.1% emaw 1000ppm) a hun takah pek tur (thlakhat naah leh a seng hma ni 15 ah, chu chu vawi hnih kah tur).
Oil palm	**Vegetative/ harvesting stage**		• Oil palm kung bul chu tihfai a a zar thlak bawk tur. • Leitha chu thlai pakhatah 600:200:100g a pek tur. • Heng micro-nutrients zinc, copper, manganese, iron, boron leh molybdenum te hi an mamawh tawka pek tur, a huan pum a chhiat vek loh nan ven that bawk tur. • Oil palm rah chu a puitlin hunah te, a rawng inthlak hunah leh a thlum leh thur a pai tam hunah seng tur.
Balhla	**Vegetative/ harvesting**		• Balhla kung bul chu tihfai a a zar thlak bawk tur. • Leitha chu thlai pakhatah 600:200:100g a pek tur. • Heng micro-nutrients zinc, copper, manganese, iron, boron leh molybdenum te hi an mamawh tawka pek tur, a huan pum a chhiat vek loh nan ven that bawk tur. • A zar thlak ngun hian rannung leh natna lakah a veng a, chubak ah leitha a hek lova, thlai thar a ti tam bawk ani. • A rah chu a puitlin hunah leh a rawng eng a nih hunah seng tur.
Sapthei	**Nursery stage**		• A chi chu a rah hmin tha atanga lak ni se, ni 15-20 hnuah nursery siam tur. • A hnah 2/3 a rawn awm tan hnu ah polythene bag ah phunsawn

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			tur. • Polythene bag atangin thla ¾ hnu ah huan ah phun sawn leh tur. • Bawngek leitha chu khur khat ah 15g leh NPK 100:50:100g in kumkhat chhungin pek tur.
Lakhuihthei	**A par lai**		• A par chhuah hma nan chemical (Ethrel 10ppm+2% urea+0.04% sodium carbonate) chu pek tur. Tlai ah emaw thlaiin hnah 32 a neih hunah pek tur. • Chemical pek atangin ni 55-60 chhungin a par a chhuah thei ang. • Leitha chu thlai pakhat ah 60:50:60g a pek tur. • Thlai hnah leh a zar thi te chu paihfai a, hnim te tihfai bawk tur.
		Corm borer	• Carbofuran 3G chu hectare khatah 1.5kga.i a pek tur. Hemi hi a zung ah a tuina hnuhma a awmin pek tur
Cucurbitaceous crops	**A rah lai**		• Ni 7 danah tui chu tha taka pek tur. • Huan zau thamah chuan fruitfly leh pumpkin beetle ven nan carbaryl 0.2% leh malathion 0.15% chu chini tui litre khatah 10g a pawlhin kar khat danah leh a par tan tirhah leh a rah tan hunah kah tur. • Thlai pakhatah a par nasat lain urea chu 70g a pek tur.
Bawrhsaiabe	**A chin dan**	**1. Nursery tihfai a tui tlem pek tur.** **2. Phunsawn hnuah tui tha taka pek tur.**	• A kung bulthut ah hnim chheh darh tur. • A khat tawkin tui pek tur. • A tiak phunsawn te chu nil eh ruah lakah hliahkhuh tur.
		1. Aphids	• Surf tuiin thlai chu kah tur. • Heng insecticides Imidacloprid

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			200SL hi tui litre khatah 0.25ml in emaw Dimethoate 30% EC hi tui litre 10 ah 7ml a kah tur
		2. Flea beetle	• Pangang tui leh a puitling te chu a kung atangin thin thlak tur. • Heng insecticides Imidacloprid 200SL hi tui litre khatah 0.25ml in emaw Dimethoate 30% EC hi tui litre 10 ah 7ml a kah tur.
		3. Epilachna beetle	• A hnah a pangang leh a tui awm chu paihfai tur. • Methyl parathion 0.5% emaw Dimethoate 0.3% a kah tur.
		4. Leaf hopper	• Heng insecticides Imidacloprid 200SL hi tui litre khatah 0.25ml in emaw Dimethoate 30% EC hi tui litre 10 ah 7ml a kah tur.
		Bacterial wilt	• Huan chu fai taka dah a, thlai damlo te chu paihfai bawk tur. • Thlai damlo enkawl nan copper fungicide (2% Bordeaux mixture) a kah tur.bacterial witl chu root knot nematodes tam naah a awm thin a, hemi nematodes control hian bacterial wilt hi a veng thei. • Streptocycline sulphate chu tui litre khatah 0.3g leh Blitox 50 chu tui litre 15 ah 5g a pek tur.
		Damping off	• Thlai chi chu kg khatah Thiram 3g emaw Trichoderma viride4g+Metalaxyl 4g (Apron) a chiah tur. • Bordeaux mixture 1% emaw 2g Captan emaw 3 copper oxychloride chu tui litre khatah pawlhin a chin atanga ni 10-15 ah leih tur.
		Leaf spot and leaf blotch	• Dithane M-45 chu tui litre khatah 2.5g emaw Carbendazim 1g chu tui litre khatah pawlhin karkhat danah vawi 2/3 kah tur.

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			• Leaf spot tan Blitox 3g chu tui litre khata pawlhin kah tur.
		Leaf spot leh leaf blotch	• Tui litre khatah Dithane M-45 chu 2.5g emaw Bavistin chu 1g a pawlhin karkhat danah vawi 2/3 kah thin tur. • Leaf spot ah chuan tui litre khatah Blitox chu 3g pawlh a kah thin tur.
French bean	**A par lai**		• Bean hnah, a tang ro leh hnim te chu paihfai vek tur. • Lei chu boruak kal that nan laihphut thin tur. • A chin atanga ni 20-25 ah bean kung chu mau in a zamna siam tur.
		Blister beetle	• Rannung ho chu mankhawmin thah vek tur. • Cypermethrin 2g chu tui litre khata pawlhin kah thin tur
Bawkbawn	**A chin dan**		• Balu leh leitha chu lei nen a chawhpawlh hnu in 75-100cm a zau ah a phunna tur siam tur. A chinna lai chu Blue copper 100g tui litre 40 ah emaw formaldehyde nen a pawlhin leih tur. • A chi chu 5cm a inhlat a tuh in lei pangngai a vur leh tur.
Tomato	**A chin dan**		• Nursery tur chu lei dip tha darh leh tlema pawng tur (0.8m a zau leh 15cm a sei ni se). • Leitha 10kg leh bawngek leitha 15:15:15 leh carbofuran 2.5g chawhpawlh pek tur.
		Aphids	• Surf tuiin thlai chu kah tur. • Heng insecticides Imidacloprid 200SL hi tui litre khatah 0.25ml in emaw Dimethoate 30% EC hi tui litre 10 ah 7ml a kah tur.
		Epilachna beetle	• Methyl parathion 0.5% emaw

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			Dimethoate 0.3% a kah in flea beetle a veng thei
Buh	**Nursery stage**	**Pre kharif rice**	• A chi tha leh khat tha chauh hman tur. • Tui litre 10 ah chi (salt) 250g pawlhin chutah chuan chiah tur. • Bavistin 50WP @0.1% chu tui litre khatah 2g a pawlhin a chi chu chiah tur.
		Raised bed method	• A chin na tur chu 10m a sei ni se, 1.25m a zau leh tui luanna tur 20-30cm a zau siam tur. Hei hian a chi kal ral mai mai tur a veng. • Leitha pek hnu ah a chi damdawi a chiah te chu theh tur.
Vaimim	**A chin dan**		• Lei chu vawi 2/3 laihphut phawt tur. • A chi chu a line indawt a chin tur • A chi chu kg khatah Thiram 4g a chiah tur. • Hectare khatah buh chi chu 20-25kg hman tur. • Bawngek leitha chu hectare khatah 5-10t chu 80:60:40kg N, P2O5 leh K20 hman tur. Vaimim chin hma in lei nen tihpawlh tur. Nitrogen chu a dose chanve in a chin hnu ah pek tur, a bang 25% chu a hnu thlakhat ah leh a dang 25% chu a par hunah pek tur.
Sawhthing leh Aieng	**Land preparation**		• Thlai hnah, a tang ro leh hnim te chu paihfai vek tur. • Lei chu boruak kal that nan laihphut thin tur. • Nitrogen leitha chu an mamawh taw kanga pek tur.
		Thrips	• Roger emaw Monocrophos chu tui litre khatah 2.5ml a pawlhin kah tur.

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		Scales	• Quinalphos emaw Monocrotophos chu tui litre khatah 2.5ml a pawlhin kah tur.
Vawk	**Kumtluanin**	**Porcine Reproductive Respiratory Syndrome (PRRS).**	1. A natna vei vawk te chu thah a phum tur a ni.
	A puitling hun	**Swine fever.**	2. Vawk thla hnih a nihin SF vaccine pek tur a ni a, he vaccine hi thla ruk emaw kumtluanin pek chhunzawm tur
Bawng	**Kumtluanin**	**Foot and Mouth Disease (FMD)**	• Thla16 a upa an rih in FMD vaccine pek tur a nia, thla 6 danah pek chhunzawm tur a ni.
	A naupan lai	**Black Quarter (BQ)**	• Black Quarter Vaccine (BQ) + Thla ruk an tlin hunah vaccine lak tan tur. + Kumkhat hnu ah vaccine pek leh tur.
Ar	**Kumtluanin**	**Ranikhet Disease.**	1. Ar note an pian hlimin F_1 vaccine pek tur a nia an puitlin hunah R_2B pek leh tur a ni.
		Coccidiosis	2. Amprolium emaw coccidiostat pek tur.

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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: 15- 19 August, 2015**

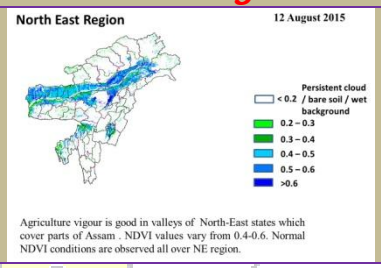
Bulletin No: -544/2015/ Bulletin/English **Date of issue: 14th August, 2015**

Parameters	15.08.2015	16.08.2015	17.08.2015	18.08.2015	19.08.2015
Rainfall (mm)	0	0	0	0	10
Max Temp (oC)	30	29	28	28	24
Min Temp (oC)	20	21	19	20	20
Cloud Coverage	Partially clear	Mainly cloudy	Partially clear	Mainly cloudy	Mainly cloudy
Max RH (%)	98	98	99	98	98
Min RH (%)	58	71	66	72	88
Wind Speed (KmpH)	2	2	4	4	4
***Wind Direction**	E	S-E	S-E	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 MONSOON- July 1-31, 2015 (*Percent of deviation from normal in parenthesis*)

Aizawl- 412.50mm (341.8mm)	**Champhai- 105.47mm (250.30mm)**	**Saiha- 307.78 mm (87.2mm)**	**Kolasib- 331.10mm (380.9mm)**
Lawngtlai-291.28mm (285.5mm)	**Lunglei-326.52mm (186.21mm)**	**Mamit-204.84mm (442.80mm)**	**Serchhip-189.57mm (25.9mm)**

Weather summary of the past three days	Weather forecast valid from 15th August, 2015 To 19th August, 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 24-30^{0}C and 19-21^{0}C. Maximum relative humidity is expected in the range of 98-99% and minimum may from 58-88%. Wind direction would be easterly to southeasterly with the wind speed of 2-4 km per hour. Mainly cloudy sky will prevail during the next five days. ***Weekly cumulative rainfall:*** **10.0 mm**
NDVI for Mizoram	 NDVI for Mizoram is less than normal NDVI. Value shown that NDVI is zero. So, it represents "Bare Soil".

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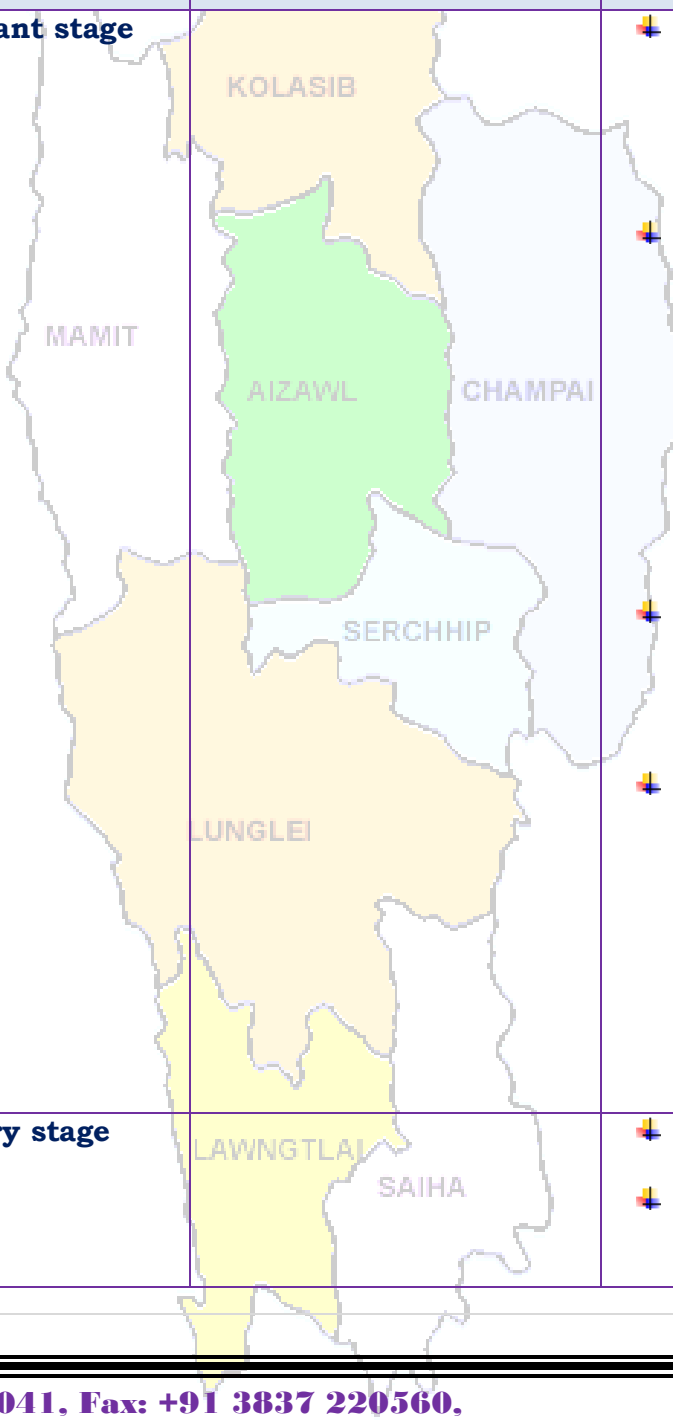
Main Crop/ Animal /Fisheries	Stage	Cultural practices/ Pest/ Diseases	Agricultural / Horticultural/ animal husbandry advisories
Khasi Mandarin and acid lime	**Transplant stage**		▪ Well rotten FYM @ 500g/pit is applied at 15-20 days before planting along with 12 g each of N and K2O/plant and 4 g of P2O5/plant. ▪ This root stock has proved very successful for raising some sweet orange and mandarin orange varieties This root stock is resistant to Tristeza virus but highly susceptible to exocortis. It is also recommended for this region till any other rootstock is found to be promising. ▪ Citrus plantations are seldom put under planned cultivation, and plantations are always kept under sod or raised as mixed crops ▪ Layered plants about one year old, are also selected in case of lemon, lime etc. Vigorous plants are always preferred for better growth. While placing the plants in the pits care should be taken that bud union remains 12-15 cm above the ground level.
Oil plam	**Nursery stage**		▪ Remove the exocarp and mesocarp with knife. ▪ Dry the seeds on concrete or wooden floors under shade for 2 days and stored for 3-9

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		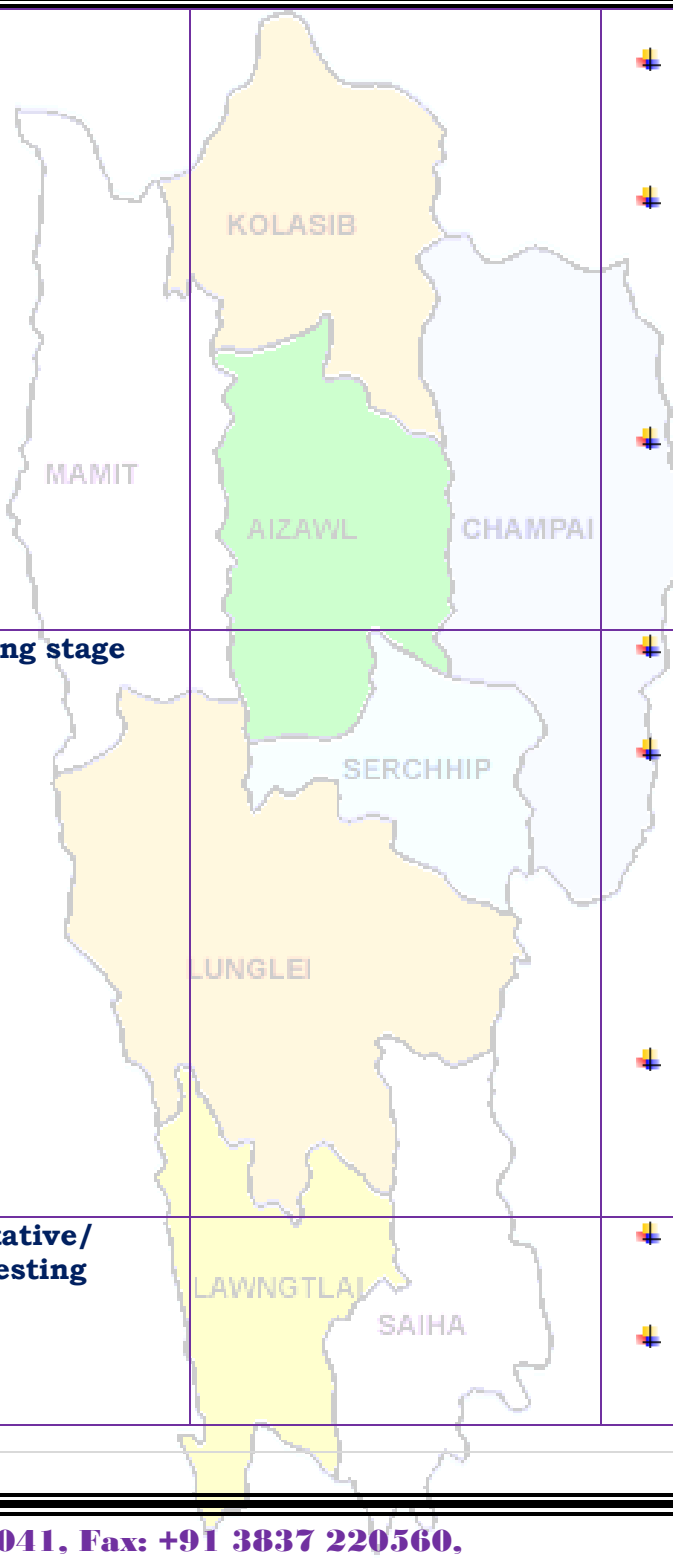	months. • Seeds are soaked in water for 5 days (changing the water daily) and spread out to dry for 24 hours. • Dried seeds are put in 250 gauge and 23 X 13 cm size polythene bags filled with top soil, sand and well decomposed cattle manure in equal proportions and placed for germination. • Germination (90-95 %) starts 10-12 days. Apply fertilizer mixture containing 15:15:6 of NPK @ 8 g in 5 litres of water for 100 seedlings
Oil plam	**Flowering stage**		• 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).

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		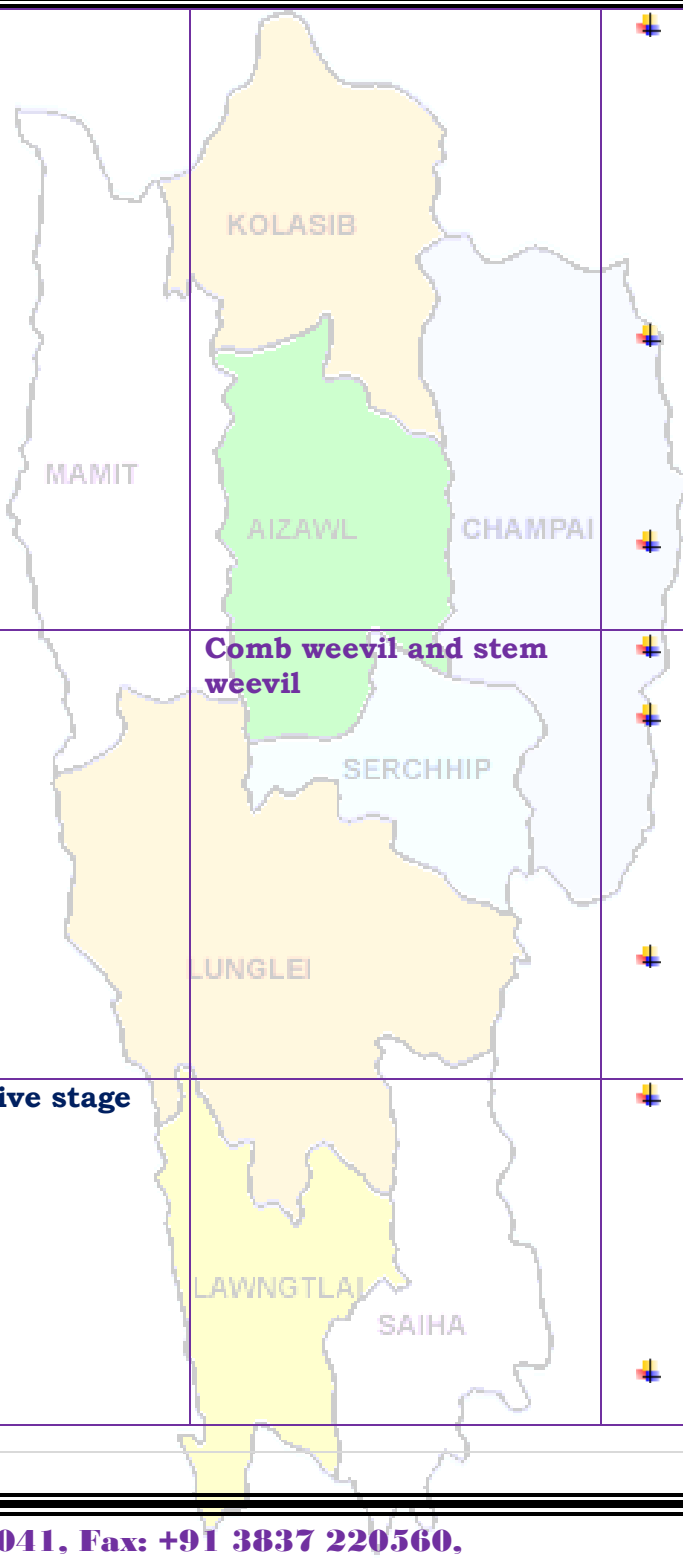	▪ Apply micro-nutrients viz. zinc, copper, manganese, iron, boron and molybdenum are required in ample quantities for supplying nutrients and also reduce serious disorders which may lead to decline of the whole orchard. ▪ Pruning on a regular basis removes unwanted or a sucker, keep production mats in optimum condition, saves fertilizer, reduces pest and disease. ▪ Fruits are harvested when they attain full size, develop attractive yellow colour.
		Comb weevil and stem weevil	▪ Applications of neem powder effectively controlled weevils. ▪ Application of 60 to 100 g of neem seed powder or neem cake at planting and then at 4 months intervals significantly diminished pest damage and increased yields. ▪ Application of over 100 g or neem oil was phytotoxic (harmful to plants) and uneconomical.
Passion Fruit	**Vegetative stage**		▪ Except for a space of about 60-90cm radius around the base of each vine which has to be kept clean weeded at all times, the rest of the plantation maybe allowed to have an undergrowth of grass. ▪ Application of 217gms, 312 gms, 167gms of Urea, Super

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		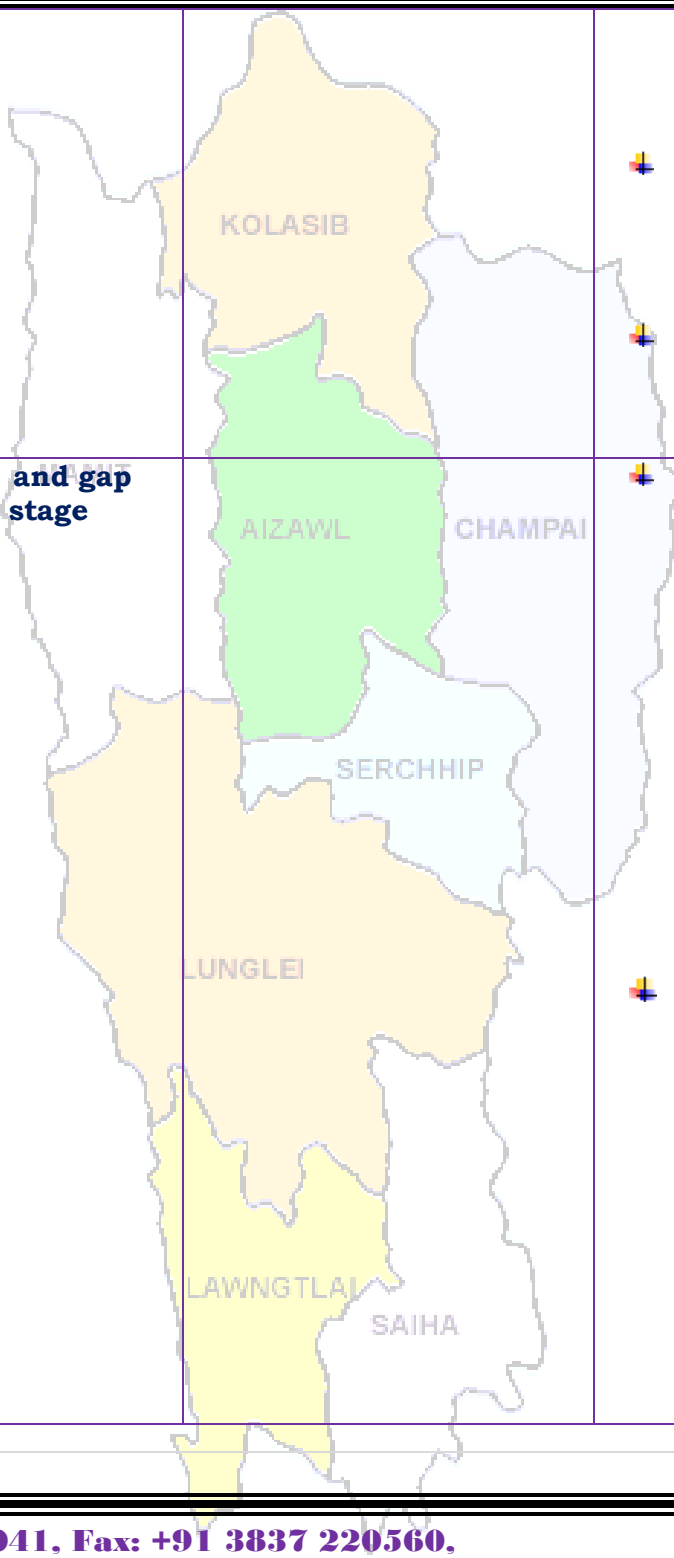	and Potash respectively per vine annually in splits for the purple and the yellow variety. For the Kavari variety 238.7gm, 375gms,167gms of Urea super, Potash respectively per vine per year in split doses. **Trellies making** : Establishment of proper and durable frame work for the purpose is very necessary.
Pineapple	**Planting and gap filling stage**		Double row planting is done by alternating two rows of crops by a wider mound or path. For optimum plant density, particularly in the hills. It is advisable to space two rows of crops at a distance of 60 cm, followed by a mound or flat path of 90 cm width. Within the row plants are spaced 30 cm apart. In this way 43,500 plants can be accommodated in one hectare of land. The pineapple suckers are allowed to dry at least for 25-30 days before planting. In fact, if fresh suckers are planted in moist soil, or if more moisture is available as in rainy season, they may begin to decay. To facilitate better rooting, it is necessary to strip off the scale leaves from the basal portions of the planting materials. After removing

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		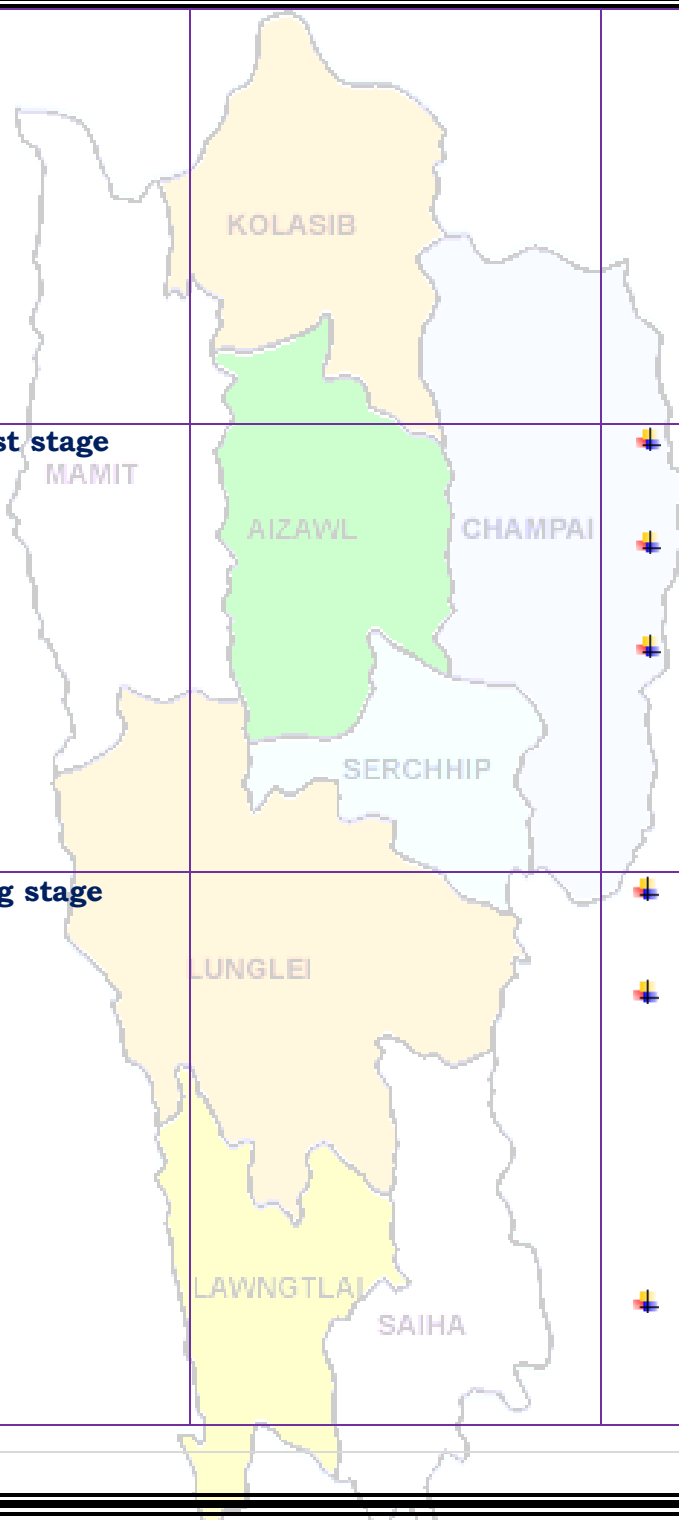	scaly leaves, the planting material should be treated with Difolation (0.2%) solution to avoid heart rot disease. Planting is usually done during monsoon, preferably in the beginning or later part of monsoon such as in August. Periods of heavy rainfall like July should be avoided for pineapple plantation.
Colocasia	**Harvest stage**		✦ Colocasia becomes ready for harvest five to six months after planting. ✦ The mother corms and side tubers are separated after harvest. ✦ The side tubers to be used as planting materials are usually separated from the mother corm and stored. Keep seed tuber in sand spread over the floor to avoid rotting.
French bean	**sowing stage**		✦ Land is ploughed to a fine tilth and divided into plots of convenient size. ✦ Ridges and furrows are prepared by ploughing after a basal dose application of farmyard manure. Field is irrigated once and seeds are sown under optimum moisture condition on side of ridges 2-3 days after irrigation. ✦ Spacing and seed rate vary with varieties. Early varieties are sown at a spacing of 45-60 cm x 10-15 cm and seed

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		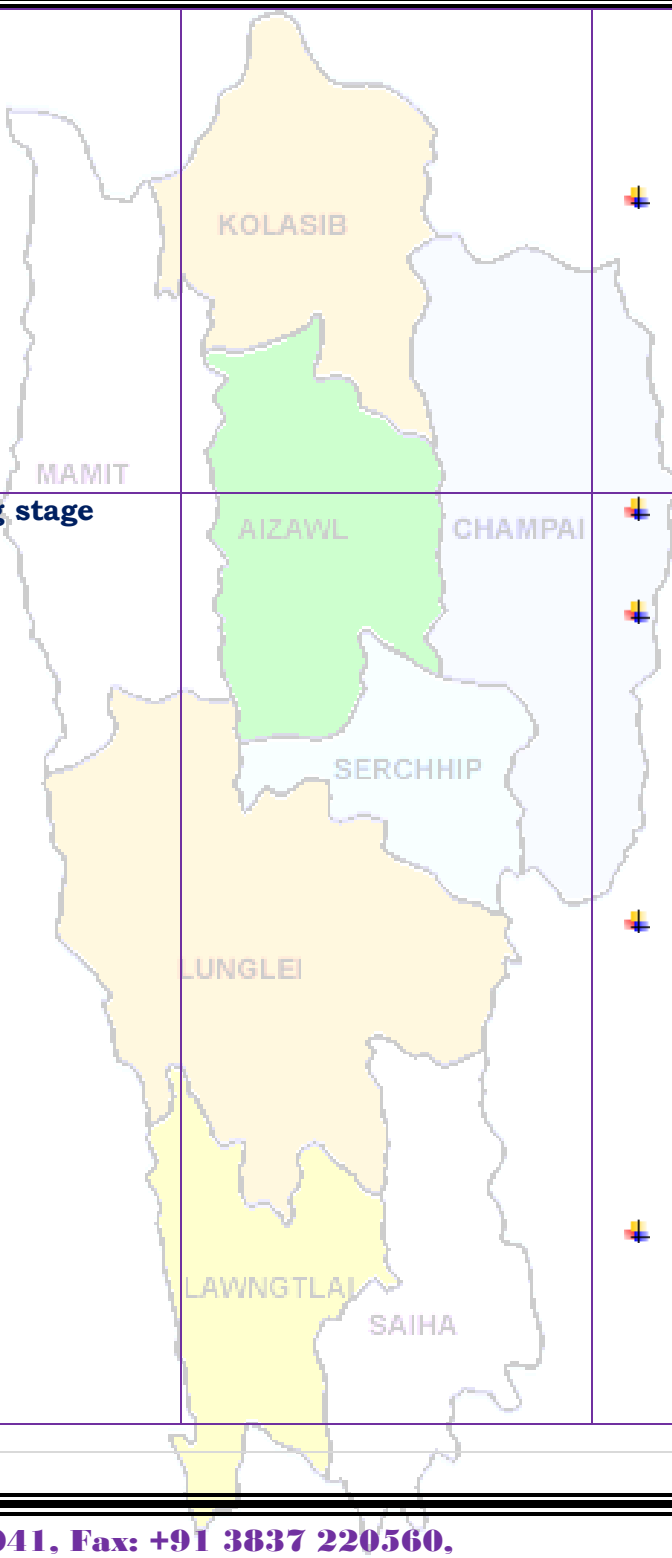	rate required is 80-90 kg / ha. Pole types are sown at 1.0 m apart in hills @ 3-4 plants / hill and seed rate is much less (25-30 kg/ha.). In addition to 20-25 t. of farmyard manure, 50 kg N, 75 kg, P2O5 and 75 kg K2O are recommended. Half of N along with full P and K should be applied as basal dose at the time of making ridges and furrows or one or two weeks after germination.
Cowpea	**sowing stage**		Land is ploughed to a fine tilth and divided into plots of convenient size. Ridges and furrows are prepared by ploughing after a basal dose application of farmyard manure. Field is irrigated once and seeds are sown under optimum moisture condition on side of ridges 2-3 days after irrigation. Spacing and seed rate vary with varieties. Early varieties are sown at a spacing of 45-60 cm x 10-15 cm and seed rate required is 80-90 kg / ha. Pole types are sown at 1.0 m apart in hills @ 3-4 plants / hill and seed rate is much less (25-30 kg/ha.). In addition to 20-25 t. of farmyard manure, 50 kg N, 75 kg, P2O5 and 75 kg K2O are recommended. Half of N along with full P and K should be applied as basal

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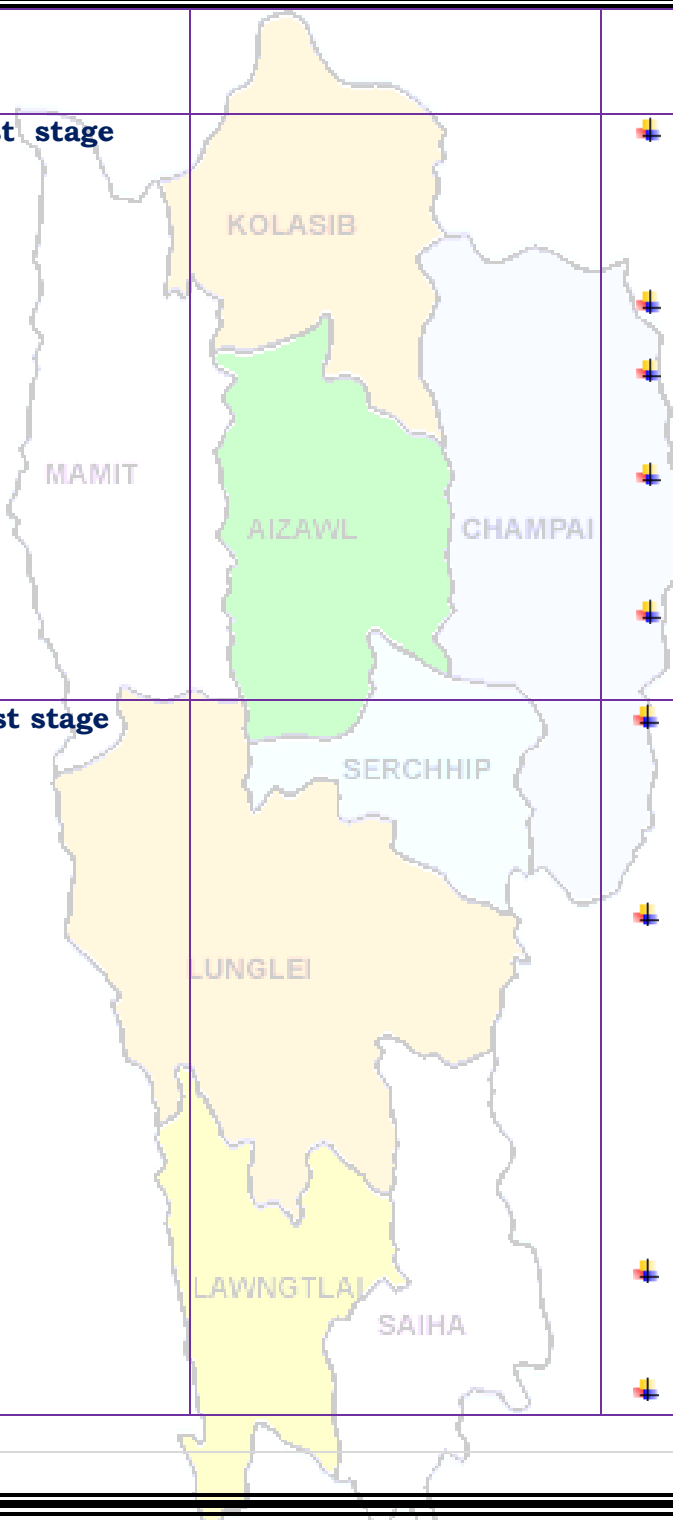
			dose at the time of making ridges and furrows or one or two weeks after germination.
Brinjal	**Harvest stage**		✦ Brinjal fruits are harvested at immature stage after attaining full size, but before loosing its glossy appearance. ✦ Dullness of fruit indicates over maturity. ✦ Usually fruits are harvested along with its stalk with a slight twist by hand. ✦ The harvested fruits are graded and packed in baskets or in loose gunny bags. ✦ Care should be taken to remove the fruits affected by Phomopsis blight.
Tomato	**Harvest stage**		✦ Immature: Before the seeds fully developed and before the jelly-like substances surrounding the seeds were formed. ✦ Mature green: The fully grown fruit with a brownish ring at stemscar. Removal of calyx, light green colour at blossom end changed yellowish green and seeds surrounded by jelly-like substances filling the seed cavity. ✦ Turning: ¼ of the surface at blossom end shows pink (breaker stage). ✦ Pink: ¾ of the surface shows

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			pink Hard ripe: Nearly all red or pink with firm flesh Over ripe: Fully coloured and soft.
Rice	**Panicle initiation stage**	**Kharif Rice**	Apply split dose of nitrogenous fertilizer. Use cracker or shining rope to resist from the attack of birds. Remove excess water from the field and make a drain in four corner of the field Planning for second crop like toria or pea.
Maize	**Harvest stage**		Cobs which are to be utilized as grain should be harvested when the grains are almost dry or containing roughly 20 % moisture. The appearance in the grains of composite and high yielding varieties however may be misleading as grains become dry while the stalk and leaves are still green. The cobs are removed from the standing crop and sun dried before shelling, otherwise retained in their jackets, if kept for seed or to be consumed or utilized at a later stage.
Kharif pulses (Green gram, Black gram and Rajma)	**flowering stage**		One or two hand hoeing and weeding should be done, depending upon soil type and extent of weed infestation. Weeds can also be controlled effectively by the application

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			of TOK-E-25 at the rate of 10 ml dissolved in 1 liter of water as pre-emergence spray. ➢ Provide irrigation in dry condition or dry spell. ➢ Provide 2% urea solution for better growth.
Ginger and turmeric	**Vegetative stage**		➢ Remove unwanted plant near base of the plant and cut dead branches. ➢ Pre-emergence application of Atrazine (Atratraf 50 wp, Gesaprim 500 fw) @ of 1.0-1.5 kg a.i ha-1in 600 litre water, Alachlor (Lasso) @ 2-2.5 kg a.i ha-1, Metolachlor (Dual) @ 1.5-2.0 kg a.i ha-1, Pendamethalin (Stomp) @ 1-1.5 kg a.i. ha-1arge effective way for control of many annual and broad leaved weeds. ➢ Earting up of soil along with fertilizer mixture.
		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 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

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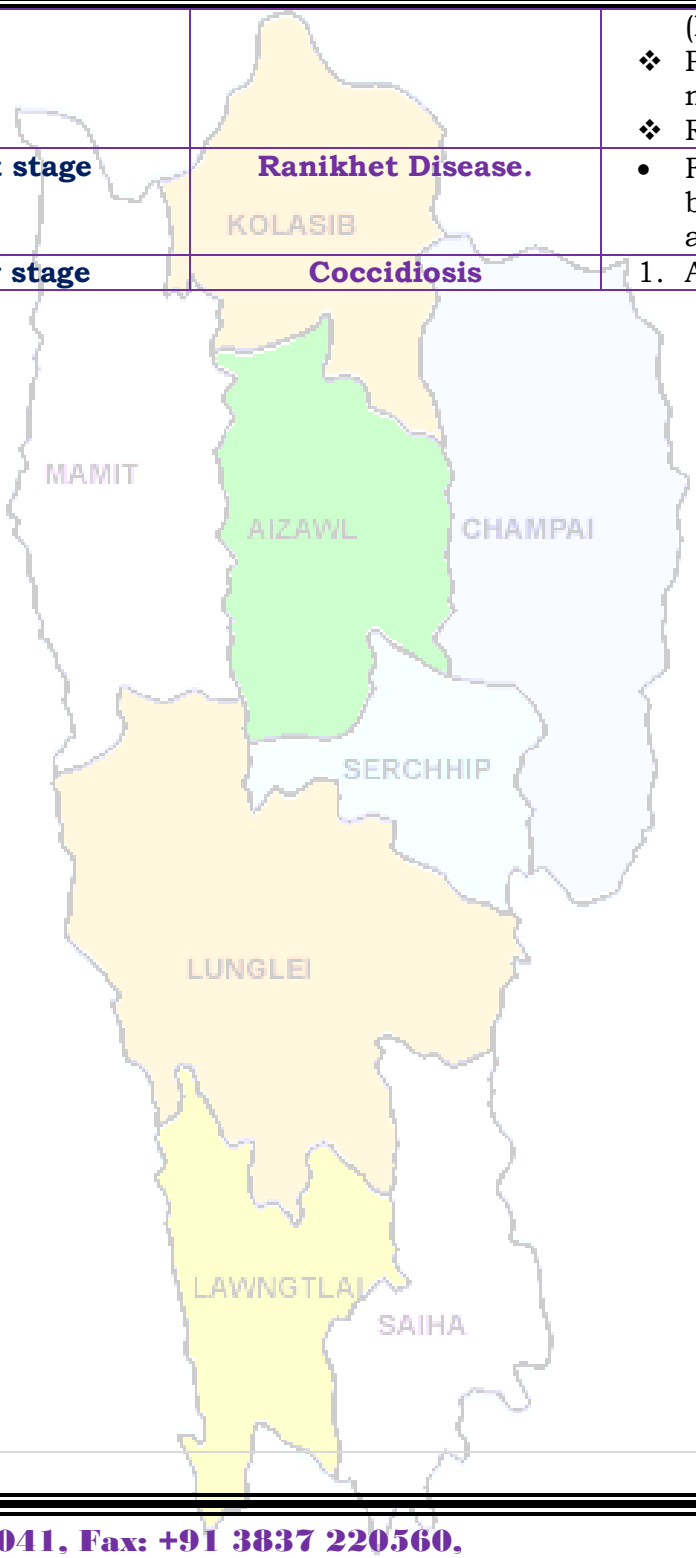
			(BQV). ❖ Primary vaccination 6 month or above ❖ Revaccination annually
Poultry	**Adult stage**	**Ranikhet Disease.**	• F1 vaccine at (1-6) days of birth and R_2B vaccine for adult birds.
	Early stage	**Coccidiosis**	1. Amprolium or coccidiostat



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

District: Saiha **Period: 15- 19 August, 2015**

Bulletin No: -544/2015/ Bulletin/Mizo **Date of issue: 14th August, 2015**

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Min RH (%)	58	71	66	72	88
Wind Speed (KmpH)	2	2	4	4	4
***Wind Direction**	E	S-E	S-E	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 MONSOON- July 1-31, 2015 (*Percent of deviation from normal in parenthesis*)

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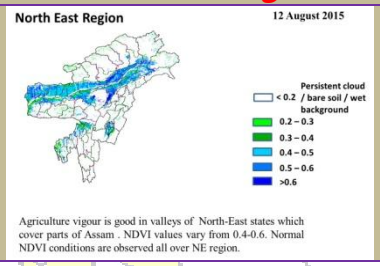
Lawngtlai-291.28mm (285.5mm)	Lunglei-326.52mm (186.21mm)	Mamit-204.84mm (442.80mm)	Serchhip-189.57mm (25.9mm)

Ni thum kaltha sik leh sa dinhmun tlangpui	August 15, 2015 atanga August 19, 2015 sik leh sa dinhmun hmuhlawk dan	
	Ni 1 lo awm turah hian ruahtui a tlak beisei a ni. Khua a lum lai berin 24-30^{0}C a ni ang a.A vawh lai ber in 19-21^{0}C ni tur ah beisei a ni.RH san lai berin 98-99% leh a hniam lai berin 58-88% ni tur a beisei niin. Thli tleh dan kawng zawng chu chhimchhak lam atangin a nat zawng chu darkar 2-4 km ni tur a beisei niin. Ni nga chhung lo awm tur ah hian chhum tlem a lan beisei a ni. ***Weekly cumulative rainfall:*** **10.0mm**	
NDVI for Mizoram and SPI		NDVI for Mizoram is less than normal NDVI. Value shown that NDVI is zero. So, it represents "Bare Soil".

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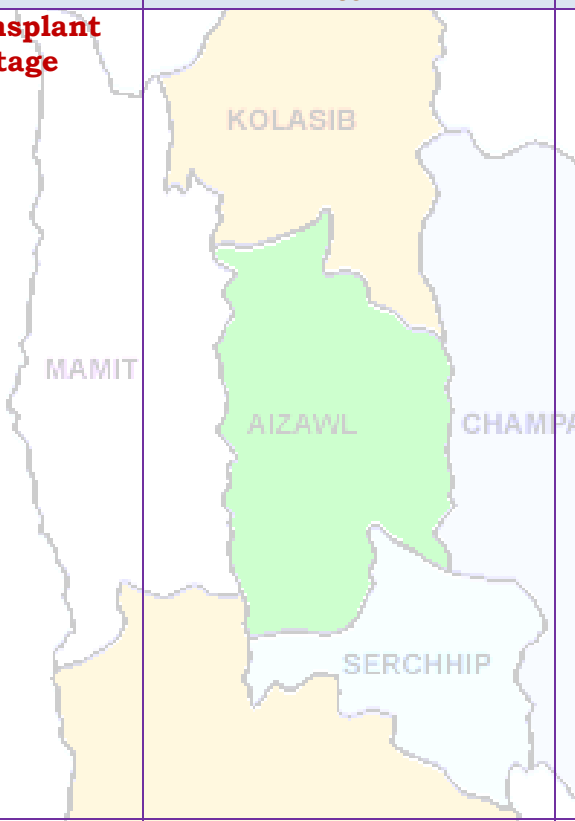
Thlai/ ran /sangha	Spat zawng	Hmalakna tur/ rannung leh natna hrik awm thei te	Agricultural/Horticultural/ animal husbandry atana thurawn
Khasi Mandarin and acid lime	**Transplant stage**		• A chi: A chi chu lakchhuah anih veleh nurseey ah a thuk zawng 1.5-2cm leh 10X5cm a inhlat a chin tur. A rawn chawr chu polythene bag ah hnah 4-6 a neih hunah phun sawn tur. • Nursery chu rannung leh a damlohna dang laka ven nan ser huan atanga meter 500 a hla ah dah tur. • Lei, balu leh bawngek leitha chu a inzat theuha pawlhin pek tur. • Bawngek leitha chu thlai pakhat ah 600:200:100g a pek tur. • Certified thlai chi chauh hman tur. • Ser kung bula tuitling chu paihfai vek tur. • A tiak inchen tlang chauh phun atan hman tur. • A zar tliak leh hnip chu paih fai zel tur. • Thlai chu hrisel taka enkawl tur.
	Vegetative stage		• Gibberellins (10ppm) chu a rah khal that nan te, a rawng insiam nan te kah tur. • Thlai in tui tha taka an hmuh theih nan drip irrigation hman tur. • Ser rah tla hi ser kung khatah vawi 2 a thleng thin a, hemi ven nan hian GA3, urea, benomyl leh carbendazim a hun takah pek tur, • Heng rannung blackfly(kolshi), citrus psylla, leaf miner, bark eating caterpillar, fruit sucking moth, mites, twing blight,

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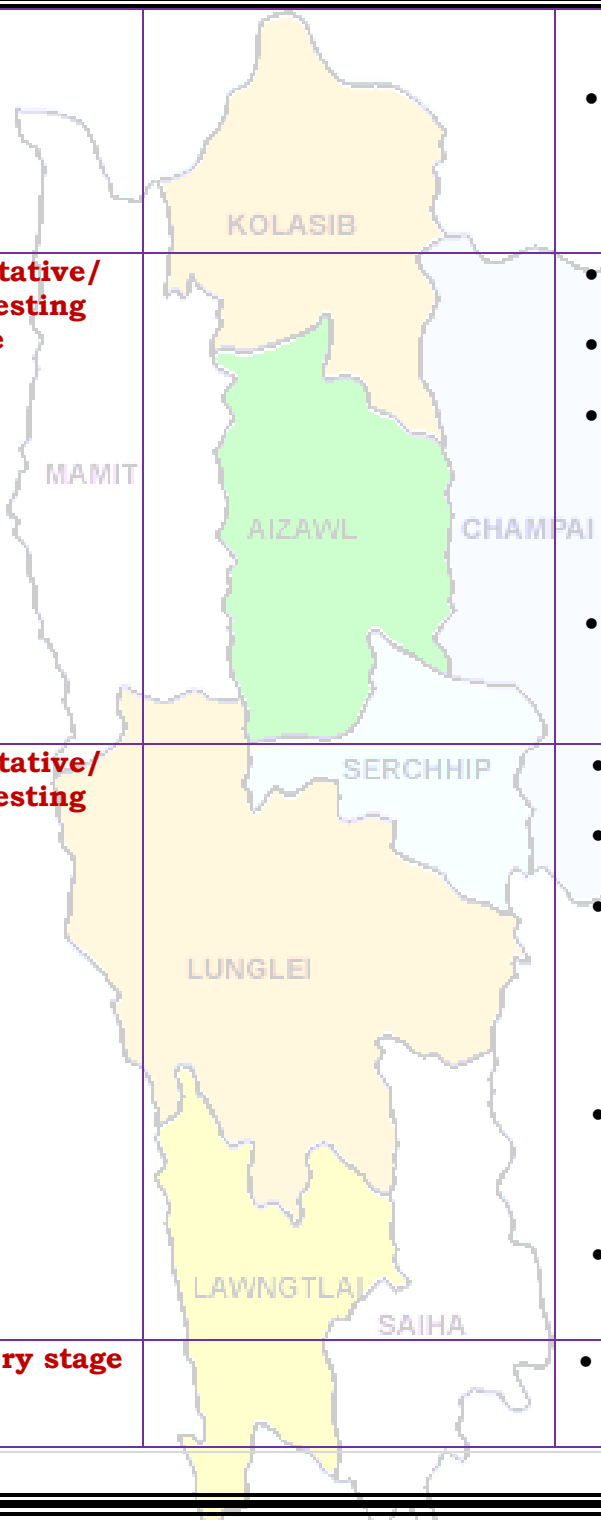
			gummosis, root rot leh collar rot te hi ven tur. • Fungicide Carbendazim (0.1% emaw 1000ppm) a hun takah pek tur (thlakhat naah leh a seng hma ni 15 ah, chu chu vawi hnih kah tur).
Oil palm	**Vegetative/ harvesting stage**		• Oil palm kung bul chu tihfai a a zar thlak bawk tur. • Leitha chu thlai pakhatah 600:200:100g a pek tur. • Heng micro-nutrients zinc, copper, manganese, iron, boron leh molybdenum te hi an mamawh tawka pek tur, a huan pum a chhiat vek loh nan ven that bawk tur. • Oil palm rah chu a puitlin hunah te, a rawng inthlak hunah leh a thlum leh thur a pai tam hunah seng tur.
Balhla	**Vegetative/ harvesting**		• Balhla kung bul chu tihfai a a zar thlak bawk tur. • Leitha chu thlai pakhatah 600:200:100g a pek tur. • Heng micro-nutrients zinc, copper, manganese, iron, boron leh molybdenum te hi an mamawh tawka pek tur, a huan pum a chhiat vek loh nan ven that bawk tur. • A zar thlak ngun hian rannung leh natna lakah a veng a, chubak ah leitha a hek lova, thlai thar a ti tam bawk ani. • A rah chu a puitlin hunah leh a rawng eng a nih hunah seng tur.
Sapthei	**Nursery stage**		• A chi chu a rah hmin tha atanga lak ni se, ni 15-20 hnuah nursery siam tur.

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			• A hnah 2/3 a rawn awm tan hnu ah polythene bag ah phunsawn tur. • Polythene bag atangin thla ¾ hnu ah huan ah phun sawn leh tur. • Bawngek leitha chu khur khat ah 15g leh NPK 100:50:100g in kumkhat chhungin pek tur.
Lakhuihthei	**A par lai**		• A par chhuah hma nan chemical (Ethrel 10ppm+2% urea+0.04% sodium carbonate) chu pek tur. Tlai ah emaw thlaiin hnah 32 a neih hunah pek tur. • Chemical pek atangin ni 55-60 chhungin a par a chhuah thei ang. • Leitha chu thlai pakhat ah 60:50:60g a pek tur. • Thlai hnah leh a zar thi te chu paihfai a, hnim te tihfai bawk tur.
		Corm borer	• Carbofuran 3G chu hectare khatah 1.5kga.i a pek tur. Hemi hi a zung ah a tuina hnuhma a awmin pek tur
Cucurbitaceous crops	**A rah lai**		• Ni 7 danah tui chu tha taka pek tur. • Huan zau thamah chuan fruitfly leh pumpkin beetle ven nan carbaryl 0.2% leh malathion 0.15% chu chini tui litre khatah 10g a pawlhin kar khat danah leh a par tan tirhah leh a rah tan hunah kah tur. • Thlai pakhatah a par nasat lain urea chu 70g a pek tur.
Bawrhsaiabe	**A chin dan**	**1. Nursery tihfai a tui tlem pek tur.** **2. Phunsawn hnuah tui tha taka pek tur.**	• A kung bulthut ah hnim chheh darh tur. • A khat tawkin tui pek tur. • A tiak phunsawn te chu nil eh ruah lakah hliahkhuh tur.

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		1. Aphids	• Surf tuiin thlai chu kah tur. • Heng insecticides Imidacloprid 200SL hi tui litre khatah 0.25ml in emaw Dimethoate 30% EC hi tui litre 10 ah 7ml a kah tur
		2. Flea beetle	• Pangang tui leh a puitling te chu a kung atangin thin thlak tur. • Heng insecticides Imidacloprid 200SL hi tui litre khatah 0.25ml in emaw Dimethoate 30% EC hi tui litre 10 ah 7ml a kah tur.
		3. Epilachna beetle	• A hnah a pangang leh a tui awm chu paihfai tur. • Methyl parathion 0.5% emaw Dimethoate 0.3% a kah tur.
		4. Leaf hopper	• Heng insecticides Imidacloprid 200SL hi tui litre khatah 0.25ml in emaw Dimethoate 30% EC hi tui litre 10 ah 7ml a kah tur.
		Bacterial wilt	• Huan chu fai taka dah a, thlai damlo te chu paihfai bawk tur. • Thlai damlo enkawl nan copper fungicide (2% Bordeaux mixture) a kah tur.bacterial witl chu root knot nematodes tam naah a awm thin a, hemi nematodes control hian bacterial wilt hi a veng thei. • Streptocycline sulphate chu tui litre khatah 0.3g leh Blitox 50 chu tui litre 15 ah 5g a pek tur.
		Damping off	• Thlai chi chu kg khatah Thiram 3g emaw Trichoderma viride4g+Metalaxyl 4g (Apron) a chiah tur. • Bordeaux mixture 1% emaw 2g Captan emaw 3 copper oxychloride chu tui litre khatah pawlhin a chin atanga ni 10-15 ah leih tur.
		Leaf spot and leaf blotch	• Dithane M-45 chu tui litre khatah

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			2.5g emaw Carbendazim 1g chu tui litre khatah pawlhin karkhat danah vawi 2/3 kah tur. • Leaf spot tan Blitox 3g chu tui litre khata pawlhin kah tur.
		Leaf spot leh leaf blotch	• Tui litre khatah Dithane M-45 chu 2.5g emaw Bavistin chu 1g a pawlhin karkhat danah vawi 2/3 kah thin tur. • Leaf spot ah chuan tui litre khatah Blitox chu 3g pawlh a kah thin tur.
French bean	**A par lai**		• Bean hnah, a tang ro leh hnim te chu paihfai vek tur. • Lei chu boruak kal that nan laihphut thin tur. • A chin atanga ni 20-25 ah bean kung chu mau in a zamna siam tur.
		Blister beetle	• Rannung ho chu mankhawmin thah vek tur. • Cypermethrin 2g chu tui litre khata pawlhin kah thin tur
Bawkbawn	**A chin dan**		• Balu leh leitha chu lei nen a chawhpawlh hnu in 75-100cm a zau ah a phunna tur siam tur. A chinna lai chu Blue copper 100g tui litre 40 ah emaw formaldehyde nen a pawlhin leih tur. • A chi chu 5cm a inhlat a tuh in lei pangngai a vur leh tur.
Tomato	**A chin dan**		• Nursery tur chu lei dip tha darh leh tlema pawng tur (0.8m a zau leh 15cm a sei ni se). • Leitha 10kg leh bawngek leitha 15:15:15 leh carbofuran 2.5g chawhpawlh pek tur.
		Aphids	• Surf tuiin thlai chu kah tur. • Heng insecticides Imidacloprid 200SL hi tui litre khatah 0.25ml

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			in emaw Dimethoate 30% EC hi tui litre 10 ah 7ml a kah tur.
		Epilachna beetle	• Methyl parathion 0.5% emaw Dimethoate 0.3% a kah in flea beetle a veng thei
Buh	**Nursery stage**	**Pre kharif rice**	• A chi tha leh khat tha chauh hman tur. • Tui litre 10 ah chi (salt) 250g pawlhin chutah chuan chiah tur. • Bavistin 50WP @0.1% chu tui litre khatah 2g a pawlhin a chi chu chiah tur.
		Raised bed method	• A chin na tur chu 10m a sei ni se, 1.25m a zau leh tui luanna tur 20-30cm a zau siam tur. Hei hian a chi kal ral mai mai tur a veng. • Leitha pek hnu ah a chi damdawi a chiah te chu theh tur.
Vaimim	**A chin dan**		• Lei chu vawi 2/3 laihphut phawt tur. • A chi chu a line indawt a chin tur • A chi chu kg khatah Thiram 4g a chiah tur. • Hectare khatah buh chi chu 20-25kg hman tur. • Bawngek leitha chu hectare khatah 5-10t chu 80:60:40kg N, P2O5 leh K20 hman tur. Vaimim chin hma in lei nen tihpawlh tur. Nitrogen chu a dose chanve in a chin hnu ah pek tur, a bang 25% chu a hnu thlakhat ah leh a dang 25% chu a par hunah pek tur.
Sawhthing leh Aieng	**Land preparation**		• Thlai hnah, a tang ro leh hnim te chu paihfai vek tur. • Lei chu boruak kal that nan laihphut thin tur. • Nitrogen leitha chu an mamawh taw kanga pek tur.
		Thrips	• Roger emaw Monocrophos chu tui

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			litre khatah 2.5ml a pawlhin kah tur.
		Scales	• Quinalphos emaw Monocrotophos chu tui litre khatah 2.5ml a pawlhin kah tur.
Vawk	**Kumtluanin**	**Porcine Reproductive Respiratory Syndrome (PRRS).**	1. A natna vei vawk te chu thah a phum tur a ni.
	A puitling hun	**Swine fever.**	2. Vawk thla hnih a nihin SF vaccine pek tur a ni a, he vaccine hi thla ruk emaw kumtluanin pek chhunzawm tur
Bawng	**Kumtluanin**	**Foot and Mouth Disease (FMD)**	• Thla16 a upa an rih in FMD vaccine pek tur a nia, thla 6 danah pek chhunzawm tur a ni.

	A naupan lai	**Black Quarter (BQ)**	• Black Quarter Vaccine (BQ)
			  Thla ruk an tlin hunah vaccine lak tan tur.
			  Kumkhat hnu ah vaccine pek leh tur.

Ar	**Kumtluanin**	**Ranikhet Disease.**	1. Ar note an pian hlimin F_1 vaccine pek tur a nia an puitlin hunah R_2B pek leh tur a ni.
		Coccidiosis	2. Amprolium emaw coccidiostat pek tur.

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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:** 15- 19 August, 2015

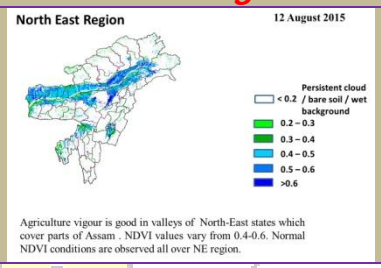
Bulletin No: -544/2015/ Bulletin/English **Date of issue:** 14th August, 2015

Parameters	15.08.2015	16.08.2015	17.08.2015	18.08.2015	19.08.2015
Rainfall (mm)	4	3	0	0	0
Max Temp (oC)	29	28	28	27	26
Min Temp (oC)	20	20	19	20	20
Cloud Coverage	Mainly cloudy	Mainly cloudy	Mainly cloudy	Mainly cloudy	Mainly cloudy
Max RH (%)	99	100	100	100	99
Min RH (%)	59	70	69	72	88
Wind Speed (KmpH)	2	2	2	2	3
*Wind Direction	S-E	S	S-E	S-E	S

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 MONSOON- July 1-31, 2015 (*Percent of deviation from normal in parenthesis*)

Aizawl- 412.50mm (341.8mm)	Champhai- 105.47mm (250.30mm)	Saiha- 307.78 mm (87.2mm)	Kolasib- 331.10mm (380.9mm)
Lawngtlai-291.28mm (285.5mm)	Lunglei-326.52mm (186.21mm)	Mamit-204.84mm (442.80mm)	Serchhip-189.57mm (25.9mm)

Weather summary of the past three days	Weather forecast valid from 15th August, 2015 To 19th August, 2015.
	There are chances of light rainfall during the next 2 days. The maximum and minimum temperatures for the next 5 days may range for 26-29^{0}C and 19-20^{0}C. Maximum relative humidity is expected in the range of 99-100% and minimum may from 59-88%. Wind direction would be southerly to southeasterly with the wind speed of 2-3 km per hour. Mainly cloudy sky will prevail during the next five days. ***Weekly cumulative rainfall:*** **07.0 mm**
NDVI for Mizoram	 NDVI for Mizoram is less than normal NDVI. Value shown that NDVI is zero. So, it represents "Bare Soil".

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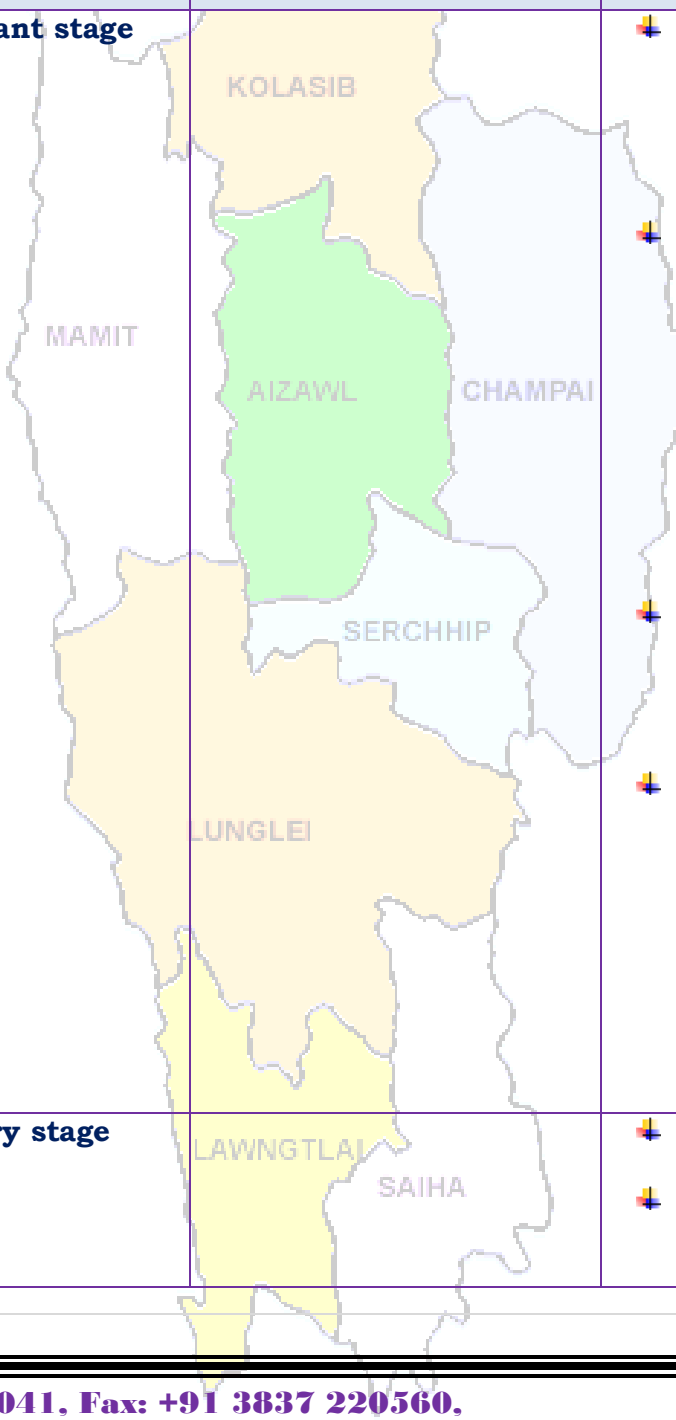
Main Crop/ Animal /Fisheries	Stage	Cultural practices/ Pest/ Diseases	Agricultural / Horticultural/ animal husbandry advisories
Khasi Mandarin and acid lime	**Transplant stage**		▪ Well rotten FYM @ 500g/pit is applied at 15-20 days before planting along with 12 g each of N and K2O/plant and 4 g of P2O5/plant. ▪ This root stock has proved very successful for raising some sweet orange and mandarin orange varieties This root stock is resistant to Tristeza virus but highly susceptible to exocortis. It is also recommended for this region till any other rootstock is found to be promising. ▪ Citrus plantations are seldom put under planned cultivation, and plantations are always kept under sod or raised as mixed crops ▪ Layered plants about one year old, are also selected in case of lemon, lime etc. Vigorous plants are always preferred for better growth. While placing the plants in the pits care should be taken that bud union remains 12-15 cm above the ground level.
Oil plam	**Nursery stage**		▪ Remove the exocarp and mesocarp with knife. ▪ Dry the seeds on concrete or wooden floors under shade for 2 days and stored for 3-9

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		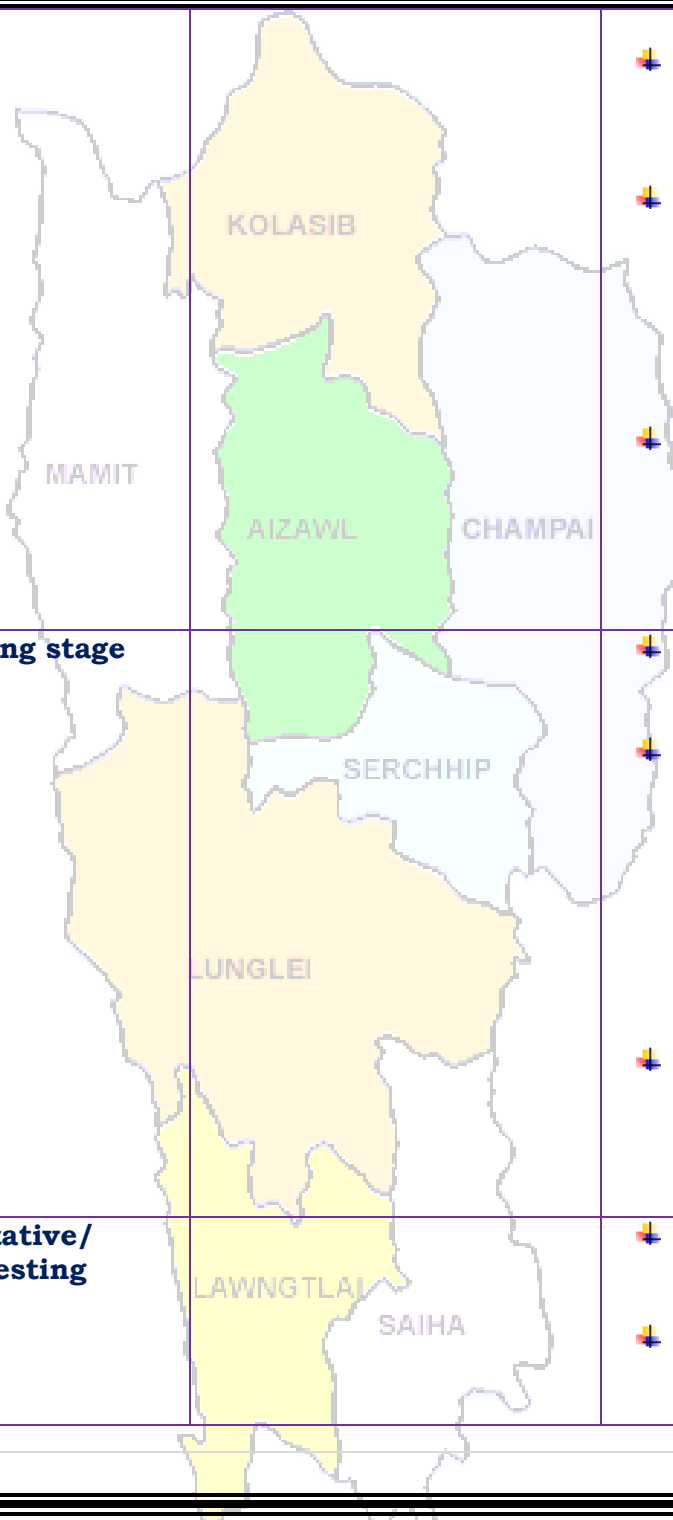	months. • Seeds are soaked in water for 5 days (changing the water daily) and spread out to dry for 24 hours. • Dried seeds are put in 250 gauge and 23 X 13 cm size polythene bags filled with top soil, sand and well decomposed cattle manure in equal proportions and placed for germination. • Germination (90-95 %) starts 10-12 days. Apply fertilizer mixture containing 15:15:6 of NPK @ 8 g in 5 litres of water for 100 seedlings
Oil plam	**Flowering stage**		• 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).

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		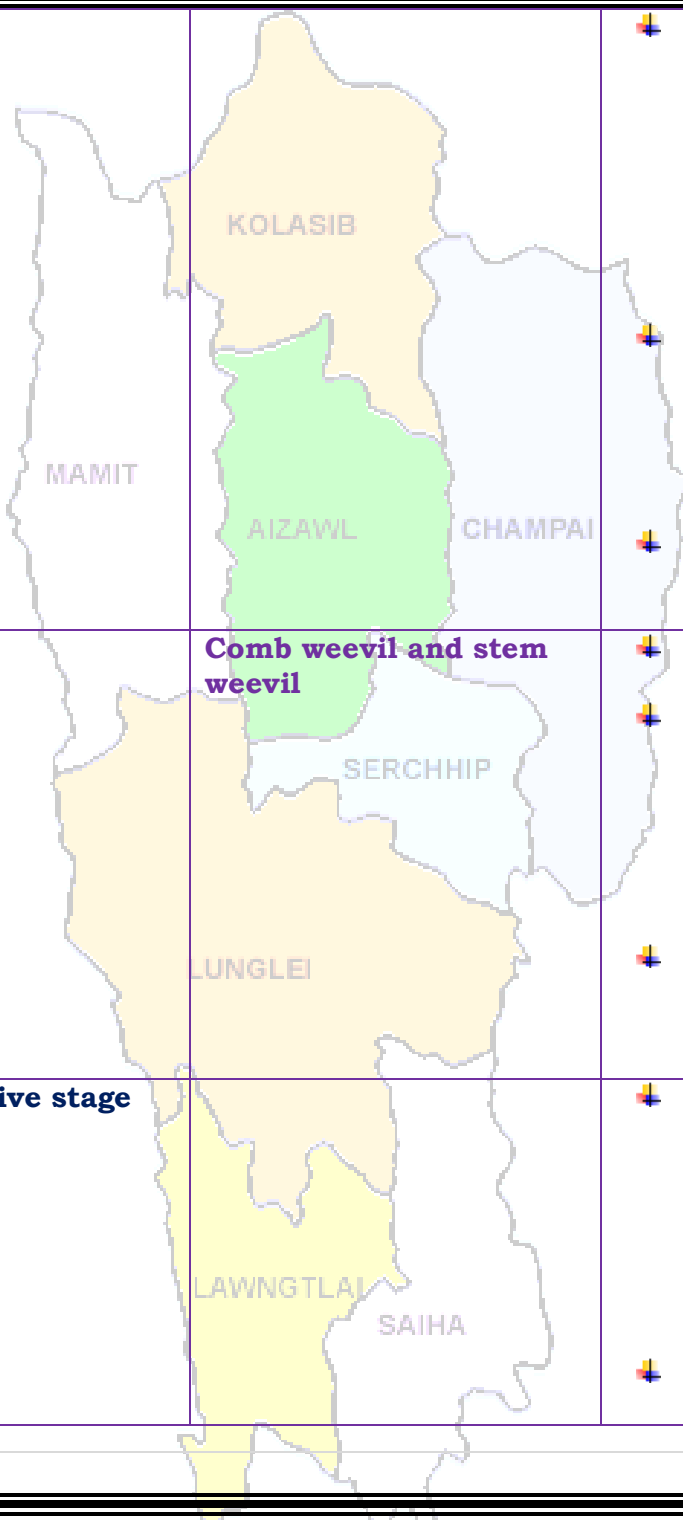	▪ Apply micro-nutrients viz. zinc, copper, manganese, iron, boron and molybdenum are required in ample quantities for supplying nutrients and also reduce serious disorders which may lead to decline of the whole orchard. ▪ Pruning on a regular basis removes unwanted or a sucker, keep production mats in optimum condition, saves fertilizer, reduces pest and disease. ▪ Fruits are harvested when they attain full size, develop attractive yellow colour.
		Comb weevil and stem weevil	▪ Applications of neem powder effectively controlled weevils. ▪ Application of 60 to 100 g of neem seed powder or neem cake at planting and then at 4 months intervals significantly diminished pest damage and increased yields. ▪ Application of over 100 g or neem oil was phytotoxic (harmful to plants) and uneconomical.
Passion Fruit	**Vegetative stage**		▪ Except for a space of about 60-90cm radius around the base of each vine which has to be kept clean weeded at all times, the rest of the plantation maybe allowed to have an undergrowth of grass. ▪ Application of 217gms, 312 gms, 167gms of Urea, Super

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		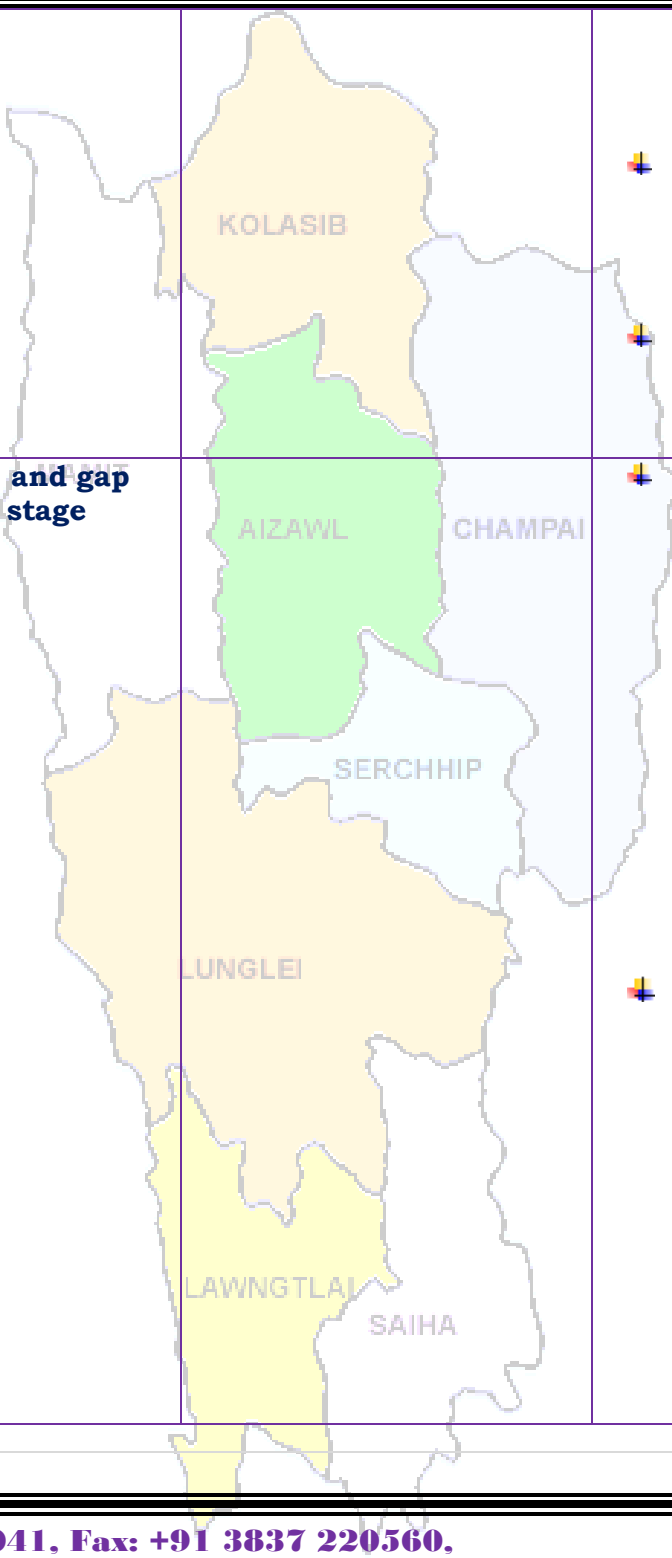	and Potash respectively per vine annually in splits for the purple and the yellow variety. For the Kavari variety 238.7gm, 375gms,167gms of Urea super, Potash respectively per vine per year in split doses. **Trellies making** : Establishment of proper and durable frame work for the purpose is very necessary.
Pineapple	**Planting and gap filling stage**		Double row planting is done by alternating two rows of crops by a wider mound or path. For optimum plant density, particularly in the hills. It is advisable to space two rows of crops at a distance of 60 cm, followed by a mound or flat path of 90 cm width. Within the row plants are spaced 30 cm apart. In this way 43,500 plants can be accommodated in one hectare of land. The pineapple suckers are allowed to dry at least for 25-30 days before planting. In fact, if fresh suckers are planted in moist soil, or if more moisture is available as in rainy season, they may begin to decay. To facilitate better rooting, it is necessary to strip off the scale leaves from the basal portions of the planting materials. After removing

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		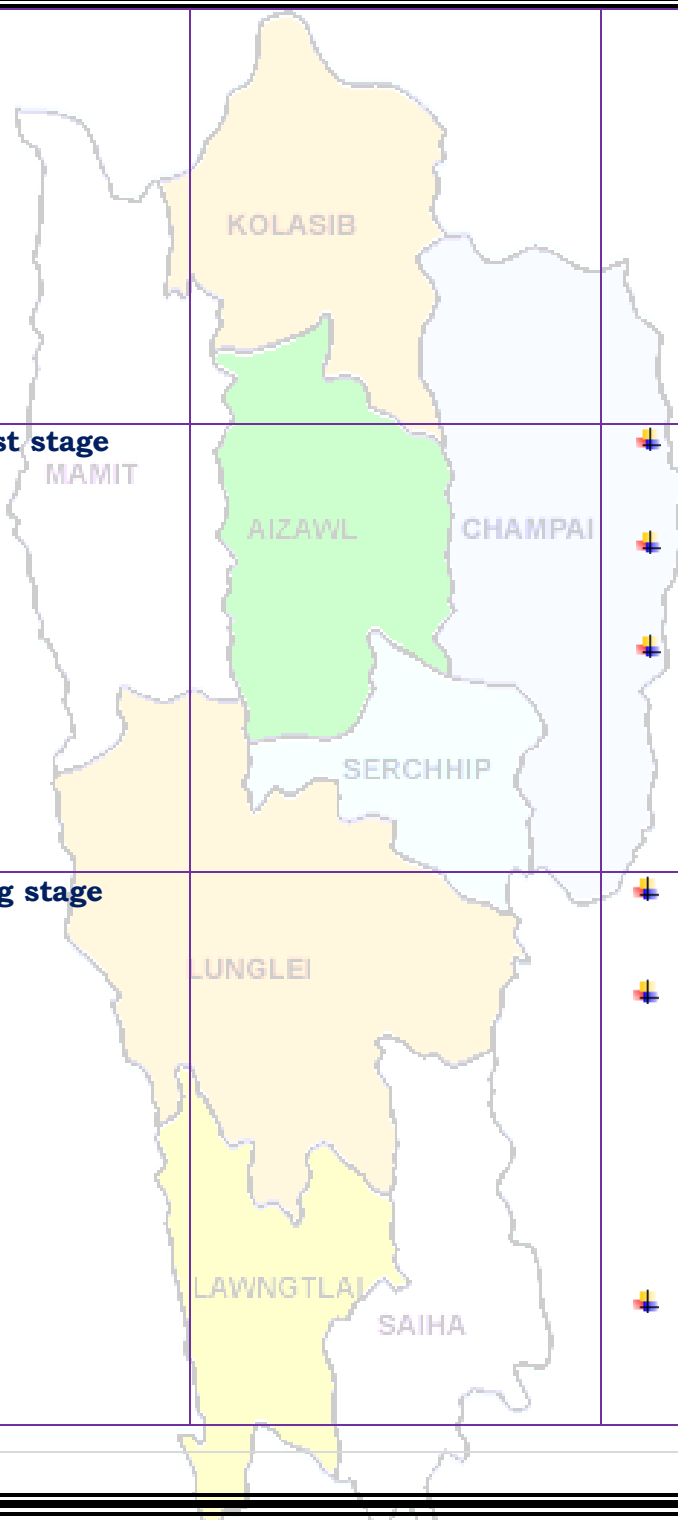	scaly leaves, the planting material should be treated with Difolation (0.2%) solution to avoid heart rot disease. Planting is usually done during monsoon, preferably in the beginning or later part of monsoon such as in August. Periods of heavy rainfall like July should be avoided for pineapple plantation.
Colocasia	**Harvest stage**		✦ Colocasia becomes ready for harvest five to six months after planting. ✦ The mother corms and side tubers are separated after harvest. ✦ The side tubers to be used as planting materials are usually separated from the mother corm and stored. Keep seed tuber in sand spread over the floor to avoid rotting.
French bean	**sowing stage**		✦ Land is ploughed to a fine tilth and divided into plots of convenient size. ✦ Ridges and furrows are prepared by ploughing after a basal dose application of farmyard manure. Field is irrigated once and seeds are sown under optimum moisture condition on side of ridges 2-3 days after irrigation. ✦ Spacing and seed rate vary with varieties. Early varieties are sown at a spacing of 45-60 cm x 10-15 cm and seed

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		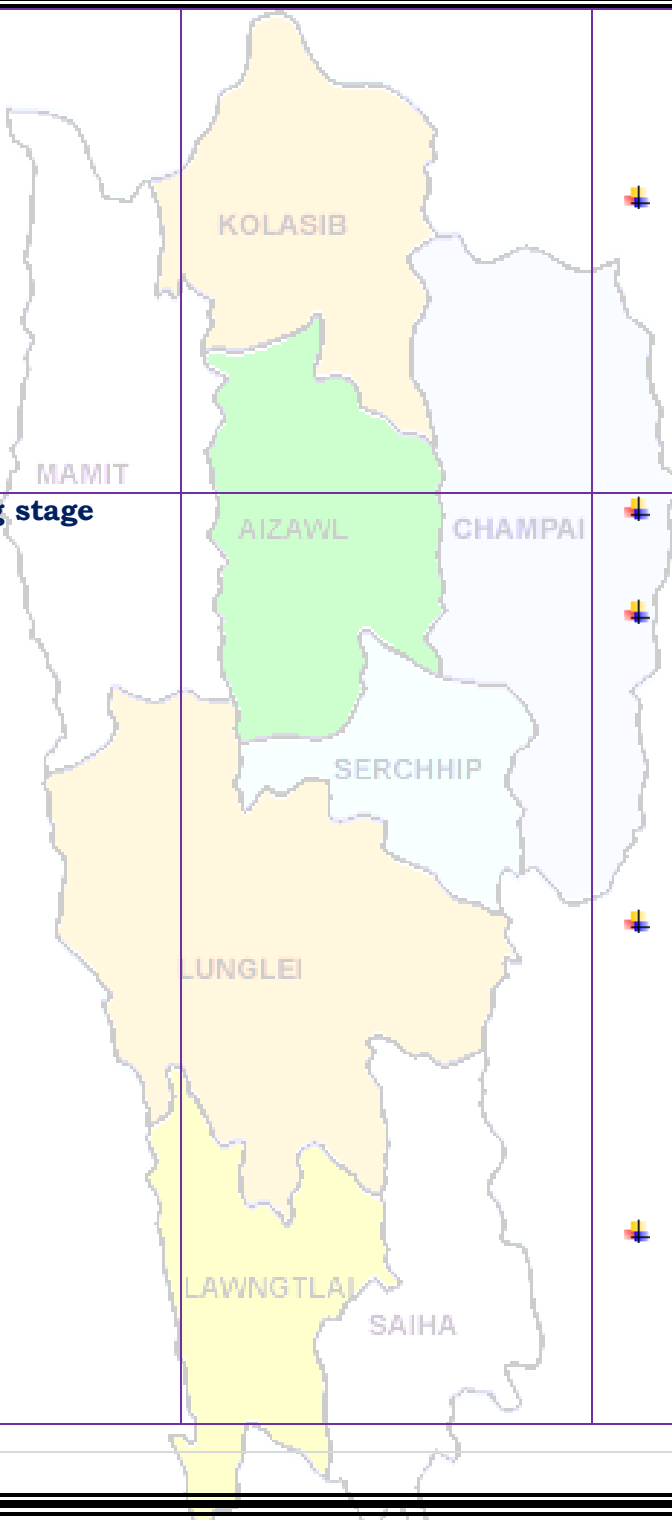	rate required is 80-90 kg / ha. Pole types are sown at 1.0 m apart in hills @ 3-4 plants / hill and seed rate is much less (25-30 kg/ha.). In addition to 20-25 t. of farmyard manure, 50 kg N, 75 kg, P2O5 and 75 kg K2O are recommended. Half of N along with full P and K should be applied as basal dose at the time of making ridges and furrows or one or two weeks after germination.
Cowpea	**sowing stage**		Land is ploughed to a fine tilth and divided into plots of convenient size. Ridges and furrows are prepared by ploughing after a basal dose application of farmyard manure. Field is irrigated once and seeds are sown under optimum moisture condition on side of ridges 2-3 days after irrigation. Spacing and seed rate vary with varieties. Early varieties are sown at a spacing of 45-60 cm x 10-15 cm and seed rate required is 80-90 kg / ha. Pole types are sown at 1.0 m apart in hills @ 3-4 plants / hill and seed rate is much less (25-30 kg/ha.). In addition to 20-25 t. of farmyard manure, 50 kg N, 75 kg, P2O5 and 75 kg K2O are recommended. Half of N along with full P and K should be applied as basal

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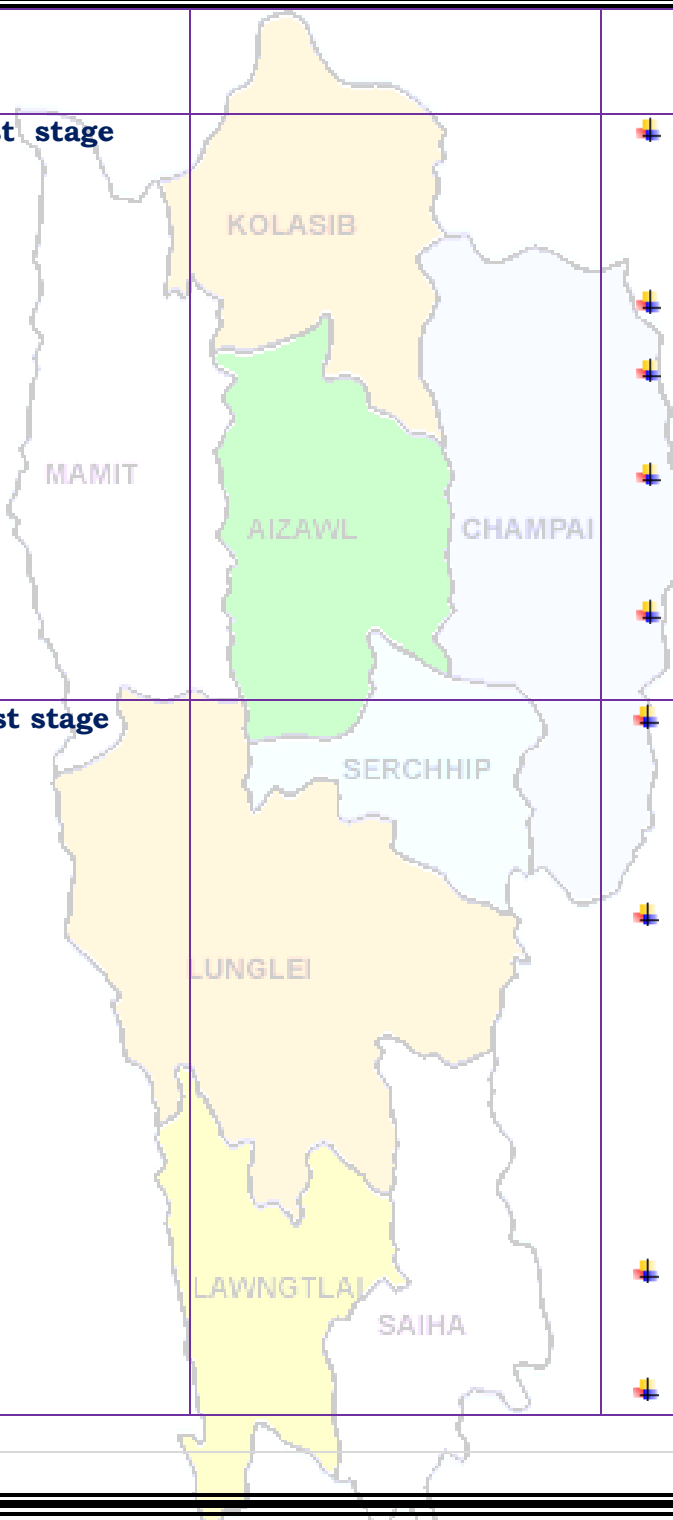
			dose at the time of making ridges and furrows or one or two weeks after germination.
Brinjal	**Harvest stage**		✦ Brinjal fruits are harvested at immature stage after attaining full size, but before loosing its glossy appearance. ✦ Dullness of fruit indicates over maturity. ✦ Usually fruits are harvested along with its stalk with a slight twist by hand. ✦ The harvested fruits are graded and packed in baskets or in loose gunny bags. ✦ Care should be taken to remove the fruits affected by Phomopsis blight.
Tomato	**Harvest stage**		✦ Immature: Before the seeds fully developed and before the jelly-like substances surrounding the seeds were formed. ✦ Mature green: The fully grown fruit with a brownish ring at stemscar. Removal of calyx, light green colour at blossom end changed yellowish green and seeds surrounded by jelly-like substances filling the seed cavity. ✦ Turning: ¼ of the surface at blossom end shows pink (breaker stage). ✦ Pink: ¾ of the surface shows

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			pink Hard ripe: Nearly all red or pink with firm flesh Over ripe: Fully coloured and soft.
Rice	**Panicle initiation stage**	**Kharif Rice**	Apply split dose of nitrogenous fertilizer. Use cracker or shining rope to resist from the attack of birds. Remove excess water from the field and make a drain in four corner of the field Planning for second crop like toria or pea.
Maize	**Harvest stage**		Cobs which are to be utilized as grain should be harvested when the grains are almost dry or containing roughly 20 % moisture. The appearance in the grains of composite and high yielding varieties however may be misleading as grains become dry while the stalk and leaves are still green. The cobs are removed from the standing crop and sun dried before shelling, otherwise retained in their jackets, if kept for seed or to be consumed or utilized at a later stage.
Kharif pulses (Green gram, Black gram and Rajma)	**flowering stage**		One or two hand hoeing and weeding should be done, depending upon soil type and extent of weed infestation. Weeds can also be controlled effectively by the application

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			of TOK-E-25 at the rate of 10 ml dissolved in 1 liter of water as pre-emergence spray. ➢ Provide irrigation in dry condition or dry spell. ➢ Provide 2% urea solution for better growth.
Ginger and turmeric	**Vegetative stage**		➢ Remove unwanted plant near base of the plant and cut dead branches. ➢ Pre-emergence application of Atrazine (Atratraf 50 wp, Gesaprim 500 fw) @ of 1.0-1.5 kg a.i ha-1in 600 litre water, Alachlor (Lasso) @ 2-2.5 kg a.i ha-1, Metolachlor (Dual) @ 1.5-2.0 kg a.i ha-1, Pendamethalin (Stomp) @ 1-1.5 kg a.i. ha-1arge effective way for control of many annual and broad leaved weeds. ➢ Earting up of soil along with fertilizer mixture.
		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 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

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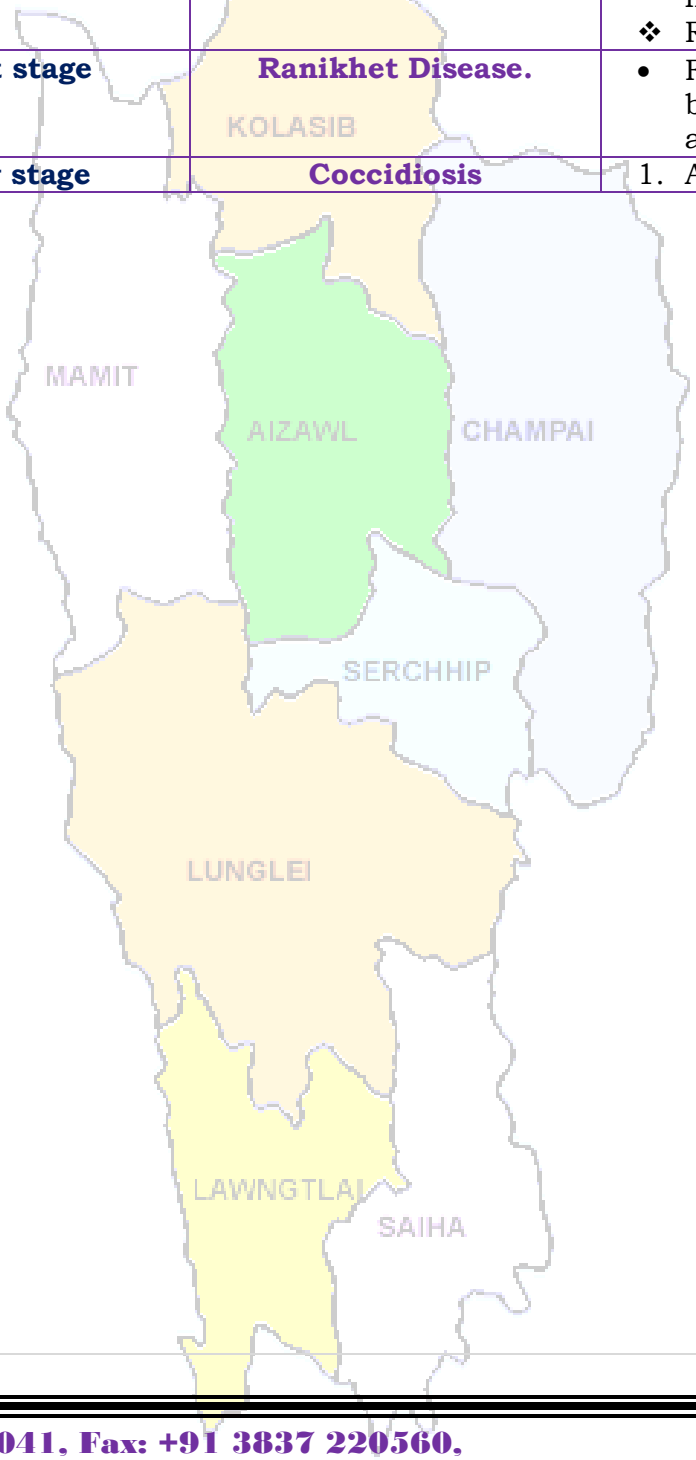
			(BQV). ❖ Primary vaccination 6 month or above ❖ Revaccination annually
Poultry	**Adult stage**	**Ranikhet Disease.**	• F1 vaccine at (1-6) days of birth and R_2B vaccine for adult birds.
	Early stage	**Coccidiosis**	1. Amprolium or coccidiostat



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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: 15- 19 August, 2015**

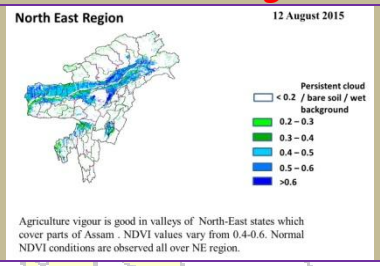
Bulletin No: -544/2015/ Bulletin/Mizo **Date of issue: 14th August, 2015**

Parameters	15.08.2015	16.08.2015	17.08.2015	18.08.2015	19.08.2015
Rainfall (mm)	4	3	0	0	0
Max Temp (oC)	29	28	28	27	26
Min Temp (oC)	20	20	19	20	20
Cloud Coverage	Mainly cloudy	Mainly cloudy	Mainly cloudy	Mainly cloudy	Mainly cloudy
Max RH (%)	99	100	100	100	99
Min RH (%)	59	70	69	72	88
Wind Speed (KmpH)	2	2	2	2	3
*Wind Direction	S-E	S	S-E	S-E	S

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 MONSOON- July 1-31, 2015 (*Percent of deviation from normal in parenthesis*)

Aizawl- 412.50mm (341.8mm)	Champhai- 105.47mm (250.30mm)	Saiha- 307.78 mm (87.2mm)	Kolasib- 331.10mm (380.9mm)
Lawngtlai-291.28mm (285.5mm)	Lunglei-326.52mm (186.21mm)	Mamit-204.84mm (442.80mm)	Serchhip-189.57mm (25.9mm)

Ni thum kaltha sik leh sa dinhmun tlangpui	August 15, 2015 atanga August 19, 2015 sik leh sa dinhmun hmuhlawk dan	
	Ni 2 lo awm turah hian ruahtui a tlak beisei a ni. Khua a lum lai berin 26-29^{0}C a ni ang a.A vawh lai ber in 19-20^{0}C ni tur ah beisei a ni.RH san lai berin 99-100% leh a hniam lai berin 59-88% ni tur a beisei niin. Thli tleh dan kawng zawng chu chhimchhak lam atangin a nat zawng chu darkar 2-3 km ni tur a beisei niin. Ni nga chhung lo awm tur ah hian chhum tlem a lan beisei a ni. ***Weekly cumulative rainfall:*** **07.0mm**	
NDVI for Mizoram and SPI		NDVI for Mizoram is less than normal NDVI. Value shown that NDVI is zero. So, it represents "Bare Soil".

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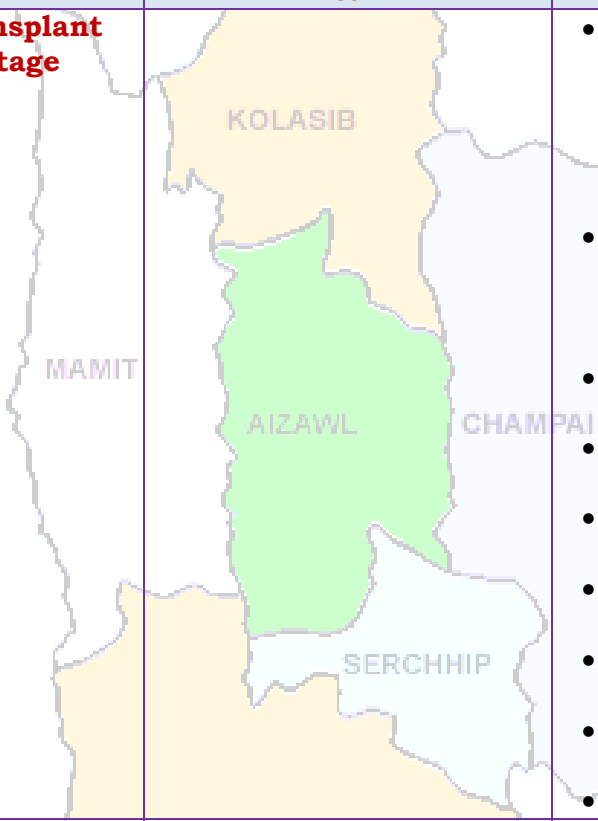
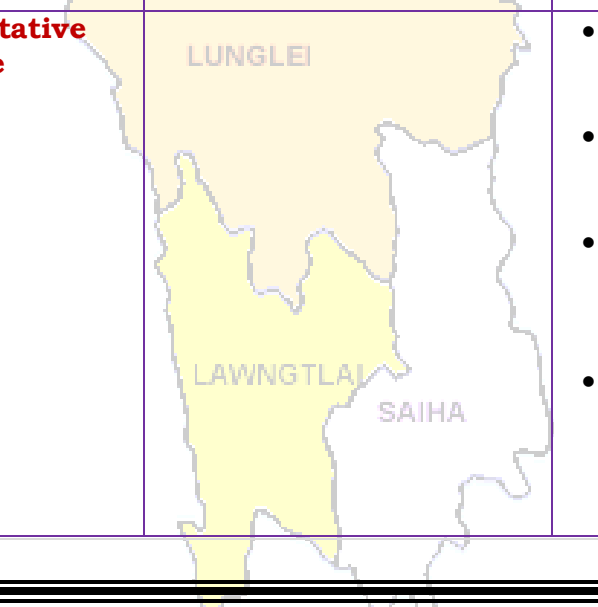
Thlai/ ran /sangha	Spat zawng	Hmalakna tur/ rannung leh natna hrik awm thei te	Agricultural/Horticultural/ animal husbandry atana thurawn
Khasi Mandarin and acid lime	**Transplant stage**		• A chi: A chi chu lakchhuah anih veleh nurseey ah a thuk zawng 1.5-2cm leh 10X5cm a inhlat a chin tur. A rawn chawr chu polythene bag ah hnah 4-6 a neih hunah phun sawn tur. • Nursery chu rannung leh a damlohna dang laka ven nan ser huan atanga meter 500 a hla ah dah tur. • Lei, balu leh bawngek leitha chu a inzat theuha pawlhin pek tur. • Bawngek leitha chu thlai pakhat ah 600:200:100g a pek tur. • Certified thlai chi chauh hman tur. • Ser kung bula tuitling chu paihfai vek tur. • A tiak inchen tlang chauh phun atan hman tur. • A zar tliak leh hnip chu paih fai zel tur. • Thlai chu hrisel taka enkawl tur.
	Vegetative stage		• Gibberellins (10ppm) chu a rah khal that nan te, a rawng insiam nan te kah tur. • Thlai in tui tha taka an hmuh theih nan drip irrigation hman tur. • Ser rah tla hi ser kung khatah vawi 2 a thleng thin a, hemi ven nan hian GA3, urea, benomyl leh carbendazim a hun takah pek tur, • Heng rannung blackfly(kolshi), citrus psylla, leaf miner, bark eating caterpillar, fruit sucking moth, mites, twing blight, gummosis, root rot leh collar rot

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		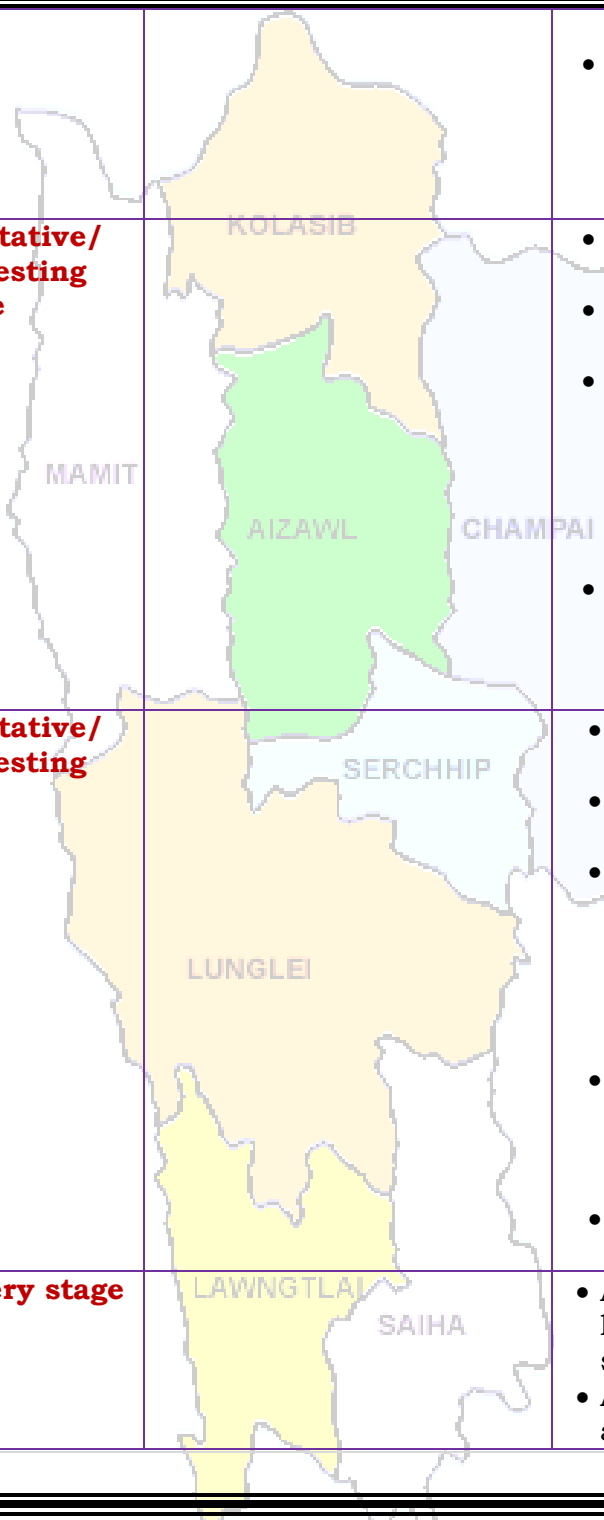	te hi ven tur. • Fungicide Carbendazim (0.1% emaw 1000ppm) a hun takah pek tur (thlakhat naah leh a seng hma ni 15 ah, chu chu vawi hnih kah tur).
Oil palm	**Vegetative/ harvesting stage**		• Oil palm kung bul chu tihfai a a zar thlak bawk tur. • Leitha chu thlai pakhatah 600:200:100g a pek tur. • Heng micro-nutrients zinc, copper, manganese, iron, boron leh molybdenum te hi an mamawh tawka pek tur, a huan pum a chhiat vek loh nan ven that bawk tur. • Oil palm rah chu a puitlin hunah te, a rawng inthlak hunah leh a thlum leh thur a pai tam hunah seng tur.
Balhla	**Vegetative/ harvesting**		• Balhla kung bul chu tihfai a a zar thlak bawk tur. • Leitha chu thlai pakhatah 600:200:100g a pek tur. • Heng micro-nutrients zinc, copper, manganese, iron, boron leh molybdenum te hi an mamawh tawka pek tur, a huan pum a chhiat vek loh nan ven that bawk tur. • A zar thlak ngun hian rannung leh natna lakah a veng a, chubak ah leitha a hek lova, thlai thar a ti tam bawk ani. • A rah chu a puitlin hunah leh a rawng eng a nih hunah seng tur.
Sapthei	**Nursery stage**		• A chi chu a rah hmin tha atanga lak ni se, ni 15-20 hnuah nursery siam tur. • A hnah 2/3 a rawn awm tan hnu ah polythene bag ah phunsawn

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			tur. • Polythene bag atangin thla ¾ hnu ah huan ah phun sawn leh tur. • Bawngek leitha chu khur khat ah 15g leh NPK 100:50:100g in kumkhat chhungin pek tur.
Lakhuihthei	**A par lai**		• A par chhuah hma nan chemical (Ethrel 10ppm+2% urea+0.04% sodium carbonate) chu pek tur. Tlai ah emaw thlaiin hnah 32 a neih hunah pek tur. • Chemical pek atangin ni 55-60 chhungin a par a chhuah thei ang. • Leitha chu thlai pakhat ah 60:50:60g a pek tur. • Thlai hnah leh a zar thi te chu paihfai a, hnim te tihfai bawk tur.
		Corm borer	• Carbofuran 3G chu hectare khatah 1.5kga.i a pek tur. Hemi hi a zung ah a tuina hnuhma a awmin pek tur
Cucurbitaceous crops	**A rah lai**		• Ni 7 danah tui chu tha taka pek tur. • Huan zau thamah chuan fruitfly leh pumpkin beetle ven nan carbaryl 0.2% leh malathion 0.15% chu chini tui litre khatah 10g a pawlhin kar khat danah leh a par tan tirhah leh a rah tan hunah kah tur. • Thlai pakhatah a par nasat lain urea chu 70g a pek tur.
Bawrhsaiabe	**A chin dan**	**1. Nursery tihfai a tui tlem pek tur.** **2. Phunsawn hnuah tui tha taka pek tur.**	• A kung bulthut ah hnim chheh darh tur. • A khat tawkin tui pek tur. • A tiak phunsawn te chu nil eh ruah lakah hliahkhuh tur.
		1. Aphids	• Surf tuiin thlai chu kah tur. • Heng insecticides Imidacloprid

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			200SL hi tui litre khatah 0.25ml in emaw Dimethoate 30% EC hi tui litre 10 ah 7ml a kah tur
		2. Flea beetle	• Pangang tui leh a puitling te chu a kung atangin thin thlak tur. • Heng insecticides Imidacloprid 200SL hi tui litre khatah 0.25ml in emaw Dimethoate 30% EC hi tui litre 10 ah 7ml a kah tur.
		3. Epilachna beetle	• A hnah a pangang leh a tui awm chu paihfai tur. • Methyl parathion 0.5% emaw Dimethoate 0.3% a kah tur.
		4. Leaf hopper	• Heng insecticides Imidacloprid 200SL hi tui litre khatah 0.25ml in emaw Dimethoate 30% EC hi tui litre 10 ah 7ml a kah tur.
		Bacterial wilt	• Huan chu fai taka dah a, thlai damlo te chu paihfai bawk tur. • Thlai damlo enkawl nan copper fungicide (2% Bordeaux mixture) a kah tur.bacterial witl chu root knot nematodes tam naah a awm thin a, hemi nematodes control hian bacterial wilt hi a veng thei. • Streptocycline sulphate chu tui litre khatah 0.3g leh Blitox 50 chu tui litre 15 ah 5g a pek tur.
		Damping off	• Thlai chi chu kg khatah Thiram 3g emaw Trichoderma viride4g+Metalaxyl 4g (Apron) a chiah tur. • Bordeaux mixture 1% emaw 2g Captan emaw 3 copper oxychloride chu tui litre khatah pawlhin a chin atanga ni 10-15 ah leih tur.
		Leaf spot and leaf blotch	• Dithane M-45 chu tui litre khatah 2.5g emaw Carbendazim 1g chu tui litre khatah pawlhin karkhat danah vawi 2/3 kah tur.

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			• Leaf spot tan Blitox 3g chu tui litre khata pawlhin kah tur.
		Leaf spot leh leaf blotch	• Tui litre khatah Dithane M-45 chu 2.5g emaw Bavistin chu 1g a pawlhin karkhat danah vawi 2/3 kah thin tur. • Leaf spot ah chuan tui litre khatah Blitox chu 3g pawlh a kah thin tur.
French bean	**A par lai**		• Bean hnah, a tang ro leh hnim te chu paihfai vek tur. • Lei chu boruak kal that nan laihphut thin tur. • A chin atanga ni 20-25 ah bean kung chu mau in a zamna siam tur.
		Blister beetle	• Rannung ho chu mankhawmin thah vek tur. • Cypermethrin 2g chu tui litre khata pawlhin kah thin tur
Bawkbawn	**A chin dan**		• Balu leh leitha chu lei nen a chawhpawlh hnu in 75-100cm a zau ah a phunna tur siam tur. A chinna lai chu Blue copper 100g tui litre 40 ah emaw formaldehyde nen a pawlhin leih tur. • A chi chu 5cm a inhlat a tuh in lei pangngai a vur leh tur.
Tomato	**A chin dan**		• Nursery tur chu lei dip tha darh leh tlema pawng tur (0.8m a zau leh 15cm a sei ni se). • Leitha 10kg leh bawngek leitha 15:15:15 leh carbofuran 2.5g chawhpawlh pek tur.
		Aphids	• Surf tuiin thlai chu kah tur. • Heng insecticides Imidacloprid 200SL hi tui litre khatah 0.25ml in emaw Dimethoate 30% EC hi tui litre 10 ah 7ml a kah tur.
		Epilachna beetle	• Methyl parathion 0.5% emaw

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			Dimethoate 0.3% a kah in flea beetle a veng thei
Buh	**Nursery stage**	**Pre kharif rice**	• A chi tha leh khat tha chauh hman tur. • Tui litre 10 ah chi (salt) 250g pawlhin chutah chuan chiah tur. • Bavistin 50WP @0.1% chu tui litre khatah 2g a pawlhin a chi chu chiah tur.
		Raised bed method	• A chin na tur chu 10m a sei ni se, 1.25m a zau leh tui luanna tur 20-30cm a zau siam tur. Hei hian a chi kal ral mai mai tur a veng. • Leitha pek hnu ah a chi damdawi a chiah te chu theh tur.
Vaimim	**A chin dan**		• Lei chu vawi 2/3 laihphut phawt tur. • A chi chu a line indawt a chin tur • A chi chu kg khatah Thiram 4g a chiah tur. • Hectare khatah buh chi chu 20-25kg hman tur. • Bawngek leitha chu hectare khatah 5-10t chu 80:60:40kg N, P2O5 leh K20 hman tur. Vaimim chin hma in lei nen tihpawlh tur. Nitrogen chu a dose chanve in a chin hnu ah pek tur, a bang 25% chu a hnu thlakhat ah leh a dang 25% chu a par hunah pek tur.
Sawhthing leh Aieng	**Land preparation**		• Thlai hnah, a tang ro leh hnim te chu paihfai vek tur. • Lei chu boruak kal that nan laihphut thin tur. • Nitrogen leitha chu an mamawh taw kanga pek tur.
		Thrips	• Roger emaw Monocrophos chu tui litre khatah 2.5ml a pawlhin kah tur.

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		Scales	• Quinalphos emaw Monocrotophos chu tui litre khatah 2.5ml a pawlhin kah tur.
Vawk	**Kumtluanin**	**Porcine Reproductive Respiratory Syndrome (PRRS).**	1. A natna vei vawk te chu thah a phum tur a ni.
	A puitling hun	**Swine fever.**	2. Vawk thla hnih a nihin SF vaccine pek tur a ni a, he vaccine hi thla ruk emaw kumtluanin pek chhunzawm tur
Bawng	**Kumtluanin**	**Foot and Mouth Disease (FMD)**	• Thla16 a upa an rih in FMD vaccine pek tur a nia, thla 6 danah pek chhunzawm tur a ni.
	A naupan lai	**Black Quarter (BQ)**	• Black Quarter Vaccine (BQ) + Thla ruk an tlin hunah vaccine lak tan tur. + Kumkhat hnu ah vaccine pek leh tur.
Ar	**Kumtluanin**	**Ranikhet Disease.**	1. Ar note an pian hlimin F_1 vaccine pek tur a nia an puitlin hunah R_2B pek leh tur a ni.
		Coccidiosis	2. Amprolium emaw coccidiostat pek tur.

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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: Aizawl **Period: 15- 19 August, 2015**

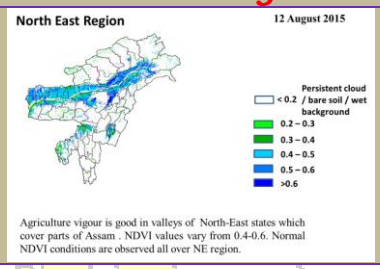
Bulletin No: -544/2015/ Bulletin/Mizo **Date of issue: 14th August, 2015**

Parameters	15.08.2015	16.08.2015	17.08.2015	18.08.2015	19.08.2015
Rainfall (mm)	3	5	3	5	22
Max Temp (oC)	30	29	29	28	27
Min Temp (oC)	20	21	19	20	21
Cloud Coverage	Mainly cloudy	Mainly cloudy	Mainly cloudy	Mainly cloudy	Partially clear
Max RH (%)	99	99	98	96	95
Min RH (%)	74	70	63	68	73
Wind Speed (KmpH)	3	3	3	6	6
*Wind Direction	S-E	S	S-E	S	S

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 MONSOON- July 1-31, 2015 (*Percent of deviation from normal in parenthesis*)

Aizawl- 412.50mm (341.8mm)	Champhai- 105.47mm (250.30mm)	Saiha- 307.78 mm (87.2mm)	Kolasib- 331.10mm (380.9mm)
Lawngtlai-291.28mm (285.5mm)	Lunglei-326.52mm (186.21mm)	Mamit-204.84mm (442.80mm)	Serchhip- 189.57mm (25.9mm)

Ni thum kaltha sik leh sa dinhmun tlangpui	August 15, 2015 atanga August 19, 2015 sik leh sa dinhmun hmuhlawk dan	
	Ni 5 lo awm turah hian ruahtui a tlak beisei a ni. Khua a lum lai berin 27-30^{0}C a ni ang a.A vawh lai ber in 19-21^{0}C ni tur ah beisei a ni.RH san lai berin 95-99% leh a hniam lai berin 63-74% ni tur a beisei niin. Thli tleh dan kawng zawng chu chhimchhak lam atangin a nat zawng chu darkar 3-6 km ni tur a beisei niin. Ni nga chhung lo awm tur ah hian chhum tlem a lan beisei a ni. ***Weekly cumulative rainfall:*** **38.0mm**	
NDVI for Mizoram		NDVI for Mizoram is less than normal NDVI. Value shown that NDVI is zero. So, it represents "Bare Soil".

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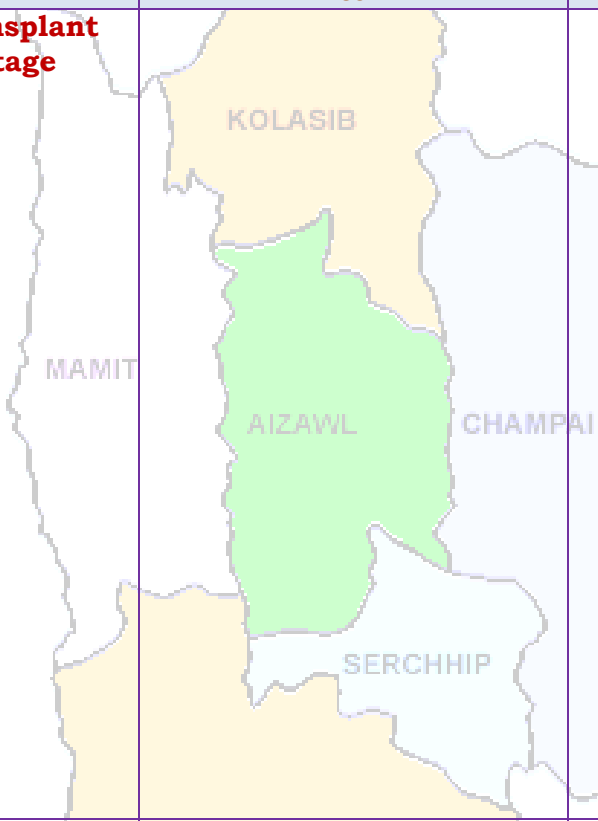
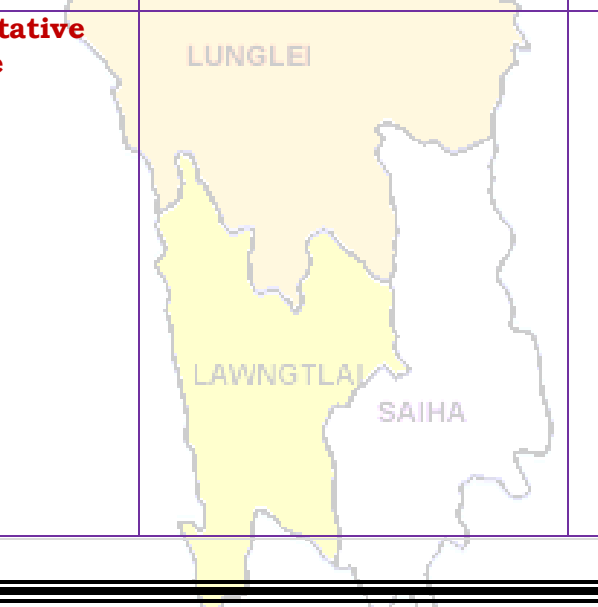
Thlai/ ran /sangha	Spat zawng	Hmalakna tur/ rannung leh natna hrik awm thei te	Agricultural/Horticultural/ animal husbandry atana thurawn
Khasi Mandarin and acid lime	**Transplant stage**		• A chi: A chi chu lakchhuah anih veleh nurseey ah a thuk zawng 1.5-2cm leh 10X5cm a inhlat a chin tur. A rawn chawr chu polythene bag ah hnah 4-6 a neih hunah phun sawn tur. • Nursery chu rannung leh a damlohna dang laka ven nan ser huan atanga meter 500 a hla ah dah tur. • Lei, balu leh bawngek leitha chu a inzat theuha pawlhin pek tur. • Bawngek leitha chu thlai pakhat ah 600:200:100g a pek tur. • Certified thlai chi chauh hman tur. • Ser kung bula tuitling chu paihfai vek tur. • A tiak inchen tlang chauh phun atan hman tur. • A zar tliak leh hnip chu paih fai zel tur. • Thlai chu hrisel taka enkawl tur.
	Vegetative stage		• Gibberellins (10ppm) chu a rah khal that nan te, a rawng insiam nan te kah tur. • Thlai in tui tha taka an hmuh theih nan drip irrigation hman tur. • Ser rah tla hi ser kung khatah vawi 2 a thleng thin a, hemi ven nan hian GA3, urea, benomyl leh carbendazim a hun takah pek tur, • Heng rannung blackfly(kolshi), citrus psylla, leaf miner, bark eating caterpillar, fruit sucking moth, mites, twing blight,

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			gummosis, root rot leh collar rot te hi ven tur. • Fungicide Carbendazim (0.1% emaw 1000ppm) a hun takah pek tur (thlakhat naah leh a seng hma ni 15 ah, chu chu vawi hnih kah tur).
Oil palm	**Vegetative/ harvesting stage**		• Oil palm kung bul chu tihfai a a zar thlak bawk tur. • Leitha chu thlai pakhatah 600:200:100g a pek tur. • Heng micro-nutrients zinc, copper, manganese, iron, boron leh molybdenum te hi an mamawh tawka pek tur, a huan pum a chhiat vek loh nan ven that bawk tur. • Oil palm rah chu a puitlin hunah te, a rawng inthlak hunah leh a thlum leh thur a pai tam hunah seng tur.
Balhla	**Vegetative/ harvesting**		• Balhla kung bul chu tihfai a a zar thlak bawk tur. • Leitha chu thlai pakhatah 600:200:100g a pek tur. • Heng micro-nutrients zinc, copper, manganese, iron, boron leh molybdenum te hi an mamawh tawka pek tur, a huan pum a chhiat vek loh nan ven that bawk tur. • A zar thlak ngun hian rannung leh natna lakah a veng a, chubak ah leitha a hek lova, thlai thar a ti tam bawk ani. • A rah chu a puitlin hunah leh a rawng eng a nih hunah seng tur.
Sapthei	**Nursery stage**		• A chi chu a rah hmin tha atanga lak ni se, ni 15-20 hnuah nursery siam tur.

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			• A hnah 2/3 a rawn awm tan hnu ah polythene bag ah phunsawn tur. • Polythene bag atangin thla ¾ hnu ah huan ah phun sawn leh tur. • Bawngek leitha chu khur khat ah 15g leh NPK 100:50:100g in kumkhat chhungin pek tur.
Lakhuihthei	**A par lai**		• A par chhuah hma nan chemical (Ethrel 10ppm+2% urea+0.04% sodium carbonate) chu pek tur. Tlai ah emaw thlaiin hnah 32 a neih hunah pek tur. • Chemical pek atangin ni 55-60 chhungin a par a chhuah thei ang. • Leitha chu thlai pakhat ah 60:50:60g a pek tur. • Thlai hnah leh a zar thi te chu paihfai a, hnim te tihfai bawk tur.
		Corm borer	• Carbofuran 3G chu hectare khatah 1.5kga.i a pek tur. Hemi hi a zung ah a tuina hnuhma a awmin pek tur
Cucurbitaceous crops	**A rah lai**		• Ni 7 danah tui chu tha taka pek tur. • Huan zau thamah chuan fruitfly leh pumpkin beetle ven nan carbaryl 0.2% leh malathion 0.15% chu chini tui litre khatah 10g a pawlhin kar khat danah leh a par tan tirhah leh a rah tan hunah kah tur. • Thlai pakhatah a par nasat lain urea chu 70g a pek tur.
Bawrhsaiabe	**A chin dan**	**1. Nursery tihfai a tui tlem pek tur.** **2. Phunsawn hnuah tui tha taka pek tur.**	• A kung bulthut ah hnim chheh darh tur. • A khat tawkin tui pek tur.

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			• A tiak phunsawn te chu nil eh ruah lakah hliahkhuh tur.
		1. Aphids	• Surf tuiin thlai chu kah tur. • Heng insecticides Imidacloprid 200SL hi tui litre khatah 0.25ml in emaw Dimethoate 30% EC hi tui litre 10 ah 7ml a kah tur
		2. Flea beetle	• Pangang tui leh a puitling te chu a kung atangin thin thlak tur. • Heng insecticides Imidacloprid 200SL hi tui litre khatah 0.25ml in emaw Dimethoate 30% EC hi tui litre 10 ah 7ml a kah tur.
		3. Epilachna beetle	• A hnah a pangang leh a tui awm chu paihfai tur. • Methyl parathion 0.5% emaw Dimethoate 0.3% a kah tur.
		4. Leaf hopper	• Heng insecticides Imidacloprid 200SL hi tui litre khatah 0.25ml in emaw Dimethoate 30% EC hi tui litre 10 ah 7ml a kah tur.
		Bacterial wilt	• Huan chu fai taka dah a, thlai damlo te chu paihfai bawk tur. • Thlai damlo enkawl nan copper fungicide (2% Bordeaux mixture) a kah tur.bacterial witl chu root knot nematodes tam naah a awm thin a, hemi nematodes control hian bacterial wilt hi a veng thei. • Streptocycline sulphate chu tui litre khatah 0.3g leh Blitox 50 chu tui litre 15 ah 5g a pek tur.
		Damping off	• Thlai chi chu kg khatah Thiram 3g emaw Trichoderma viride4g+Metalaxyl 4g (Apron) a chiah tur. • Bordeaux mixture 1% emaw 2g Captan emaw 3 copper oxychloride chu tui litre khatah pawlhin a chin atanga ni 10-15

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			ah leih tur.
		Leaf spot and leaf blotch	• Dithane M-45 chu tui litre khatah 2.5g emaw Carbendazim 1g chu tui litre khatah pawlhin karkhat danah vawi 2/3 kah tur. • Leaf spot tan Blitox 3g chu tui litre khata pawlhin kah tur.
		Leaf spot leh leaf blotch	• Tui litre khatah Dithane M-45 chu 2.5g emaw Bavistin chu 1g a pawlhin karkhat danah vawi 2/3 kah thin tur. • Leaf spot ah chuan tui litre khatah Blitox chu 3g pawlh a kah thin tur.
French bean	**A par lai**		• Bean hnah, a tang ro leh hnim te chu paihfai vek tur. • Lei chu boruak kal that nan laihphut thin tur. • A chin atanga ni 20-25 ah bean kung chu mau in a zamna siam tur.
		Blister beetle	• Rannung ho chu mankhawmin thah vek tur. • Cypermethrin 2g chu tui litre khata pawlhin kah thin tur
Bawkbawn	**A chin dan**		• Balu leh leitha chu lei nen a chawhpawlh hnu in 75-100cm a zau ah a phunna tur siam tur. A chinna lai chu Blue copper 100g tui litre 40 ah emaw formaldehyde nen a pawlhin leih tur. • A chi chu 5cm a inhlat a tuh in lei pangngai a vur leh tur.
Tomato	**A chin dan**		• Nursery tur chu lei dip tha darh leh tlema pawng tur (0.8m a zau leh 15cm a sei ni se). • Leitha 10kg leh bawngek leitha 15:15:15 leh carbofuran 2.5g chawhpawlh pek tur.

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		Aphids	• Surf tuiin thlai chu kah tur. • Heng insecticides Imidacloprid 200SL hi tui litre khatah 0.25ml in emaw Dimethoate 30% EC hi tui litre 10 ah 7ml a kah tur.
		Epilachna beetle	• Methyl parathion 0.5% emaw Dimethoate 0.3% a kah in flea beetle a veng thei
Buh	**Nursery stage**	**Pre kharif rice**	• A chi tha leh khat tha chauh hman tur. • Tui litre 10 ah chi (salt) 250g pawlhin chutah chuan chiah tur. • Bavistin 50WP @0.1% chu tui litre khatah 2g a pawlhin a chi chu chiah tur.
		Raised bed method	• A chin na tur chu 10m a sei ni se, 1.25m a zau leh tui luanna tur 20-30cm a zau siam tur. Hei hian a chi kal ral mai mai tur a veng. • Leitha pek hnu ah a chi damdawi a chiah te chu theh tur.
Vaimim	**A chin dan**		• Lei chu vawi 2/3 laihphut phawt tur. • A chi chu a line indawt a chin tur • A chi chu kg khatah Thiram 4g a chiah tur. • Hectare khatah buh chi chu 20-25kg hman tur. • Bawngek leitha chu hectare khatah 5-10t chu 80:60:40kg N, P2O5 leh K20 hman tur. Vaimim chin hma in lei nen tihpawlh tur. Nitrogen chu a dose chanve in a chin hnu ah pek tur, a bang 25% chu a hnu thlakhat ah leh a dang 25% chu a par hunah pek tur.
Sawhthing leh Aieng	**Land preparation**		• Thlai hnah, a tang ro leh hnim te chu paihfai vek tur.

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			• Lei chu boruak kal that nan laihphut thin tur. • Nitrogen leitha chu an mamawh taw kanga pek tur.
		Thrips	• Roger emaw Monocrophos chu tui litre khatah 2.5ml a pawlhin kah tur.
		Scales	• Quinalphos emaw Monocrotophos chu tui litre khatah 2.5ml a pawlhin kah tur.
Vawk	**Kumtluanin**	**Porcine Reproductive Respiratory Syndrome (PRRS).**	1. A natna vei vawk te chu thah a phum tur a ni.
	A puitling hun	**Swine fever.**	2. Vawk thla hnih a nihin SF vaccine pek tur a ni a, he vaccine hi thla ruk emaw kumtluanin pek chhunzawm tur
Bawng	**Kumtluanin**	**Foot and Mouth Disease (FMD)**	• Thla16 a upa an rih in FMD vaccine pek tur a nia, thla 6 danah pek chhunzawm tur a ni.

	A naupan lai	**Black Quarter (BQ)**	• Black Quarter Vaccine (BQ)
			  Thla ruk an tlin hunah vaccine lak tan tur.
			  Kumkhat hnu ah vaccine pek leh tur.

Ar	**Kumtluanin**	**Ranikhet Disease.**	1. Ar note an pian hlimin F_1 vaccine pek tur a nia an puitlin hunah R_2B pek leh tur a ni.
		Coccidiosis	2. Amprolium emaw coccidiostat pek tur.

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

District: Aizawl **Period: 15- 19 August, 2015**

Bulletin No: -544/2015/ Bulletin/English **Date of issue: 14th August, 2015**

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Min RH (%)	74	70	63	68	73
Wind Speed (KmpH)	3	3	3	6	6
***Wind Direction**	S-E	S	S-E	S	S

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 MONSOON- July 1-31, 2015 (*Percent of deviation from normal in parenthesis*)

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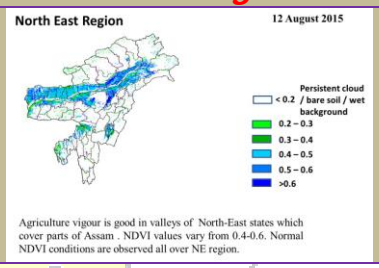
Weather summary of the past three days	Weather forecast valid from 15th August, 2015 To 19th August, 2015.
	There is a chance of moderate to light rainfall during the next 5 days. The maximum and minimum temperatures for the next 5 days may range for 27-30^{0}C and 19-21^{0}C. Maximum relative humidity is expected in the range of 95-99% and minimum may from 63-74%. Wind direction would be southeasterly to southerly with the wind speed of 3-6 km per hour. Mainly cloudy sky will prevail during the next five days. ***Weekly cumulative rainfall:*** **38.0 mm**

NDVI for Mizoram		
		NDVI for Mizoram is less than normal NDVI. Value shown that NDVI is zero. So, it represents "Bare Soil".

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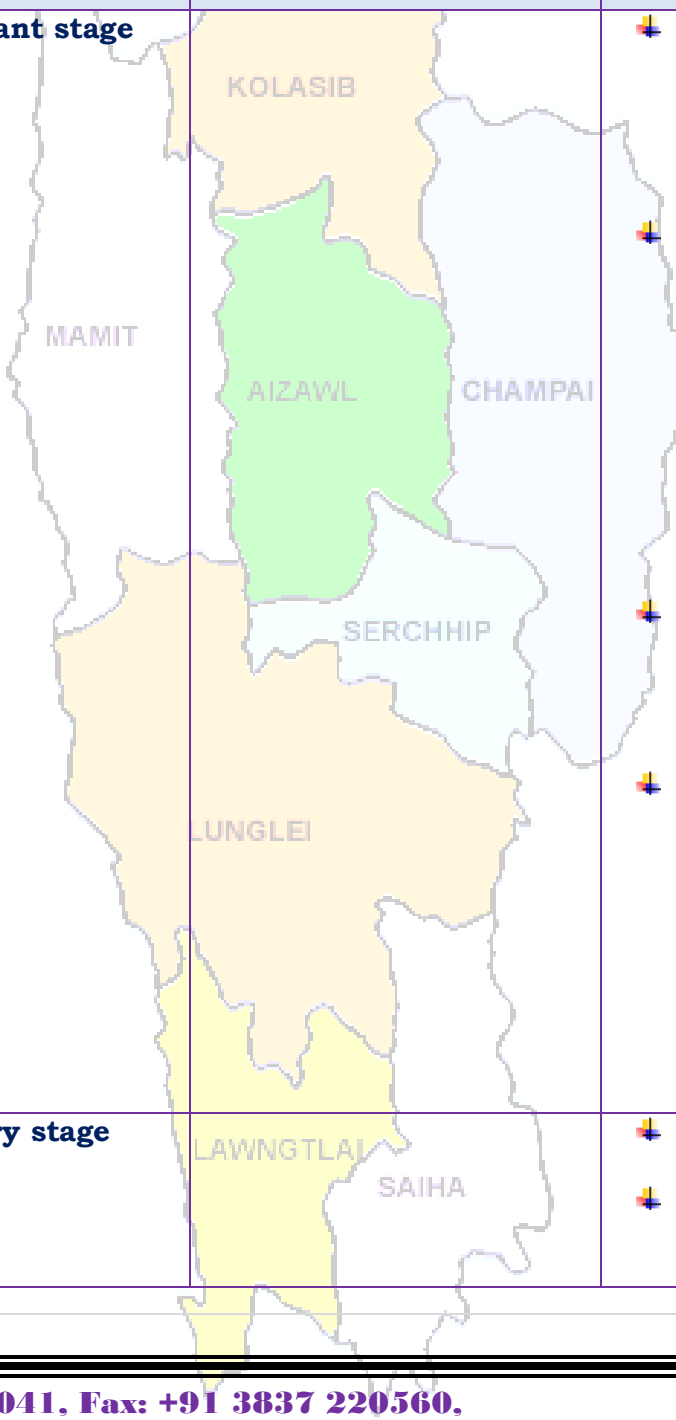
Main Crop/ Animal /Fisheries	Stage	Cultural practices/ Pest/ Diseases	Agricultural / Horticultural/ animal husbandry advisories
Khasi Mandarin and acid lime	**Transplant stage**		▪ Well rotten FYM @ 500g/pit is applied at 15-20 days before planting along with 12 g each of N and K2O/plant and 4 g of P2O5/plant. ▪ This root stock has proved very successful for raising some sweet orange and mandarin orange varieties This root stock is resistant to Tristeza virus but highly susceptible to exocortis. It is also recommended for this region till any other rootstock is found to be promising. ▪ Citrus plantations are seldom put under planned cultivation, and plantations are always kept under sod or raised as mixed crops ▪ Layered plants about one year old, are also selected in case of lemon, lime etc. Vigorous plants are always preferred for better growth. While placing the plants in the pits care should be taken that bud union remains 12-15 cm above the ground level.
Oil plam	**Nursery stage**		▪ Remove the exocarp and mesocarp with knife. ▪ Dry the seeds on concrete or wooden floors under shade for 2 days and stored for 3-9

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		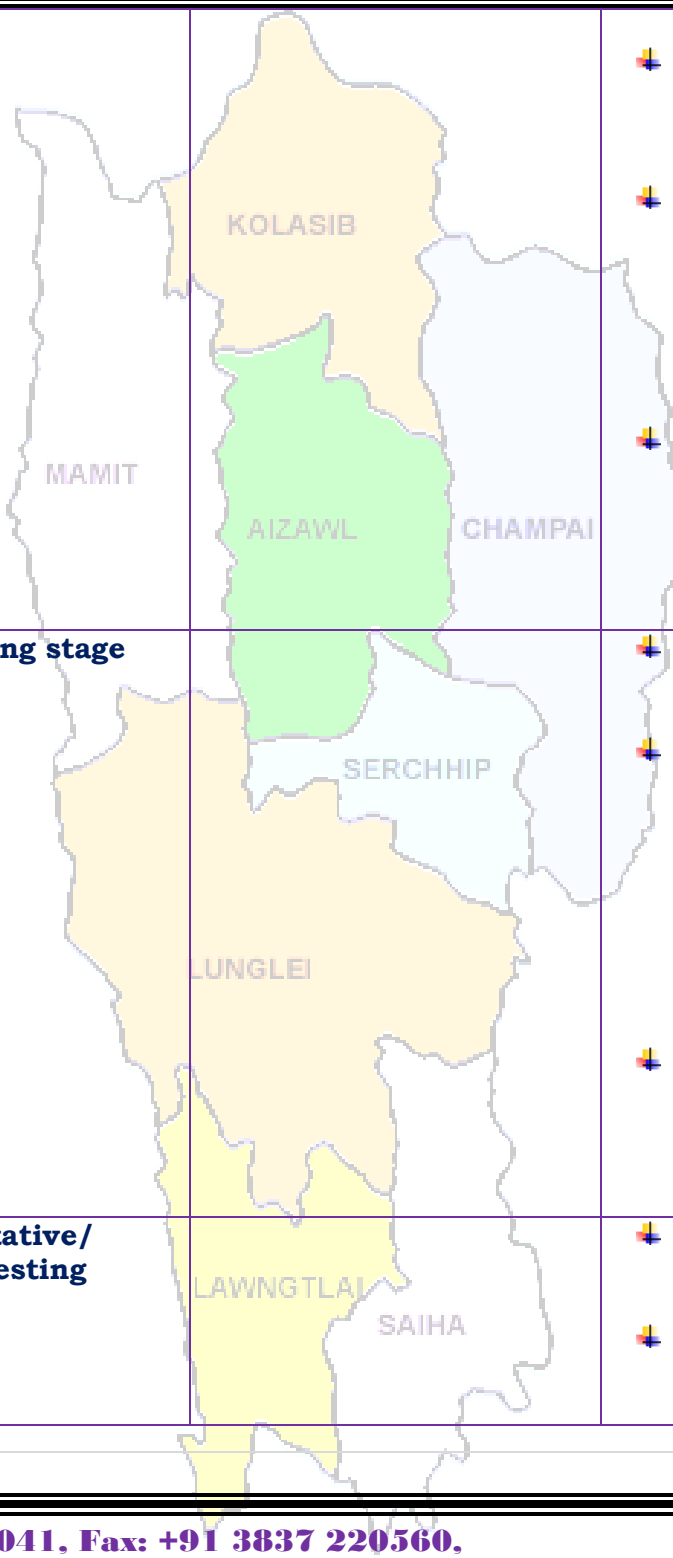	months. • Seeds are soaked in water for 5 days (changing the water daily) and spread out to dry for 24 hours. • Dried seeds are put in 250 gauge and 23 X 13 cm size polythene bags filled with top soil, sand and well decomposed cattle manure in equal proportions and placed for germination. • Germination (90-95 %) starts 10-12 days. Apply fertilizer mixture containing 15:15:6 of NPK @ 8 g in 5 litres of water for 100 seedlings
Oil plam	**Flowering stage**		• 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).

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		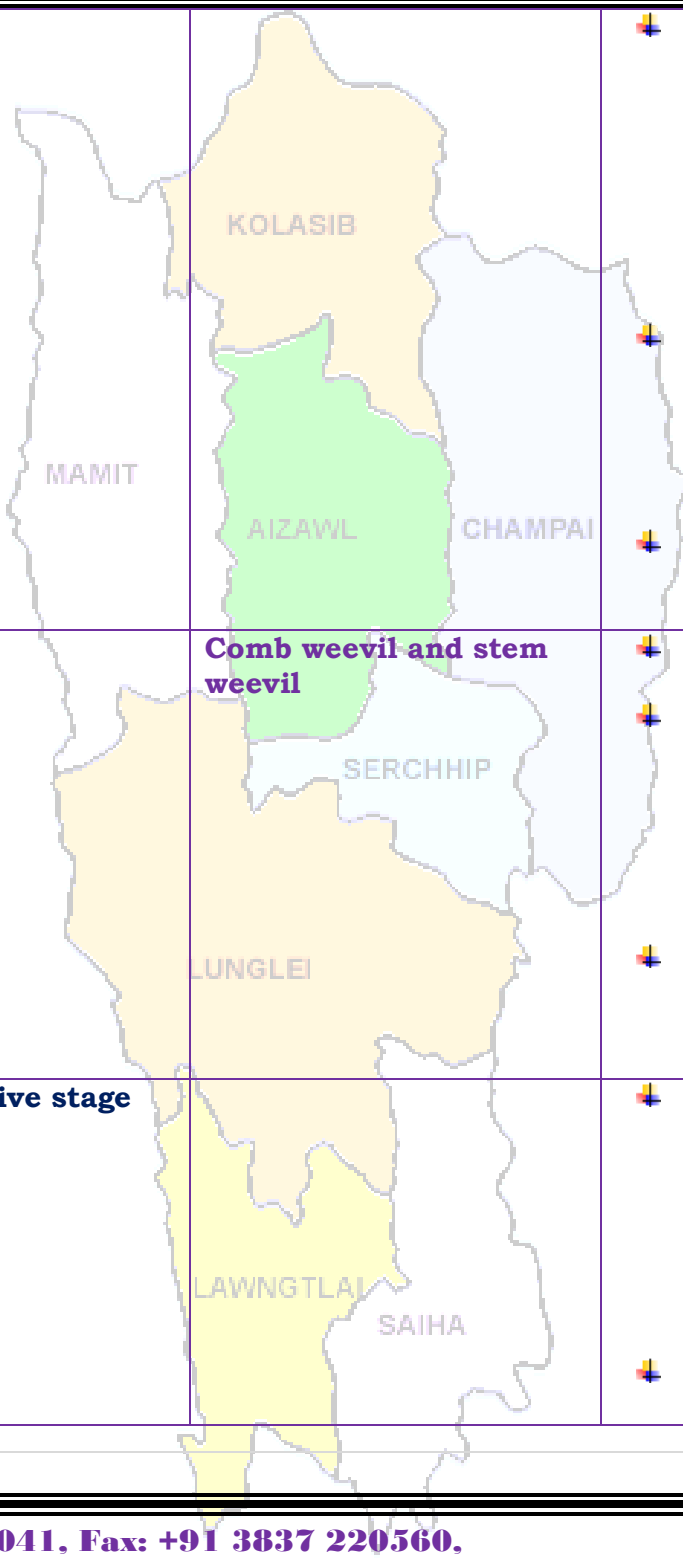	▪ Apply micro-nutrients viz. zinc, copper, manganese, iron, boron and molybdenum are required in ample quantities for supplying nutrients and also reduce serious disorders which may lead to decline of the whole orchard. ▪ Pruning on a regular basis removes unwanted or a sucker, keep production mats in optimum condition, saves fertilizer, reduces pest and disease. ▪ Fruits are harvested when they attain full size, develop attractive yellow colour.
		Comb weevil and stem weevil	▪ Applications of neem powder effectively controlled weevils. ▪ Application of 60 to 100 g of neem seed powder or neem cake at planting and then at 4 months intervals significantly diminished pest damage and increased yields. ▪ Application of over 100 g or neem oil was phytotoxic (harmful to plants) and uneconomical.
Passion Fruit	**Vegetative stage**		▪ Except for a space of about 60-90cm radius around the base of each vine which has to be kept clean weeded at all times, the rest of the plantation maybe allowed to have an undergrowth of grass. ▪ Application of 217gms, 312 gms, 167gms of Urea, Super

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		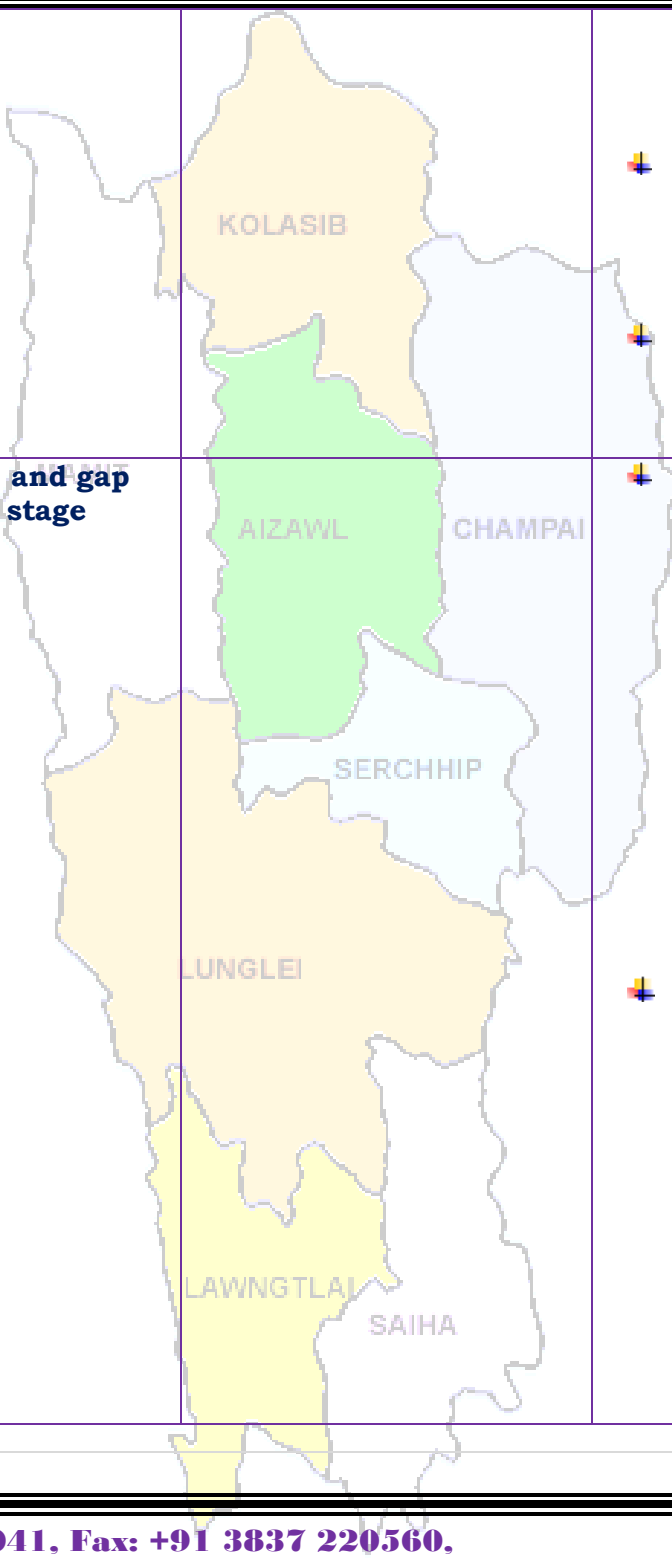	and Potash respectively per vine annually in splits for the purple and the yellow variety. For the Kavari variety 238.7gm, 375gms,167gms of Urea super, Potash respectively per vine per year in split doses. **Trellies making** : Establishment of proper and durable frame work for the purpose is very necessary.
Pineapple	**Planting and gap filling stage**		Double row planting is done by alternating two rows of crops by a wider mound or path. For optimum plant density, particularly in the hills. It is advisable to space two rows of crops at a distance of 60 cm, followed by a mound or flat path of 90 cm width. Within the row plants are spaced 30 cm apart. In this way 43,500 plants can be accommodated in one hectare of land. The pineapple suckers are allowed to dry at least for 25-30 days before planting. In fact, if fresh suckers are planted in moist soil, or if more moisture is available as in rainy season, they may begin to decay. To facilitate better rooting, it is necessary to strip off the scale leaves from the basal portions of the planting materials. After removing

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		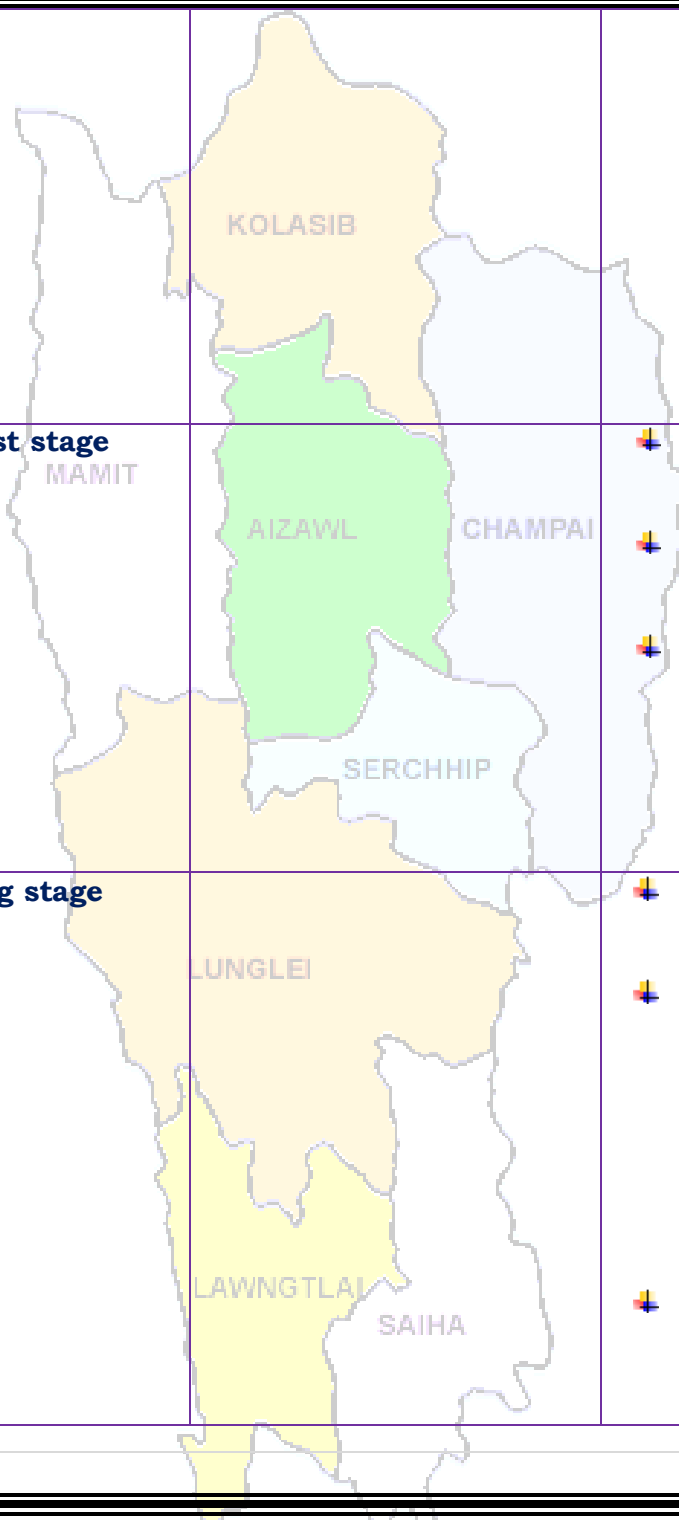	scaly leaves, the planting material should be treated with Difolation (0.2%) solution to avoid heart rot disease. Planting is usually done during monsoon, preferably in the beginning or later part of monsoon such as in August. Periods of heavy rainfall like July should be avoided for pineapple plantation.
Colocasia	**Harvest stage**		✦ Colocasia becomes ready for harvest five to six months after planting. ✦ The mother corms and side tubers are separated after harvest. ✦ The side tubers to be used as planting materials are usually separated from the mother corm and stored. Keep seed tuber in sand spread over the floor to avoid rotting.
French bean	**sowing stage**		✦ Land is ploughed to a fine tilth and divided into plots of convenient size. ✦ Ridges and furrows are prepared by ploughing after a basal dose application of farmyard manure. Field is irrigated once and seeds are sown under optimum moisture condition on side of ridges 2-3 days after irrigation. ✦ Spacing and seed rate vary with varieties. Early varieties are sown at a spacing of 45-60 cm x 10-15 cm and seed

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		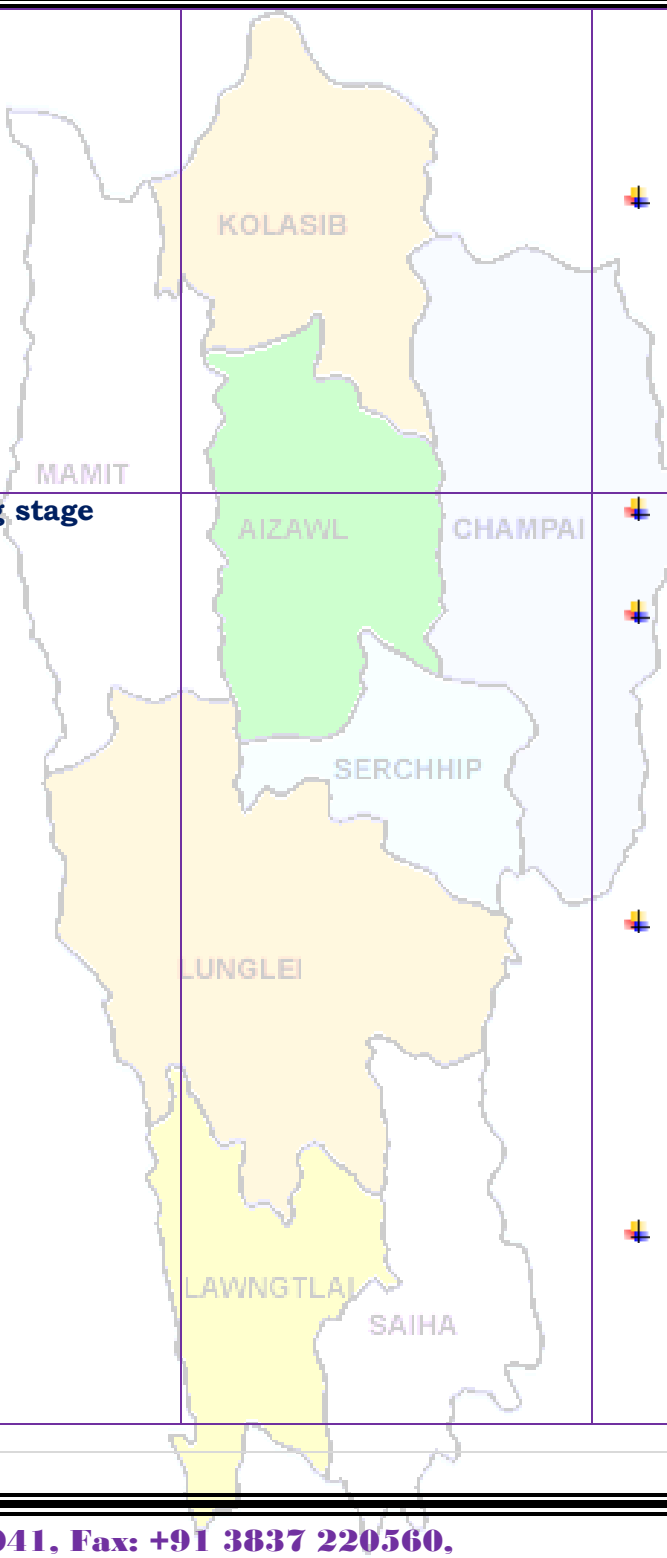	rate required is 80-90 kg / ha. Pole types are sown at 1.0 m apart in hills @ 3-4 plants / hill and seed rate is much less (25-30 kg/ha.). In addition to 20-25 t. of farmyard manure, 50 kg N, 75 kg, P2O5 and 75 kg K2O are recommended. Half of N along with full P and K should be applied as basal dose at the time of making ridges and furrows or one or two weeks after germination.
Cowpea	**sowing stage**		Land is ploughed to a fine tilth and divided into plots of convenient size. Ridges and furrows are prepared by ploughing after a basal dose application of farmyard manure. Field is irrigated once and seeds are sown under optimum moisture condition on side of ridges 2-3 days after irrigation. Spacing and seed rate vary with varieties. Early varieties are sown at a spacing of 45-60 cm x 10-15 cm and seed rate required is 80-90 kg / ha. Pole types are sown at 1.0 m apart in hills @ 3-4 plants / hill and seed rate is much less (25-30 kg/ha.). In addition to 20-25 t. of farmyard manure, 50 kg N, 75 kg, P2O5 and 75 kg K2O are recommended. Half of N along with full P and K should be applied as basal

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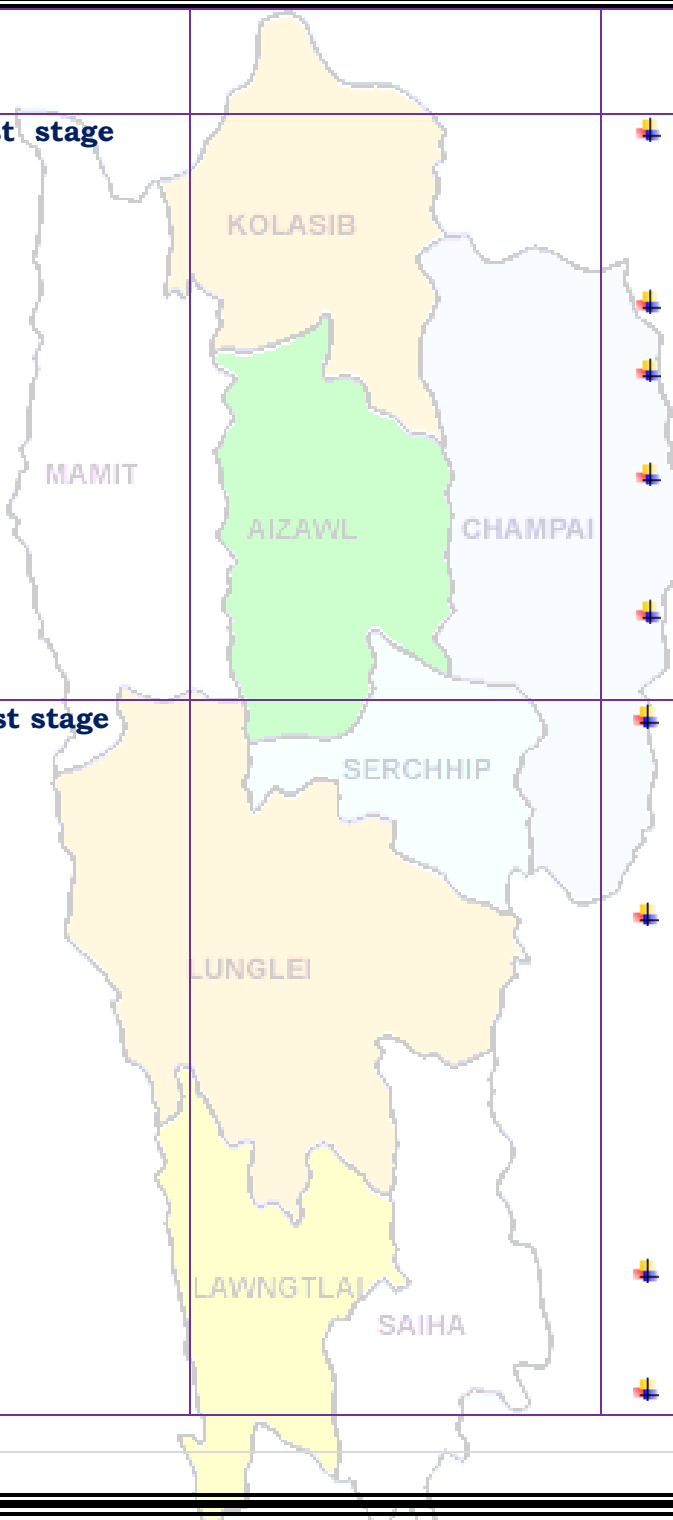
			dose at the time of making ridges and furrows or one or two weeks after germination.
Brinjal	**Harvest stage**		✦ Brinjal fruits are harvested at immature stage after attaining full size, but before loosing its glossy appearance. ✦ Dullness of fruit indicates over maturity. ✦ Usually fruits are harvested along with its stalk with a slight twist by hand. ✦ The harvested fruits are graded and packed in baskets or in loose gunny bags. ✦ Care should be taken to remove the fruits affected by Phomopsis blight.
Tomato	**Harvest stage**		✦ Immature: Before the seeds fully developed and before the jelly-like substances surrounding the seeds were formed. ✦ Mature green: The fully grown fruit with a brownish ring at stemscar. Removal of calyx, light green colour at blossom end changed yellowish green and seeds surrounded by jelly-like substances filling the seed cavity. ✦ Turning: ¼ of the surface at blossom end shows pink (breaker stage). ✦ Pink: ¾ of the surface shows

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			pink Hard ripe: Nearly all red or pink with firm flesh Over ripe: Fully coloured and soft.
Rice	**Panicle initiation stage**	**Kharif Rice**	Apply split dose of nitrogenous fertilizer. Use cracker or shining rope to resist from the attack of birds. Remove excess water from the field and make a drain in four corner of the field Planning for second crop like toria or pea.
Maize	**Harvest stage**		Cobs which are to be utilized as grain should be harvested when the grains are almost dry or containing roughly 20 % moisture. The appearance in the grains of composite and high yielding varieties however may be misleading as grains become dry while the stalk and leaves are still green. The cobs are removed from the standing crop and sun dried before shelling, otherwise retained in their jackets, if kept for seed or to be consumed or utilized at a later stage.
Kharif pulses (Green gram, Black gram and Rajma)	**flowering stage**		One or two hand hoeing and weeding should be done, depending upon soil type and extent of weed infestation. Weeds can also be controlled effectively by the application

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			of TOK-E-25 at the rate of 10 ml dissolved in 1 liter of water as pre-emergence spray. Provide irrigation in dry condition or dry spell. Provide 2% urea solution for better growth.
Ginger and turmeric	**Vegetative stage**		Remove unwanted plant near base of the plant and cut dead branches. Pre-emergence application of Atrazine (Atratraf 50 wp, Gesaprim 500 fw) @ of 1.0-1.5 kg a.i ha-1in 600 litre water, Alachlor (Lasso) @ 2-2.5 kg a.i ha-1, Metolachlor (Dual) @ 1.5-2.0 kg a.i ha-1, Pendamethalin (Stomp) @ 1-1.5 kg a.i. ha-1arge effective way for control of many annual and broad leaved weeds. Earting up of soil along with fertilizer mixture.
		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 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

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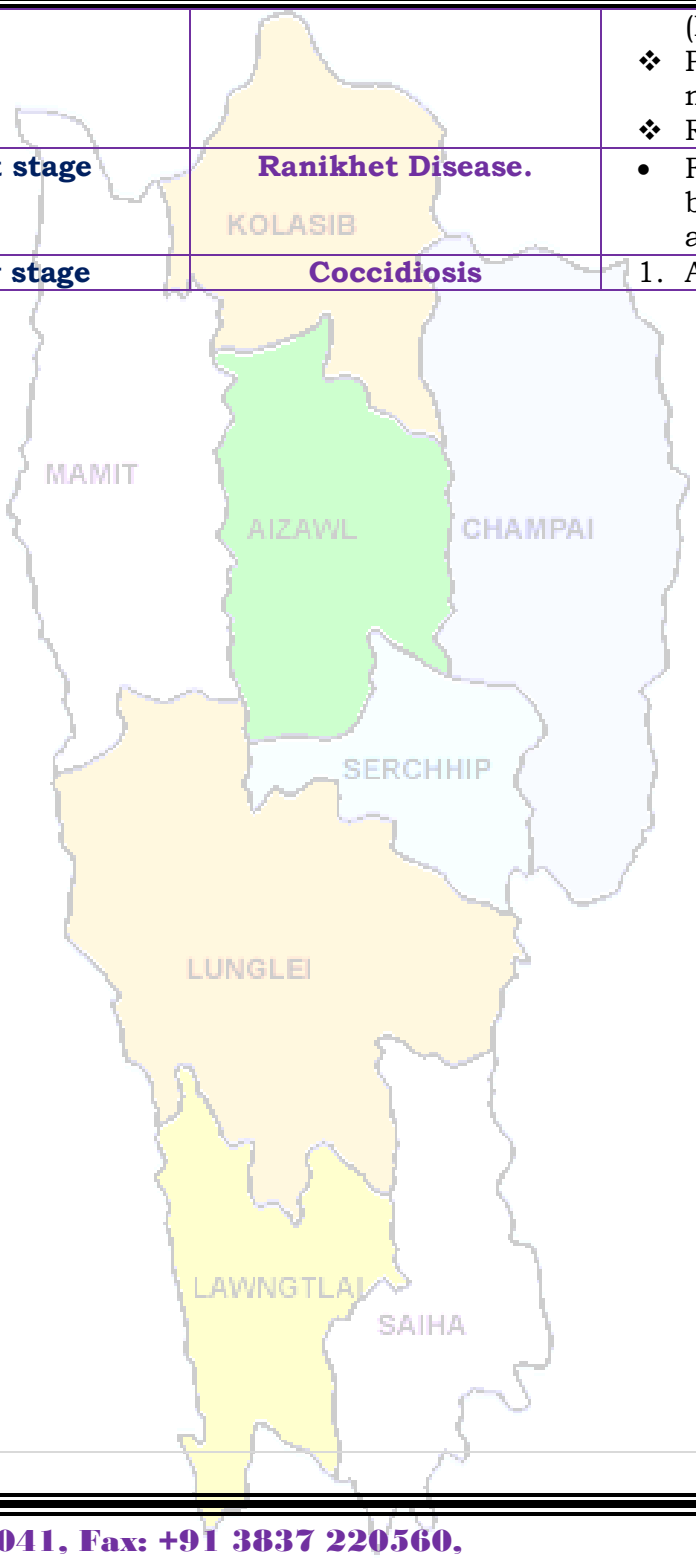
			(BQV). ❖ Primary vaccination 6 month or above ❖ Revaccination annually
Poultry	**Adult stage**	**Ranikhet Disease.**	• F1 vaccine at (1-6) days of birth and R_2B vaccine for adult birds.
	Early stage	**Coccidiosis**	1. Amprolium or coccidiostat



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