

Vol. XXXIV

Issue No. 2

Quarterly

July - Dec, 2024

HUAN ENKAWLTU



**OPERATION GINGER 2024
FEHCHHUAH RUNPUI VAILIAMNA HUN
16th August, 2024**



**Department of Horticulture
Government of Mizoram
Aizawl - 796001**

HUAN ENKAWLTU SUBSCRIBE TURTE HRIAT TUR

1. Hming : _____
 Khua/Veng hming : _____
 Street hming/H.No. : _____
 Pin Code : _____
 Phone : _____
2. Kum khat chhung subscribe duh ten ₹ 30/- pek a ngai (Hei hi Stamp man tur a ni).
3. Kum hnih chhung - ₹ 60/-
4. Kum thum chhung - ₹ 90/-
5. Stamp hi lei hmasak zel a ngaih avangin, Subscriber ten in subscribe a tawp hmain renew thin tur a ni.

Visit us @ www.horticulture.mizoram.gov.in
 email : huanenkawltu1994@gmail.com

A chhunga thu awm te

EDITOR
C.H. Lalmuanpuia
 Director of Horticulture
 Mizoram, Aizawl

ASSOCIATE EDITORS
L. Lalhmingmawia Pachuau
 Addl. Director of Horticulture (B)

ASSISTANT EDITOR
Manthanga Tochhawng
 Dy. Director of Horticulture (E&T)

Contributing Editors :

1. **C. Zosangliana**
D.H.O., Aizawl
2. **C. Lianluaia**
D.H.O., Siaha
3. **B. Lalzarzova**
D.H.O., Lunglei
4. **Lalnuntluanga**
D.H.O., Khawzawl
5. **Lalnunpuia**
D.H.O., Kolasib
6. **R. Lalrintluanga**
D.H.O., Serchhip
7. **Lalthakima**
D.H.O., Hnahthial
8. **K. Zonunsanga**
D.H.O., Champhai
9. **B. Lalchamlia**
D.H.O., Mamit
10. **Jacob Lalmalsawma**
D.H.O., Saitual
11. **J.H. Zosiamliana**
D.H.O., Lawngtlai

Circulation Manager:
Zoramsiami
 Assistant

1. Editorial 2
2. Operation Ginger 2024 3
 - Dr. H. Vanlaldiki, Dy. Director, Directorate
3. Large Cardamon/Elaichi lian 5
 - Dr. Vanlalremruati Hnamte, Dy. Director, Directorate
4. Biofertilizer, Horticulture tan a tangkaina 10
 - R. Lalmuanpuia, ADHO Lawngtlai
5. Thlai Damna Huang 15
 - Valerie Lalawmpuia, DHC, Directorate
6. Photo 17
7. Kiwi chin dan leh enkawl dan 21
 - Lalrinmawii, ADHO Champhai
8. Farmers Tour thlirletna 24
 - Rohmingthangi
9. Noida zin kawng 26
 - Jacob-a, Saikhamakawn
10. Chawhmeh hrisel ber zinga mi Mautuai 30
11. Lawrkhawm 33
12. Keimahni huang 36

Editorial..... 

C.H. Lalmuanpuia
Editor and Director of Horticulture



Huan Enkawltu taima tak tak hmun hrang hranga thawktute chibai vek u le.

Mihring, ran leh thlai te hian hrileng avangin chhialna nasa tak an lo tawh tawh thin a. Heng avanga vanduaia thleng tur lo ven leh a tihdam hna hi thil pawimawh tak a ni.

Mizoroma African Swine Fever (ASF) avanga Vawk tam tak natna lo thleng te, Fall Army Worm (FAW) avanga Vaimim chingtuten an tawhna te tillem tura a changtu department ten nasa taka a hma an la angin, Sawhthing tam natna kum 2024 a Mizoram hmun hrang hranga a lo thlenin, Horticulture Department chuan 'Operation Ginger' hming a 'Sawhthing tam ven leh enkawl dam hmalakna runpui' a changtu Minister hova department a thawkten hma an lakna chuan rah tha tak a chhuah ta a. Mizoram Sawhthing 60 - 100% lai chhanchhuah leh enkawl dam a ni hi kuthnathawktute tan malsawmna ropui tak a ni a, a lawmawm takzet a ni. Hetianga sawrkar leh kuthnathawktute tanrualna hi chhawm nun zel pawh a pawimawh takzet a ni.

Huan Enkawltu Quarterly Magazine a Bio fertilizer hman dan te, thlai damna huang te, Large Cardamom leh Kiwi chin dan mithiamten kimchang taka an zia te hi ngun takin zir ta i la, tha takin kawh tha khiau i la, heng thlai tam avanga sum leh tha tam tak kan chan tur hi kan pumpelh thei dawn a ni.

Horticulture Department chuan Horti Fair leh Exhibition bakah tunlai thiamna tha leh tangkai zawk zir chhuak turin kuthnathawktute tan training leh tour, state chung, pawn leh foreign thlengin a buatsaih thin a. Kuthnathawktute tam tak ten an hlawkpui hle thin a, an training report te hi midang te lo chhawr ve turin a remchan angin rawn tarlan thin a ni bawk.

Mizoram thil tharchhuah lama kan intodelh bakah ram dang leh state pawn a thawnchhuah tham, quality tha kan neih zel theih nan theihtawp chhuah zel turin kuthnathawktute kan fuih a, thawhrim rah hlawhtlinna tam zawk chang turin duhsakna kan hlan e.

OPERATION GINGER 2024 REPORT

Dr. H. Vanlaldiki,
Deputy Director (PP)
Directorate of Horticulture



Handholding Policy (Banakaih) hnuaiah sawhthing hi chhungkaw engemaw zatin an ching a. Hei vang hian Horticulture Department chuan sawhthing chin hma atangin hma a la nghal a. A chi chiahna district hrang hrang sawhthing chingtute hnena semchhuah a nih bakah-zirtirna pek a ni. Amaherawhchu, ruahtui tlak hma avang leh ruahtui tam avangin thlai hrang hrangah natna kum 2024 chhung hian a tam em em a. Chuvang chuan sawhthingah pawh a tam hri avanga harsatna a lo awm tak avangin "Operation Ginger 2024" hi Horticulture Department chuan a kalpui ta a ni.

1. Dt. 9th August, 2024 (Friday), chhun dar 12:00 ah Committee Room, Directorate of Horticulture-ah Sectional head zawng zawngte nen sawhthing tam chungchanga meeting hmasa ber neih a ni a. Meeting hi Pu C.H. Lalmuanpuia, Director of Horticulture in a kaihruai a. Sorkar flagship programme pawimawh tak bawhzui nan Mizoram dapchhuak a sawhthing ching an tam thu leh tun hnai chhova sawhthing chingtuten natna hrang hrang avanga harsatna an tawh chungchang te sawiin hmalak dan tur uluk taka sawiho a ni. He meeting a thurel angin a hnuaia mi ang hian hmanhmawh taka hmalak nghal a ni.
2. Dt. 13th August, 2024 (Tuesday), 10:30 AM ah Conference Hall, Directorate of Horticulture ah Mizoram chhunga District hrang hrang a DHO, ADHO, Field staff leh Project Officer zawng zawngte ko khawmin sawhthing enkawl dan training kimchang tak power point presentation hmangin neih a ni.

1.	Chairman	Pu C.H. Lalmuanpuia, Director of Horticulture
2.	Resource person	Dr. H. Vanlaldiki, Deputy Director (PP), Directorate of Horticulture

3. Booklet: *Sawhthing Natnate, A Bawmtu Rannungte leh A enkawl dan* tih buatsaih a ni a, Dt. 13th August, 2024 a training inkoh khawmnaah hian sem nghal a ni. District tina fehchhuak turten an district theuha an sem turte an hawn nghal nghe nghe a ni.

4. **Operation Ginger (Fehchhuah Runpui):**
 Dt. 16.08.2024 (Friday) dar 7:00 AM ah Horticulture Directorate building-ah Horticulture Minister, Prof. Lalnilawma hovin Secretary, Horticulture Department te nen "Operation Ginger (Fehchhuah Runpui)" flag off programme hman a ni.
 Horticulture Minister, Prof. Lalnilawma'n Aizawl, Saitual, Serchhip leh Hnahthial District a Operation Ginger atan fehchhuak tur team 4 te chu Directorate of Horticulture atangin a vailiam.
5. Hemi ni vek hian District hrang hrangah pawh DC tin ten khaw hrang hranga fehchhuak tur "Operation Ginger" team te an vai liam ve bawk a.
6. **Operation Ginger hi August thla chhung** neih tura kalpui a ni a. Hemi hun chhung hian sawhthing tam enkawl dan khaw hrang hrangah zirtima pek a nih bakah a venna damdawi leh sprayer te, a zirtima lehkhabu/booklet te sem nghal zel a ni.
7. **IPM leh Horticulture Mechanization (MIDH) hnuai** atangin a theih chin chinah a chi chiahna tur leh a tam venna/ enkawlina tur damdawi leh a kahna (Sprayer) lei nan sum awm ang ang hman a ni.

Operation Ginger 2024 khaikhawmna chu hetiang hi a ni:-

Sl. No.	Particulars	Quantity
1.	No. of Districts covered	11 Nos.
2.	No. of villages covered by Operation Ginger, 2024	423 Nos.
3.	Total no. of families cultivating Ginger	24,287 Nos.
4.	No. of families affected	8,486 Nos.
5.	No. of farmers trained	6,366 Nos.
6.	Efficacy Percentage of PP Chemicals applied	70.45 %

Sawhthing chinna hmun ngeiah kal chilhin Horticulture mithiamten zirtima an pe a. Heng zirtimate hi local media te nen tangkawpin TV ah leh social media hrang hrangah zau zawka sawhthing chingtuten an lo chhawr tangkai theih nan thehdarh a ni. Heng zirtimate hi local media Zonet leh DDK ah te tihchhuah niin Zonet leh DDK Youtube Channel-ah en theihin a awm bawk. Tin, sawhthing chin dan "Talk Show" te pawh neih a ni.

LARGE CARDAMON / ELAICHI LIAN

Dr. Vanlalremruati Hnamte,
 Dy. Director of Horticulture,
 Directorate



Large cardamom (*Amomum subulatum* Roxb.), Elaichi lian chi hi Zingiberaceae family hnuai mi niin, Sawhthing leh Aieng te nen family khat an ni. Himalayan tlang bulthut state Sikkim leh Darjeeling district, West Bengal te hi India rama chin uar berna leh tharchhuah nasat berna niin, tun hnaiah North East State dang Nagaland, Meghalaya leh Arunachal Pradesh-ah te chin man mek a ni. He thlai hi Mizoramah nasa taka tharchhuak ve tura hmalak mek niin, a bul man nan Tualpui khua, Khawzawl District-ah hmalakna kalpui mek a ni.

Large Cardamom hi 'Black Cardamom' tih pawhin hriat lar a ni a, mihring hriselna atan thatna tam tak a nei a, hmanlai atangin India leh Chinese damdawiah hman nasat niin, pumpui chak nan, thawk lama harsatna chhawk nan te, cancer cells ven nan leh BP leh zun thlum sang tihhniam nan a tha hle.

Large Cardamom/Elaichi lian tharchhuahte hi a man a to thei hle a, a man hniam lai berin kg ah Rs. 700/- niin a man that ber laiin Rs. 2,500/- a ni thung a ni.

SIK LEH SA:

Elaichi lian hi Sciophyte (Hlim duh bik thlai) niin, boruak hnawng tamna si tlangram ramhnuai

hmun hlimawmna hi a mhat duh zualna a ni. Sik leh sa mamawh tlangpui chu 2-6°C (December - January), 25-30°C (June - July), kumtluan ruahtlak zat 2000 - 3500 mm niin, vur leh rial tla erawh a haw hle a ni.

LEICHINNA:

Ramhnuai lei, lei hang tamnaah chin a mha, lei thur (5-5.5 pH) ah chin tlangpui niin, tui tlin theihna leiah a hlawhtling thei lo, tui luan ral zung zung theihna siam ngei ngei tur.

VARIETIES:

Varieties tam tak awmin, a chinna hmun san zawng a zir te in variety thlan thiam a ngai a ni. Variety

larzual parukte chu Ramsey, Ramla, Sawney, Gardo Seto Ramnag leh Dzongu Golsen te an ni. Heng varieties zingah hian 'Sawney' variety hi kan ram mil pui tur bera thlan niin, he variety hi altitude sang lutuk lo (975-151 m amsl) atanga hmun sang tak (151 m amsl) ah chin theih niin, a thlai kung san zawng hi 4-6 feet niin, a kung hi a thau mha a a kung hi a senduk rawng lam niin, a rah kawm (capsule) hi a lian thain chi 35-50 nos. a pai tlangpui. A par hun hi March - May, fur tak tak hmaiin a par a, a capsule thar hun hi September - October, hmun sang zualah chuan November thla thleng a thar a ni.

Variety mha em em dang leh chu 'Seremna' niin, a thar hlawk theih em avangin leh natna a do mhat avangin a ni. Sawney variety nen a kung san zawng a inang a, a kung hi a hring thung, a hnahte an uaithla hnuang a, tiller khatah a rahbawr 2-3 zel niin, rahbawr khatah a kawm (capsule) - 10 no. zel awmin, capsule khatah a chi 65-70 zel a pai thung a ni.

CHINNA HMUN SAWNGBAWL DAN:

Chinna hmun tur kan thlanin a hmasa berah kan hriat pawimawh tur chu kan chinna tur lei chu ramhnuai

lei - sawntlung leimha tamna a ni tur tih leh tui hna mha tak bul hnai a ni tur a ni tih a ni. Hmun hlim (50% shade) ah a mha duh ber a, chuvangin ram ngaw chhah lutuk lo hnuaiah chin a mha ber. Ram vah faia kan ching dawn a nih chuan, heng thingkung hlim petu (shade tree) atan a mha te - Faruuh, Kangmek, Kharduap, etc.

Kan chinna tur lei chu hnim to awm lova siam hmasak tur. Khur feet khat a thuk leh zau a laih tur niin khur te hi 1.8m x 1.8m (6 feet x 6 feet) a inhlath leichung hang leh bawngkek leimha @ 1-2kg khur khatah chawhpawlh tur. Khur hi May thla ah hengte hian chhung khah tur. A phun hun hi June - July niin, July thla ral hma ngeia phun zawh a mha. Leiah hnawng a awm tam a ngaih avangin, phun thuk lutuk loh tur. Pal ban phun tel zel tur ruahsur tamna leh thli nasat naah phei chuan a mul zual. Mulching (thlai bul khuh) hi tih nghal a tha hle.

CHIN PUN DAN:

Elaichi lian hi seeds (a chi) emaw suckers hmangin a chin pun theih. A chi (seeds) amanga tihpun hian a miak tam tak a neih theih phah a, virus natna kaichhawng a tlem (a chi lakna a hriselin), mahse a chi amanga chin pun te hi an thar a hlawk lo thung.

Suckers hman mhatna erawh a thar hlawk a, a thlai zia a inthlak lo (true-to-type).

A. A chi (seeds) hmanga tih pun dan:

A chi tihpun nana hman tur te hi Elaichi lian thar hlawk leh chinna hmun hrisel (natna in a bawh loh) amanga thlan tur a ni. A chi kawr (Capsule) hmin tha, a rahbawr rau rauah, a hnuaia lam leh laihawl a mi thlan tur. Hmun hlimah tih ro hnuaia primary nursery-ah kui tur.

1. Primary Nursery:

A chi hi September - October thlaah kui tur. A kuina tur lei chu lei thawl, tui tling thei lo tur a ni. A chi kuina tur bed chu 15-25cm. lei atanga pawngsang, 1 m a zau, 6 m a sei a siam a tha. Bawngkek leimha hmin tha tak nen a chawhpawlh a tha. Bed khat zelah a chi 80-100g te ngil takin 10cm a inhlatah thlak tur, lei tlem zelin khuh zawhah buhpawl emaw hnimhnah ro 10-15cm chhahin khuh tur. Lei tihhawng turin tui pek zin tur. A chi kui te chu a tlangpuiin ni 25-30 ah an tiak a, a nawlpui an tiah hnuaia, hnim ro a khuhna chu laksawn tur. A kui tiahna hmun chu zar hlim nghal tur. Hnim to awm apiang pawh phawi zel

tur. A tiakte chuan hnah 3-4 an neih velah secondary nursery-ah phun sawn tur.

2. Secondary Nursery:

A tiakte chu secondary nursery-ah polybags-ah emaw secondary beds-ah emaw sawn tur a ni.

i). Poly bag nursery:

Polythene bag 15cm x 15cm a lian, a mawng a kua tereuh te te awmte hman tur. Potting mixture tur atan lei, balu leh bawngkek lei tha te 4:1:1 zelin siama bag-ah thun khah tur. Primary nursery atanga tiak phun sawn tur te chu bag tinah uluk taka phun luh tur, hmun hlim hnuaia 1m zela zau, a thui zawng chu remchan dan zelin rem khawm zel tur. Polybags-ah hian April - May thlaah phun luh a, tui uluk taka pek tur. Thla 10-12 hnuaia kan phunna tur hmunah a phun sawn theih ang.

ii). Raised Secondary beds:

Secondary beds hi a tiak phun sawnna tur lei siam pawng, 15cm a sang, 10 cm a zau, duh anga seiah bawngkek lei tha nena chawhpawlh that em em tur a ni. Primary nursery atanga a tiak phawi (hnah 3-4 nei) te chu 15cm inkar hlatah (May-June

thlaah) phun sawn tur. A tiak phun sawn te bi kar zel chu hnahro emaw buhpawl a khuh tur. Nursery hi zar hlim tur niin tui uluk taka pek reng tur. A miak te chu 45-60cm a sang an lo nih hun, peng (tillers) 2-3, a rawn neihah kan chinna tur hmunah a kum leh June-July thla ah phun sawn tur a ni.

B. SUCKERS HMANGA CHIN PUN:

Suckers hi a kung peng, Elaichi lian tih pun nana hmang ber a ni. Heng suckers hi a kung hrisel, thar hlawk (kum thum a zawna 800kg aia tam tin 2.5 hmunah thar thei) atanga lak tur, heng sucker pakhat zel hian peng upa tawh pakhat leh peng la no ve tak pahnih emaw a bul mit pahnih a nei tel tur a ni.

PHUN DAN:

Leilung hnawng awm tam theih lai June-July thlaah phun ngei ngei tur. Suckers/seedlings te hi khur laih sa, lei vurna tur sawngbawlsa lai takah thuk lutuk loah phun tur. Ruah tamin a len bo loh nan a tiak/suckers kan phun zawh bulah pal vih bur zel tur, hnahro emaw buhpawl in a kar zelah khuh tur.

ORGANIC NUTRIENT MANAGEMENT:

Thlai chinna leilung hanna tlem tial tial te tih han leh hi tih tur pawimawh tak a ni. Hemi tur hian bawngkek lei tha emaw compost ang chi reng reng hi Elaichi lian thlai tinah 5kg vawihnih pek thin tur, April-May leh August-September ah. Vermicompost (changpat lei tha) te hi hmun tam takah chuan hman nasat a ni.

Kan chinna hmun tur terrace a nih loh a, hmun awih tlanah chuan, a sang laia lei te hlawi deuh a, a hnuai laiah daha Mulching (hnim hnah/ buhpawl a khuh) tih tur. Hemi hian nasa takin lei hnawna pein, hengte hi zawi zawia lo mawihin lei hanna nasa takin a pe let dawn a ni.

TUIPEK DAN TUR:

Elaichi lian hi lei ro rei lutukah a tha thei lo. Phun kumah, khaw ro lai (September-March) in ni 10 danah tui pek a tha. Tuipek thatna zelah Elaichi lian hi a thang chakin a thar hlawk thin. Tui pek tur tui hna a that dan a zirin pipe hmang ten, sprinkler leh flood (a luan a luan tir) hmangin pek tur. Tui khawlina tur khur hi a kung li dan zelah fur dawnah laih a tha.

SHADE (HLIM) CHUNG-CHANG:

Zirchian dan hrang hrang atangin hlim (shade) chhah lutuk leh hlim tlem lutuk hian Elaichi lian thlai thang leh thar a tihnam thei. Hei vang hian hlim 50% hi duhthusam a ni. Hlim petu thingkung zar thlak hi uluk takin fur tak tak hmain neih thin tur. Zar thlak nasat leh lutukah crawh hnah eng a ti tam. Chuvangin, uluk taka hlim siam turin hmalak a tha. Hei hian a than that nan, a hun takah a par nan leh a thar tam nan a pui a ni. Elaichi lian chinna hmun ber Sikkim leh hmun thenkhatah he thlai hi terrace-ah leh zar hliahtu thing awm lohna hmunah te an ching fan nasain uluk taka enkawl chungin, hei hi la zir chiang zel turin mithiamten hma an la mek a ni.

ELAICHI LIAN HUAN ENKAWLNA A PAWIMAWH DANGTE

i). Phun tirh kum 2-3 ah chuan phunna hmun thlawh fai hi vawi thum tal kum tin neih tur. Thlawhfai kelh crawh tih loh tur. Hnim thlawh

faina te chu a thlai bul khuh nan hman tur. A par lai crawh chuan heng khuhna hian a par a khuh tur a ni lo.

ii). Elaichi lian a rawn par hian a pa chi leh a nu chi intawng fuh nan khuaiin a par a bawm a tul thin. Hemi tur hian a chinna hmunah hian khuaibu a awm tel ve a tul a ni.

THAR DAN TLANGPUI:

Elaichi lian hi August atangin December inkarah thar thin niin, a chinna hmun san dan a zirin a thar hmain a thar tiai thei. Hmun sang lutuk lovah chuan August-September ah thar manin, hmun sangah crawh November - December-ah te thar man a ni. Hectare khat (min 2.5) hmun ah 100-400kg a thar theih.

A chi kawm (capsule) a rah chunglanga awmte a buang rawng an nih hunah lawh an hun hnai tih a hriat theih. Hemi hunah hian a kung chu lei atanga feet khat velah chhawk a, ni 10-15 dah hnuaa a hmin kim ta thin. A rah bawr hi chemte chi khat "Cardamon-knife" an tih ngeiin an la chhuak thin.

(Issue leha chhunzawm tur)

BIOFERTILIZER: HORTICULTURE TAN A TANGKAINA

R Lalmuanpuui,
ADHO Lawngtlai



INTRODUCTION

Chemical Fertilizer hman hian side effect tam tak leilung tan a thlen thei a. Chemical damdawi hman uarna ramah chuan lei thur zawng tehna (Soil pH) a tiin buk taw lova, leiah acid a tam a, a thur thin. Chu chuan lei a tichar/ khal bum a, lei insiam hmang (soil structure) a tichhe thin. Hnim leh thlai tawihin a siam lei tha (humus) te a tichhia a, chu chu thlai chinna atana siam tha leh tur chuan chemical fertilizers baw hman leh a ngai a. Amaherawhchu, hei hi khuareiah a thalo a, lei thatna (soil fertility) a chhe tial tial a, lei char bur avangin tui, nutrient leh micro nutrient te a pai tha thei lova, chu chu thlai tan a paw hle a ni. Heng damdawi leh lei charte avang hian lei chhunga lei tha siam tura rannungte an thi then a, thlai an to chak lova, lei tha an siam taw thei lo. Heng Chemical fertilizer hman hian kan chenna khawvel (environment) thleng a khawih chhe thei a ni.

Heng Chemical fertilizer hmanna avanga side effect hlauhawm tak avang hian Organic farming hi ramchhung hmun hrang hrangah chuan an uar tawh em em a, Organic Farming chu leilunga hausakna inphum sa humhalh a, tangkai thei ang bera thlai chinna atana hman hi a ni. Leilung ti tha turin leia thil nung (organism) te thatna hman tangkai zual thei nan leh natna hrik inphumte an lo ven thei nan ran ek, thlai leh hnim tawih a siamte, Bio-fertilizers leh Bio-pesticides te hmangin thlai enkawl zawk an ni. Heng zingah hian bio-fertilizers te hi eng nge an nih tih leh an hman tangkainate hi hriat a pawimawh takzet a ni.

Bio-fertilizers sawifiahna

Bio-fertilizers chu leia cheng thilnung mita hmuh thamlohte hmanga lei tha siam a ni a, chung chuan thlai tana chaw tha boruak atangte leh thilnung leh nung lo atangte in an siam chhuakin, thlaiin an mamawh Nitrogen leh Phosphate te leia hman tlakloh a awmte chu awlsam taka thlai hovin an hman tangkai thei turin lei chhungah hnathawkin an siam a, thlai tana tangkai hormone te pawh siamin, natna lakahte a veng thei baw a ni.

Bio-fertilizer te hi nutrient management atana hmanraw pawimawh tak, thlai tam zawka thar theihna leh a tam zawka sum lakluh tam theihna tha tak a ni. A tawi zawnga sawiin bio-fertilizers te chuan thlai chi emaw, zung emaw lei emaw nen chawh-pawhlin thlai chaw tha an siam bakah leia thlai nung chi hrang hrangte an tipung a, lei ansiam tha thin a ni. A diakin emaw a tuiin emaw, a ro dipin an siam ber.

Bio-fertilizers te chu:

- Thilnung tangkai mita hmuh tham loh, Fungi emaw bacteria leh algae a hlang emaw a in pawhlin hman mai tura siamsa an ni.
- Lei tih that nan leh hrisel nana hmantlak tak a ni.
- Awlsam taka hman theih an ni a, a hranpa a buaipui vak a ngai lem lo.
- Chemical fertilizer dangte anga tam tak phul (apply) a ngai ve lo.

Bio-fertilizer hman hian:

- Thlai chaw tha, a bikin Nitrogen 80-120 kg/ha leh Phosphorous an siam thei.
- Thlaiin chaw tha an mamawh a puhru a, chemical fertilizer thlakna tha tak a ni.
- Thlai thar a ti tam. A tlangpuiin 10-40% in fang nei chi a ti thar tam a, thlai thanchak dan 15-30% in a tichak baw.

iv). Thlaiin an than that nana an mamawh em em hormone a siam.

v). Thlaizung (root system) a tichak. Chu chuan lei atanga tui leh chaw tha lakchhoh kawngah a tanpui nasa em em a ni.

vi). Lei timur leh pianphung an tidanglam a, chu chuan tui pai theihna a tisang.

vii). Bio-fertilizer thenkhat chuan thlai venhimna damdawi ang chi an tichhuak a, chung chuan natna do theihna a siam baw.

Bio-fertilizers chi hrangte leh an thawh dan:

1. **Nitrogen siamtu (Nitrogen fixing):** Nitrogen hi thlai leh hnim hring ten an chawm a mawh em em a ni a, kan chenna leilung leh boruak ah te hian Nitrogen hi tam ber mah se thlai hovin heng boruaka awmte hi an hmang ngawt theilo a, an mamawh taw an hmu lo chawk thin. Amaherawhchu leia cheng rannung thenkhat hmuh theih lohte hian heng Nitrogen te hi awlsam taka thlaiin an hman tangkai thei nan ansiam thei a ni. Chung thilnung zingah chuan, Rhizobium, Azotobacter, Azospirillum leh Acetobacter te hi hman an ni tlangpui. Heng te hi then hranin an awm leh a, chungte chu:

- a). **Free-living:** Heng bacteria te hi leiah a hranin an awm a ni. (eg: Azotobacter)
- b). **Associative:** Thlai chin a zirin bacteria te chu heng thlai zung chhehvelah an cheng thin emaw an pui thin a ni. (Eg. *Azospirillum*)
- c). **Symbiotic:** Heng te hi thlai zung (root) chhungah an cheng ve thung. (Eg. *Rhizobia*, *Frankia*).
- d). **Blue-green algae (Cyanobacteria):** Heng te hi buh (rice) chinna lei ti tha thei em emtu an ni a. Thlai in an mamawh hormone, protein chi 172, vitamin leh minerals te leiah an siam thei a ni. Eg. *Anabaena*, *Nostoc*, *Tolypothrix*, *Cylindrospermum* etc.
- e). **Azolla:** Heng rannungte hi a bik takin buh chinna hmuna hman thin an ni a. Buh phun sawn hma emaw a chin laiin leiah theh thin an ni.

2. **Phosphate siamtu (Phosphate solubilizing/mobilizing):** Phosphate solubilizing bacteria (PSB) kan tihte hian lei (soil) a phosphate hman theih lohva awm te hi acid chi khat (organic acid) hmangin hman theih turin an siam thin a. Lei thur leh thur loh (pH) ah a inngat nasa em em a ni. Heng zingah hian Bacteria thenkhat, *Bacillus*, *Pseudomonas* etc. te, Fungi-*Aspergillus* leh

Penicillium etc. te leh VA - (Mycorrhizal fungi) thenkhat *Glomus* leh *Gigaspora* etc. te hman an ni.

3. **Mineral-Solubilizing Biofertilizers (Minerals siamtu):** Minerals te hi thlai chaw leh mamawh, lei chhunga awm an ni. Chung minerals zingah chuan a pawimawh zual bik Potassium, Silicate leh Zinc te hi leiah an tlem em em a, thlaite pawhin an tlachham fo reng a ni. Hemi a nih avang hian man to tak takin thlai damdawi atan an siam thin a, amaherawhchu bio-fertilizers-a rannungte hian heng minerals te hi awlsam takin thlai tana tangkai turin an siam chhuak thei a ni. Eg. *Bacillus*, *Thiobacillus* leh *Saccharomyces* te hi heng atan hian hman thin an ni.

4. **Thlai ti tawihthu (Compost Bio-fertilizers):** Heng bio-fertilizers rannungte hian tawih an siam thei a, chung thil tawihthe chu lei tha (humus)-ah chantirin, organic fertilizer tha tak atan an hman theih a ni.

Compost Accelerators: Mi-thiam ten an finfiah danin thlai tih tawih dan awlsam leh rei lo zawk

chu Celluloid siam thei thilnungte hman hi a ni. Chungte chu - *Trichoderma viride*, *Aspergillus niger*, *Paecilomyces fusisporus* te an ni.

Compost Enrichers: Thlai tih tawih tawhte chaw tha pai tam tir tur chuan Phosphate siamtu thilnungte (Phosphate Solubilizers) entirnan, *Aspergillus niger*, *Aspergillus awamorii* leh Nitrogen siamtu (Nitrogen fixers) entirnan, *Azotobacter* te hi tih tawihna khura hman a tangkai em em a ni. Phosphate siamtute hi Mineral Grade Rock Phosphate nena pawlhin thlai tawih Phosphorus awmzat an tipung thei. Tin, *Azotobacter* hian compost-a Nitrogen awmzat a tipung bawk.

A hman dan tur:

Bio-fertilizers chi hrang hrangte hi chi li in a hman theih a:

1. **Thlai chi pawlh atan:** Nitrogen siam theite leh Phosphatika Bio-fertilizer te chu 200gms. ve ve in tui 300 - 400 ml. ah pawlh tur a ni. He tui siam hi thlai chin tur chi, 10 - 12 Kg. ah leih luh a, kut a nuai pawlh tur a ni. Chutianga enkawl tawh thlai chi te chu hmun daihlim a dah ro hnuah chin nghal vat tur a ni. Lei thur atan chuan chutianga thlai chi enkawl tawhte chu chinai

thi Kg. 1 nen pawlh leh phawt a tha.

2. **Thlai tiak zung chiah:** Nitrogen siamtu (*Azotobacter*/ *Azospirillum*) leh Phosphate siamtu bio-fertilizer te chu 1 - 2 Kg ve ve in tui litre 40 - 50 ah chawhpawlh tur a ni a. He mi ah hian thlai tiak tin 1 hmuna phun tur te chu minute 20 - 30 vel chiah tur a ni. Chumi hnu a daihlma tihro a, phun hnu darkar 24 chhungin tui pek tur a ni.

3. **Lei nenapawlh:** Acre khata thlai awmzat a zirin *Azotobacter*/ *Azospirillum* te chu 2 - 4 Kg leh Phosphatika 2 - 4 Kg hman tur a ni. Heng bio-fertilizer chi hnihte hi tui litre 2 - 4 ve ve ah a hrana pawlh a; chu mi hnuah lei dur Kg. 50 - 100; a hran a chhun vum ve veah pawlh tur a ni. Chutia lei tha dur a pawlh hnu chuan zankhua a chiah tur a ni. Darkar 12 hnuah heng lei tha dur te hi tha taka chawhpawlh tur a ni. Lei thur atan chuan chinai thi Kg. 25 pawlh bawk tur a ni. Sumchang thlaite tan chuan he lei tha dur leh bio-fertilizer pawlh hi zung zawnah pawlh tur a ni. Thlai naran tan chuan lei hnawng chin hma chiahin thehdarh a, chawhpawlh tur a ni. Alu atan chuan, chin hnu ni 20 ah emaw lei chawh phut hunah emaw pawlh tur a ni.

4. **Pangpar leh ornamental plants-a hman atan:** Pangpar thenkhat Rose, Jasmine, Chrysanthemum, Marigold, Dahlia etc. te atan hian a zungchiah (root dip method) emaw cutting method hman a ni tlangpui. Chumi tur chuan bio-fertilizer pack khat (200g) chu tui liter 2 vela chiahin, hman pangpar zung (root) 200-300 vel a daih a ni.

Bio-fertilizer hman kawnga hriat tur pawimawhte:

1. Leiṭha (bio-fertilizer) fun te chu hmun hul leh ro, nisa leh lumin a thlen lohna ah dah tur a ni.
2. Bio-fertilizer te chu hman dawnah chauh hawna hman zawh nghal vek tur a ni.
3. Bio-fertilizer te leh thlai chi enkawl tawhte chu thlai venhimna damdawi emaw damdawi hmanga leiṭha siamchawp te nen hman pawlh loh tur a ni.
4. Thlai chi te chu thlai venhimna (fungicides) te nena enkawl tur a nih chuan, thlai venna chi (Bavistin, Thiram) te chuan enkawl phawt a, chumi hnuah bio-fertilizer hman tur zat let hnih vel chuan pawlh leh tur a ni.
5. Thlai chi enkawl leh bio-fertilizer leiṭha nena pawlh te chu hmun daihlimah chauh tih tur a ni.
6. Thlai chi hnan tana hman tur bik, bio-fertilizer chauh hman tur a ni a, tin, a fun te chu a nun hun chhung ngeia hman zawh tur a ni.

Thei lam leh he lei chi thlai thenkhat ten bio-fertilizer hman an hlawkpui dan.

Bio-fertilizer hman	Thei/Thlai	Bio-fertilizer tel lo nena khaikhin a a thar tam lam (%)
Rhizobium	Zikhlum	24.30
	Purun Var	14.23
	Chana	13.38
Azospirillum	Zikhlum	11.87
	Purun sen	21.68
	Bul uih	9.00
	Kawl bahra	8.50
VAM	French bean	42.4
	Zikhlum	19.00
	Tomato	32.8
	Hmarchapui	115.8
	Bawkbawn	53.15
	Serthlum	129.0
	Serthur (Assam Lemon)	150.0

THLAI DAMNA HUANG

SAWIITHING NATNA
LANCHHUAH DAN LEH ENKAWL DAN

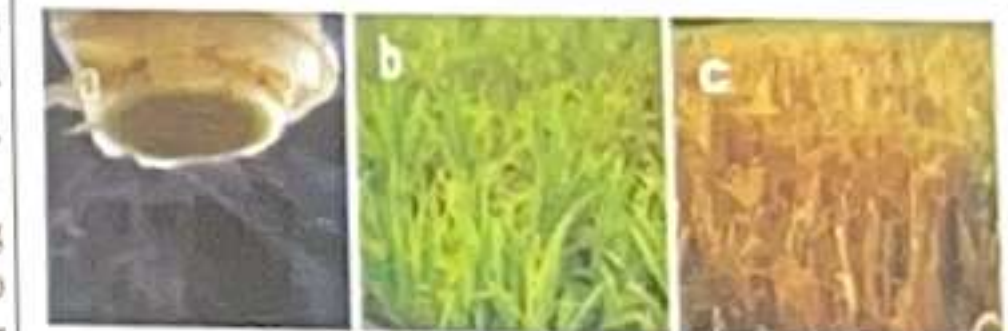


Valerie Lalawmpuii
DHC, Directorate

Sl No	Natna hming	Laanchhuah dan	Enkaw dan
1	Rhizome rot: He natna hman a bul jawih a thlen a, a jawih hri chi khat a ni. A natna thlenute chu fungus <i>Pythium aphanidermatum</i> , <i>Pythium myristicium</i> , <i>Fusarium solani</i> te an ni.	• A kung bul, lei seh chimah val lo awm thin. • A hnah hnui, hnah upa lam a eng hman a, a chung lamah a eng chho zel thin. • A bul natna kai atanga zung lo chhuak chu a lo jawih a, a chhung chu a lo uk nghuh thin. • A jawih laah chuan hmuar hri, bacteria leh ramung a hkm rhizome fly te an awm dah hle. • Nama kai sawhtingte chu awlam takin a pawh phaw theih. • Fur lain he natna hi a darh chak hle.	• Tui huanral zung zung theina ah chauh chin tur. • <i>Trichoderma harzianum</i> @ 6-10g/kg a chi chiahin a hman tur. • A hri kai tawhte chu pahfai a, Ridomil gold @ 3g/L emaw Metalaxyl + Mancozeb @ 2g/L emaw Blue bordo @ 10g/L emawte a leih a, a la kai lo te pawh kah var tur a ni.
2	Bacterial wilt: Sawhting natna pawikharwih nasa ber a ni a, a bul jawih thlen a jawih hi a rimchhe tel thin. A natna thlenute chu bacteria - <i>Ralstonia solanacearum</i> a ni.	• A hnah sir hi eng-tu-ek rawngin a lo awm a, a tlang a khawr (backward curling) a, a ro thin. • A hnah eng hi a hnah hnui lam atangin a rojan a, a chung lamah a chho zel thin. • Sawhting kung chu uai/vuam a thi mai thin. • A kung bul leseh chimah val dum dour a awm. • A jawih hi a rimchhia a, a nai deuh pur thin. • Sawhting bul chu tui fim a chiahin meikhu angin a lo zam paw chuan ang a, he hi bacterial oozie thin a ni. Hetinga tih hi bacterial wilt natna finfahna (ha tak a ni). • A chi leh lei atangin a ni kaichhawng thei a, ruahtui tam lain a darhchak em a ni. • He natna hrik hi hmanaw thianghlum lo leh vevahna lamah te tihdarh theih a ni bawh.	• A chi hrisel chauh hman tur. • Tui huanral zung zung theina ah chin tur. • A chi tur te chu dahhat dawn leh im hman Streptocycline @ 2g/10L in minute 60 chiahin a, daihlma dah hul leh tur. • Natna kaite chu a hung pahfai a, Blue bordo 10g/L emaw Copper oxychloride @ 2g/L emaw Streptocycline @ 200ppm (2g/10L) a leih a, a la kai ve lo te leh a chuma leah pawh leh tel tur.



Rhizome rot



Bacterial wilt

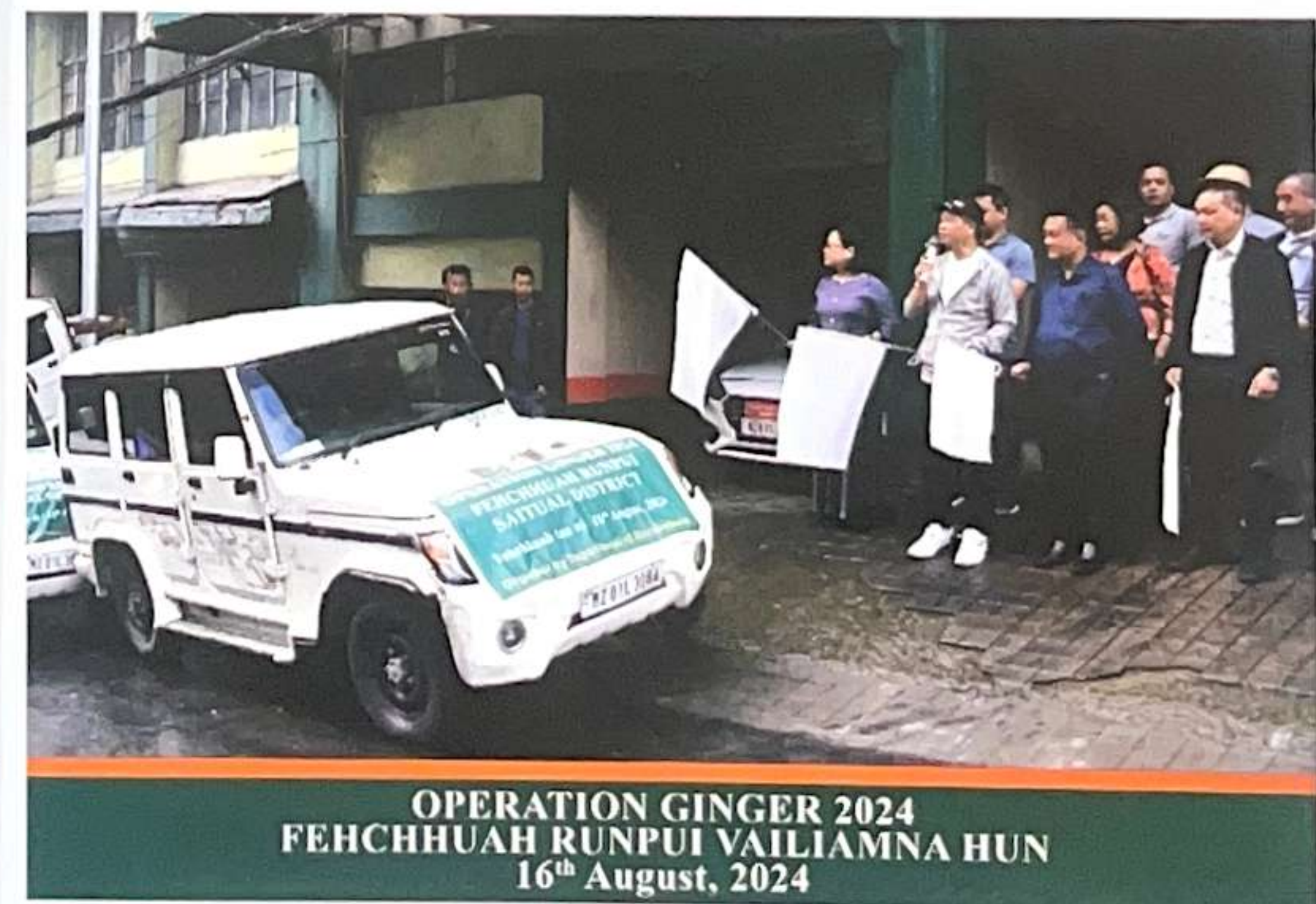
Sl No	Nama hming	Laachhrah dan	Enkwi dan
3	Leaf spot: He nansa hi hmaih ah val de nansa a ni a, a fahleu chu fungus <i>Phyllosticta zingiberi</i> a ni.	- A hmaih ah val seut (oval) emaw sawi sen deuh (spindle) a lo awm a, a val seut chu a uk rewangin a lo awm a, a lai chu a var rewang a ni a lakkha pun angin a lo pun a, a hmaih rewang eng a lo awm tel thin. - Heng val (spot) te hi a hui hmaih mte nsa a an lo in zawn khawin a, spot him takah an lo chung thin. - He nansa hi a nasa chaw a hmaih pampui a lo ro vek thin. - A hmaih chaw nansa a fah loh awangin sawhahng a fah thei lo.	Bordeaux mixture (1%) emaw Ridomil Gold 2g/L emaw Bavistin @ 2g/L emaw kab tur a ni.
4	Yellow Disease/fusarium yellow: He nansa hian hmaih eng leh thar fua a fahleu. A nansa thientue chu fungus <i>Fusarium oxysporum</i> leh <i>Fusarium solani</i> te an ni.	- A hmaih hmaih lam ah a eng tan thin. - A kang ken phoia a lo uk a, tichuan zawi muangin a vau reh tedh a, a awpahn a ro thin. - A thuan a fua lewa, a thar fua thei lo. - A chi leh lei apanga mkaichhah an ni.	- Tui huanal zung rung theihne ah chahh chin tur a ni. - A chi hmaih leh nansa kai lo chahh chin tur a ni. - A chi tur te chu dahhah down leh lam hman Metazyl @ 2.5 g/lit emaw Bordeaux Mixture (1%) in minute 60 chahh a, dahhah a dah hui leh tur. - A hi kai zawhne chu pailfai a, Ridomil gold @ 3g/L emaw Metazyl +Mancozeb @ 2g/L emaw Blac bordo @10g/L emaw hneh taka leh kab tur a ni. - Bawng el/ huanhman jawin, neem cake @ 8 qts/acre emaw mustard oil cake @ 16qts/acre tal pek tur a ni.



Leaf spot



Yellow Disease/fusarium yellow:





OPERATION GINGER 2024 AT THIAK, AIZAWL DISTRICT
16th August, 2024



OPERATION GINGER 2024 AT THIAK, AIZAWL DISTRICT
16th August, 2024



OPERATION GINGER 2024 AT THIAK, AIZAWL DISTRICT



OPERATION GINGER 2024 AT THIAK, AIZAWL DISTRICT



KIWI CHIN DAN LEH ENKAWL DAN

Lalrinmawii
ADHO Champhai



Champhai District chhungah Kiwi hi ching an awm ve pheuh pheuh a. A kum tel a ching an pun ve zel avang leh a hlawk em avangin kuthnathawktu te tan a chin dan leh a enkawl dan karawn ziaak a ni.

A hming:

- Mizo: Kiwi
- English : Kiwifruit
- Botanical name: *Actinidia deliciosa*
- Family = Actinidiaceae
- Basic chromosome number = 29

Introduction:

- Kiwi (*Actinidia deliciosa* Chev.) hi thlasik a kan hmuh, a hnah zam chi a ni a. China a Yangtze river valley atanga lo chhuak a ni.
- “China’s miracle fruit” leh “Horticulture wonder of New Zealand” ti te a sawi an ni baw.
- India-ah chuan Lal Bagh Garden, Bangalore-ah chin hmasak a ni a, amaherawhchu a kuhmum tichawrtu tur temperature vawt (chilling requirement) a awm tawh loh avangin a puitling ta lo.
- A hnu kum 1963 ah Shimla tlangah kiwi hi chin a ni a, kum

ruk hnua an lo ching puitling ve ta a ni.

- Kiwifruit hi rawng uk, a kawh hmuh thep nei a ni a. Athei hian Vitamin C leh minerals (potassium, phosphorous leh iron) te a keng tel a, calories-ah a hniam baw.

Chinna hmun:

- New Zealand, China, USA, Italy, France, Australia leh Israel – ah te an ching ber a.
- India ah chuan Himachal Pradesh tlang ah te, J&K, Uttarakhand, Sikkim, Arunachal Pradesh, Meghalaya, Nagaland leh Nilgiri hills ah te kan hmu.

Leilung:

- Kiwifruit- te hi eng ang leiah pawh, a hnum that tawh chuan an to thei tlangpui a. Amaherawhchu lei dir tak ni lo, tiau vaivut leh hlum inpawlh thatna hmunah a tha duh ber a ni.
- Leilung a thur leh a al inkar pH 5.5-6.5 vel hi duhthusam a ni.

Sik leh sa:

- Kiwifruit te hian sik leh sa an ngam viau na a; altitude ft. 3000 atanga 5500, boruak dai leh lum inkar, chilling hours 600 - 800 hmuh theihna hmunah an to tha ber a ni. He chilling hours hi dormancy tihchhiat nan a ngai a ni.
- Temperature hniam (-2.5°C emaw a aia hniam) leh boruak khal te hian a chawr no leh a kuhmum an tichhe thei a ni.
- Ni pui temperature 38°C aia sang leh khaw ro lutuk te hian a hnah leh a thei te ti kangin, a kung pumin an ti thi thei bawh.
- Hrisel taka thang lian tur chuan rualkhai takin ruahtui 120-150 cm. hi a enkawl chhung a hmuh a tha bawh.
- April leh May inkar a thli na lutuk te hian a chawr no an ti tliak thei a; chu bakah, a par

laia boruak hrang hrang - temperature hniam, rial leh ruahtui te hian a thei rah tur an tibuai thei bawh.

Varieties:

Kiwifruit hi dioecious plant a ni a, a pa (staminate flower) leh a nu (pistillate flower) te hi thei hrang ve ve ah an awm tihna a ni. Variety lar zual deuh te chu hengte hi an ni.

A. Pistillate varieties (a nu)

1. Hayward
2. Allison
3. Abbott
4. Monty
5. Bruno

B. Staminate varieties (a pa)

1. Allison
2. Tomuri
3. Matua

Leitha leh a chaw pek dan:

Kung pahnih inkar hi 6 x 6 m a dah tur a ni a. Hectare khat a zauah leitha/ bawnggek 20 kgs. lei nen tha tak a chawhpawlh a hman tur a ni. Kum tinin NPK chawhpawlh 0.5 kg. pek tur a ni a, hei hian 15% N a keng tel tur a ni. Hengte bakah hian kum 5 hnuah hetiang hian kung khat zelah leitha pek leh tur an ni-

N: 850-900g/vine P: 500-600g/vine K: 800-900g/vine

A thar zat:

Kiwi thei te hi a chin atanga kum 4-5 ah an thar thei a. Kung khatin 50-100 kg. thlang a thar thei.

Training & Pruning (A buk mawi tura sawngbawl dan leh a zar suat thawl):

Kiwi hi grape te anga zam chi an ni a, churang chuan a zar te sawngbawl that an ngai a ni.

1. **T-bar trellis system:** A buk mawi tura sawngbawl dan hmang tlanglawn ber a ni. T anga thing/ thir kham inkarah a tang pakhat chauh to tir a, a to na hmawr paih a, lehlam lehlam a zar turin a chawr pakhat tih nun tur, chu chu

'main leader' a ni ang. Main leader atang chuan a kuhmum te lo thliakin thei rah tur a lo insiam ang.

2. **Summer Pruning:** Khua a lum lain a zar te hi an thang duang em em a, chung chu suat thawl tur an ni. A kung rah tawh a nih chuan a tang hnah 3-4 vel lek theuh dah a, a bak zawng zai chhum tur. Hei hian a kung kha hnah hring tam tak aini thei rah tur zawk siam leh nan chakna (energy) a pek leh phah ang. A chho zawng a to (water shoots) te pawh hnah hnih lek nei a zai chhum vek bawh tur. Heng bakah hian a tang in kawkalh zawng zawng pawh lak bo vek tur an ni.

FARMERS' TOUR (SIKKIM) THLIRLETNA

Rohmingthangi
Secretary

Hnahthial Dist. Florist Assn.



Horticulture department hmalakna in keini 'Hnahthial District Florist Association' te chuan Sikkim-ah Farmers' tour kan nei ve a. Hun rei tak atanga kan lo beisei leh nghahhlelh em em, tour kan dilna min tih hlawhtlin sak avangin department chungah lawmthu kan sawi hmasa a. Kan tour hi ni 8th November, 2024 ah Pi Rosalind Lallawmzuali, ADHO, Hnahthial kaihhruaina hnuaiah Sikkim panin kan chhuak a. Hmun pawimawh hrang hrang te leh hmun nuam tak takte tlawhin kan program te chu tluang takin kan zo fel a. Ni 16th November, 2024 ah dam takin mahni khua kan thleng leh a ni.

He tour chhung hian keini Florist Association member ten kan la hmuh ngai loh leh kan la hriat ngai lem loh thil tam tak kan zirin kan hmu a. Kan zin kawng zawng zawngah te pawh experience tha tak kan neih phah bawh a. Sikkim leh West Bengal chhunga pangpar chin leh enkawl lama an hmalakna mai piah lamah an ram inrelbawl dan leh kalphungte tam tak kan hriat phah a. Hengte hi a hmuhdawm mai bakah entawn tur leh zir tur tam tak kan neiin ka hria.

ICAR-NRC, Pakyong hmun kan tlawh a, Nauban (orchid) pawh chi 250 lai kan hmu a, kan rama kan la hmuh ngailoh te leh mawi danglam tak takte la khawmin an lo dahkhawm a, a ropui kan tiin, kan va han hlim em. Rilru a lo lang nghal chu Forest

department in Champhai-ah Nature Learning Center a din turah hian Nauban ching ve tur hian hma a la ve mek a, hengte hi a hlawhtlin chuan tlawh tlak hmun nuam tak a ni ve thei dawn a. Kan ram hian Nauban hi chi 150 vel kan nei nia hriat a ni a, nasa taka hmalak a phurawmin, hmasawna ropui tak a va ni dawn tak em.

Eco Nature Park, Saramsa garden leh Banjhakri falls kan tlawhte hian ngaihtuahna a ti thuiin, rual awh a na hle mai. Sikkim hian ramngaw an humhalh thatzia leh a humhalhna dan thlenga an neih thatzia te, chu dan chu mipuiin an zawm thatzia te rilruah a lo lang nghal a. Anni chuan thing leh mau, hnimte thleng mai hian sat thlu ve mai mai loin, duat takin an enkawl a. Keini pawh hian kan thing leh mau

te leh pangpar te hi kan humhalh that leh zual a tul ta hle mai. Sorkar hian Sikkim ang hian ramngaw humhalhna dan hi tun aia nasa leh zuala kalpuiin hma han la se a va duhawm em. Tin, an ram hausaknate an hmang tangkai thiam em em a, an lui luang leh pangpar vul mawina hmun te khualzin te tlawh turin an siam thiamin an cheibawl thiam em em a. Kan ram pawh hian heng kan leilung hausakna te humhalh baka kan cheibawla kan tih lar thiam leh zual a ngai ve em em a ni.

Flower garden leh market-te kan tlawh atanga lang Chiang em em chu pangpar an ngaina in an ching uar hle mai a, a hralh dan pawh mumal takin an lo kalpui thin a, hetiang market pangngai tak neih ve hi a chakawm tawh hle a ni. Khua kan fan velnaah pawh inbul tin maiah hian pangpar kung 4/5 vel tal hi an nei deuh vek mai a, hmuh a nuamin khawlai a chei hle mai. Kan ramah pawh hian tun aia nasa zawk hian pangpar hi han ching ve leh ila, kan ram chu a nuamin a va

mawi leh zual dawn em! Tourist pawh kan hip hnem phah ngeiin a rinawm.

Faina lam hi an entawntlak hle mai a, an khawlai a faiin, thil eina kawr leh sarang hmuh tur a awm meuh lo. Tin, zun ram thiarna lam pawh an ulukin an invawng fel hle mai. Kan ram ang a, kawng chhak leh kawng thlang, a remchang lai lai a zun ringawt ang kha an ching ve lo. Hmun pawimawha meizial zuk an khap bakah an khawlaiah pawh meizial zu pawt pawt hmuh tur an vang bawh a ni. Heng an changkanna leh entawn tur tam tak awm te hi, kan ram pawhin kan tih theih ve vek a ni. Kan sawrkar hian tan han la zual se, mipui lamah awareness kal pui tam i la, kan ram pawhin hma kan sawn ve ngei ang. Sikkim hi tourism lamah hian an thang nasa em em a, mihring nuai ruk vel chengin, kum tin mikhual nuai 20 vel tlawhtu an nei thei a ni. Kan ramah pawh hian inzirtirna hi chak zawkin kalpui theih ni se, kan ram economy siam thatna kawng pawimawh tak a ni ve thei ngei ang.

HI TECH HORTICULTURE AND ORGANIC & NATURAL FARMING: NOIDA, UTTAR PRADESH ZINKAWNG

Jacoba, Saikhamakawn

Ni 11-15 March 2024 khan Mizoram Horticulture Department bul tumin Institute of Horticulture Technology, Greater Noida, Uttar Pradesh, India hmunah Mizoram District hrang hrang atanga thlan chhuah mi pakhat theuh te chu kan thupui 'Hi tech Horticulture and Organic & Natural Farming' training turin kan kal a, Horticulture Department atangin officer mi pahnih min hruai turin ruat an ni a, kan vaiin mi 12 kan ni.

Chungte chu:

1. Mr. Jonathan Lalrinnggheta (Leader) ADHO Siaha district
2. Mr. K. Lianhmingthanga (Asst. Leader) DHC Mamit
3. Mr. Jacoba, Saikhamakawn. Aizawl District
4. Mr. L. Lalrinmawia, Ramthar, Lunglei District
5. Mr. F. Rinthianghlina, Zotlang, Champhai District
6. Mr. Lalbiakdika, Chawntlangpui, Lawngtlai District
7. Mr. Lalchhanhima, Biate, Khawzawl District
8. Mr. H. Lalnunmawia, Hnahthial, Hnahthial District
9. Mr. Lalzamliaana, Mualpheng, Saitual District
10. Mr. Lalramthara, Serchhip, Serchhip District
11. Mr. Vanlalduhsakzualpuia, Lengpui, Mamit District
12. Mr. James Zonunsanga, Amobiya 'Ch' Siaha te kan ni.

Ni 7 March 2024, (Ningani) dar 11.00 a.m. ah Horticulture Committee Room-ah Horticulture Director leh a staff ten briefing min neihpui a, dar 1:30p.m. ah Horticulture Office atangin Thuampui Bus Terminal panin Department motorin min thlah a, dar 2:08p.m. ah Thuampui chhuahsanin Night Bus (Capital Travel) in kan kal a, tluang takin ni 8 March, 2024 zing dar 8.00 ah Guwahati Mizoram House ah kan thleng a, kan chawlh hahdam hnuah kanin bual fai a, chaw te eiin kan hahchawl a, zan dar 11:00 ah Kamakya Rail Station atangin (Kamakya Anand Vihar Rail) Noida Uttar Pradesh kan pan a, tluang takin

ni 10 March chawhnu dar 1:50 ah Anand Vihar Delhi Rail Station kan thleng a, Bus in min lo nghak a, tlai dar 2:52 ah kan training na hmun tur IIPPT College (Indian Institute of Printing and Packaging Technology) kan thleng a, kan training na College hmun hi 42 A Knowledge Park 3 Greater Noida. UP a ni. Thingpui te kan in a kanin bualfai a, kan mu chawl hahdam a, zan dar 9:15 ah zanriah kan ei a, kan eikhamah inkhawm honate neiin, tawngtai hona te kan nei a, dar 10:30 ah kan tin a, mu turin kan room theuh kan pan a, Room khatah mi 4 te mi 2 te kan riak a, a nuam khawp mai. Training a kal ho zing a, a kum upa zual deuhte mi pali min duhsak a, room nuam takah min riah tir a, kan lawm khawp mai.

Ni 11 March (Thawhtanni): Training ni 1-na:

Dar 10:00 a.m. ah kan kal chhan tak training chu IHT Training Hall-ah neih tan a ni a, Registration te tifel hmasain, Introduction leh Interview te kan nei bawk a, Dr. Vikash Singh an IHT (Indian Hi Technology) hmalakna te Power point hmangin min entir a, he hmunah hian India ram state hrang hrang atang leh Foreign atang tein farmer te training an lo neihpui nasa khawp mai a, hmun pawimawh tak mai a ni. Chawhnu lamah Dr. Amar Singha'n thlai kui dan te, leilung

sawngbawl dan te, Hi-Tech awmzia leh a tangkaina te, a thatna te min zirtir a, Field Demonstration nei turin chawhnuah bus in anmahni Firm hmun, IHT Experimental plot-ah kan kal a, Hi-tech Green House a Hydroponic hmang a thlai chin dan te, khawl hmang a leiha pek dan te, open field a Drip Irrigation system hmanga thlai chin dan te, Green house chhung temperature control dan te min zirtir a, a bengvar thlakin a hlawk thlak hle mai.

An Firm hmunte min fankual pui a dar 4:30 p.m. ah bus bawkin kan haw leh a, an firm hmun leh kan college hmun hi pangngai taka tlanin minute 20 vel tlan a ni. Tlai dar 4:55 velah kan thleng a, Thingpui te in in, kan inbual fai a, kan chawl hahdam a, zan dar 9:30 velah zanriah kan ei a, eikhamah in kawmkhawmnate neiin, vawiin lama kan thil zirte leh kan thil hmuhte sawihoin, kan sir te (min hruaitute) kan hriatthiam loh leh hriatfiah loh te zawtin hlim takin zan hun chu kan hmang zo ve leh a ni.

Ni 12 March (Thawhlehi): Training ni 2-na:

Thlai kui tiahna (seed bed) siam dan te, leilung sawngbawl dan (soil treatment) te, Seedling Tray / pro tray soil less hmang a Thlai kui dan te (cocopeet+perlite+vermiculite hman dan) min zirtir a, a bengvarthlakin a

hlawk thlak khawp mai, chhun chawlh zawhah Theory class kan nei leh a, tlai dar 4:50 ah class kan nei zo a, zan dar 9:15 ah zan riah kan ei. Zanriah hi zan dar 9 hnuah kan ei thin a, Breakfast (zinglam chaw) hi zing dar 8:00 leh dar 9:00 inkarah kan ei thin a, chhun chaw/chaw chhun, (lunch) erawh tlai dar 3:00 leh dar 4:30 inkarah kan ei thin.

Ni 13 March (Nilaini): Training ni 3-na:

Zing dar 8:45 ah zing chaw (breakfast) kan ei a, kan chaw ei hi a tlangpuiin atta kan te, chana kan te, buh te, hel ei purun sen, carrot, hmarchapui, tomato, fanghma a ni tlangpui. Mizoin 'SA' kan tih ang hi ka ei pawh ka hrelo e!!!?. Dar 10:00 a.m. ah field visit turin bus in kan kal a, chawhma dar 11:15 ah a hmun National Center for Organic & Natural Farming, GAZIABAD (NCONF) kan thleng a, theory class min neih pui hmasa phawt a, power point hmangin, Organic leh Natural Farming chungchang te, India ram hmun hrang hrang a he Center in an hmalakna te, an thil tumte leh an Center kalhmang te min hrih a, a ngaihnaawmin, mit leh beng a tlai hle, an farm hmun te min fan pui a, Bawng ek hmanga leitha siam dan te (Vermicompost) Vermi wash (Bawng ek leitha thlawr) siam dan te, a takin

min zirtir bawk a, kan hlawk khawp mai, dar 2:00 p.m. ah kan haw a, dar 3:30 p.m. ah lunch (chaw chhun) kan ei a, kan inbual fai a, kan chawl hahdam a, zan dar 8:35 p.m. ah zanriah kan ei a, eikhamah inkhawmna kan nei a, kan kal chhuahna chanchin te kan thlir letin kan sawi ho a, tawngtai hona kan nei a, zan dar 10:30 ah kan tin. (Noida a kan training chhung hian zan lamah inkhawm hona leh tawngtai hona tum thum lai kan nei a ni).

Ni 14 March (Ningani): Training ni 4-na:

Zing dar 8:15 ah breakfast tukthuan) kan ei a, dar 10:30 ah theory class kan nei tan a, vawiin a kan zir a tam zawk hi chu, a changkang lutuk a, tun atana kan hmalak mekna nen a la inmil lutuk lo te a ni deuh vek mai a, han sawi chhawn leh dan pawh a har khawp mai. Organic Farming lam a hmala te tan chuan thil pawimawh leh tangkai tak tak an ni a, a bengvar thlakin a ngaihnawm em em tho mai. Kan ramah chuan Natural Farming leh Organic Farming kalpui tur chuan, kan economic dinhmunin ala tlin chiah lo niin a lang. Thil tha tak leh kan mamawh tak pawh nise, tunah chuan kut hnathawk a huan thlai siam a eizawng tan chuan, thil harsa tak a la ni. Kan rama mi hausa leh hetiang lama mithiamte hian hma han la se la, kan ram chuan hma a sawn phah ngeim.

rinawm. Tin, kan huan thlai chinna leilung hi chemical hlang lo deuh a enkawl dan hi a awm a, Ran ek (Vawk ek, Bawng ek, Ar ek, Vermicompost, Hnimhnah up tawih leh Choka ningnawi etc) te hi kan hman tam chuan, a chemical hlang lo deuh a, mahniin Organic leitha hi a insiam chawp thei khawp mai, taimak erawh a ngai thung ang. Mi pathumin class an rawn inlak chhawk a, tlai dar 5:15 ah class kan bang a, zan dar 9:45 ah zanriah kan ei a, zanin chu inkhawmna kan nei lo. Dar 10:30 velah kan mu, (Mut pahin Mizoram budget session kan thlir).

Ni 15 March (Zirtawpni): Training ni 5-na.

Dam takin zing kan tho a, dar 8:50 ah tukthuan (Breakfast) kan ei a, dar 10:45 a.m. ah class room-ah kan lut khawm a, theory class rei vak lo min neihpui a, chumi zawhah training course certificate semna hun hman a ni a, chuan kan training chungchangah kan hmuh dan leh kan ngaihdante leh lawmthu sawinate kan zing a mi thenkhatin an nei a, chumi zawhah pawnah College kawtah a huho a thlalakna kan nei a, College hotu mi

pahnih nen, tichuan, Greater Noida-42 A Knowledge Park 3. U P a IIPPT College hmun a, Hi-Tech Horticulture and Organic & Natural Farming, ni 11 atanga ni 15 March 2024 chhung a training chu tluang takin zawh fel a lo ni ta a ni.

A tawp berah chuan Horticulture Department duhsakna dawng a he hun kan hmang thei hi kan lawm hle mai a, a thente tan pheih chuan, kan damchhung pawha kan hmuh leh kan thlen phak hauh loh tur te, kan dawn a kan chan hauh loh turte, thleng thei leh hmu thei a kan awm hi kan nihlawhin kan vannei hle mai a, Horticulture Department hotute chungah farmer-te aiawhin lawmthu ka sawi tak meuh meuh a, tin, min hruaitu Department Officer te pahnih chungah lawmthu ka sawi bawke. He programme hi a zawnghhang thlak khawp mai, tin, kan ram a kuthnathawk (a bikin) chawhmeh, thlai lam chingtute tana hlawk zawk leh tangkai zawka kan chhawr theih nan, hetiang training hi kan ram chhungah ngei, kan tawng ngei hmanga neih theih ni se la, a lawmawm ngawt ang.

CHAWHMEH HRISEL BERTE ZINGA MI MAUTUAI

Mau hi chu mizoramin kan ngah ve zawng tak a nia, chi hrang hrang 35 vel lai kan nei niin a hriate chuan an sawi. A hunlai na na chuan mautuai pawh duhtawka ei tur kan nei a, chawhmeh tui tak a lo ni ve bawk nen ei pawh kan ei nasa. Hriselna atana thawhlawk tak a nihna lam eroh kan ngaihtuah lem lova, a hrisel vak pawh kan ring em em chuang lova kan nehsawh ei vel mai mai ni hian a hriat. Awlsam taka kan hmuh theih leh kan local thilte hi chu kan ngaisang vak thin lo ve bawk a ni. Helai vela kan thlai leh thei tharchhuah ang angte hi fere deuh mahse a tharlam organic a ni tlangpuia, state dang atanga lak luh eng anga sawngbawl leh engtia rei nge zinkawng a lo zawh tawh tih poh hriat mang loh ai chuan kan tana hrisel leh tha ber ber a lo ni zawk.

Mautuai hi awihawm lo khawpin hriselna kawngtinrengah a tha niin mithiamte chuan an sawi a. Heng an sawi dan thenkhat "The poor man's timber" "The green gold" "The plant with thousand faces" tih atangte hian an ngaihhlut zia chu a hriat mai awm e. Japanese ho pawhin "King of forest vegetables" an lo ti ve bawk a ni. Hriselna atana a thatna mithiam ten an sawi hi a tlangpui lo en i la.

1) Lung tana a thatna:

Mautuai hian phytosteron leh phytonutrients a pai tam hle a, hei hian thisen kawng a tifa a. Thau chhe chi LDL cholesterol a tihhniam theih avangin thisen kawnga bal khawn (plaque) insiam tur a veng a, tha taka thisen a kalkual theih avangin thisen sang tur a vengin a tiziaawm a ni.

Vitamin K leh potassium a pai tam avangin BP a vawng normal bawk. Mautuai hian lung hriselna atana thawhlawk tak tak a pai tha hle a, thau chhia avanga lung natna chi hrang hrang lakah kan taksa a veng a ni.

2) Ril chakna leh chaw paitawih puitu:

Mautuai hi dietary fiber ah a hausa hle a. Dietary fiber chu thlai atanga ei leh in ka hmuh, kan ril ina a pai tawih emaw a hip ral theih ve loh ho hi a ni. Fiber hian ril a tihriselina tichak a, kan thil eite thataka min paitawih tirtu a ni. Fiber hi ek khal lutuk tur vengtu a nih rualin inthiar zawh harsa deuh ang chi ek nem phert deuh tikhaltu leh tihlawm thatu pawh a ni bawk. Tin, dietary fibre hi chawh

min tichak tu leh chawei tituitu pawh a ni. Mautuaia awm chlorophyll hian rilpui cancer a veng thlei nia hriat a ni bawk.

3) Taksa tichaktu leh natna vengtu:

Mautuai hi mihring hriselna leh chakna atana tha vitamins leh minerals tintengah a hausa em em a. Carbohydrates, protein leh dietary fiber a pai tam a, vitamin B chi hrang hrang, folate, vitamin A, C, E leh K te a pai tam bawk. Heng a thilpaite hi antioxidant chak ber ber ah te a chang a, natural taka collagen insiam puihin taksa detox a puih a ni. Heng a thil paite hian rilru leh taksa a tichakin a tihrisel a, natna beilet turin kan taksa a tichak bawk.

4) Rihna tihhniamna:

Mautuai hi weight loss na atan pawh a lo tha hle a; fiber a tama calorie a tlem hle thung. Ril a titam harin kaw ruahlaia pum nuam lo tur a veng a. Thisena thau chhia emaw LDL cholesterol a tihhniam theih avangin thau chhia paihna tha tak a ni. Tunlai tawng takin in diet-na tha tak a nih ber chu.

5) Zunthlum nei tan:

Mautuai hian fiber chi khat inulin a pai tam hle a, hei hian kan taksain thlum a lakluh hnathawh a

tikhawtlai a, thisena thlum tihhniamna kawngah a puih tih hmuhchhuah a ni. Zunthlum nei tan mautuai ei uar hian a lo tiziaawm thei reng a nih chu.

6) Nachhawka:

Mautuai hi hmanlai chuan ramhmul damdawi chikhat anga hman niin nachhawka atante, rul tur leh rannung tur thahna atante an lo hmang thin. Mautuaia awm methanol extract hian nachhawka tha tak a pechhuak a, tha na leh ruhseh chhawka atante hman a ni thin.

Mautuai hian tur chikhat Cyanide Taxiphyllin a pai ve a, amaherawhchu, chhum hian a thi veka a hlauhawm lo a ni.

Tlangkawmna:

Mautuai hi Southeast Asian lam hian an ei nasa a, hmasang a ta tawh Chinese ho chuan thlai hrisel tak chikhat anga ngaiin an lo ei nasaa, tun thleng hian an chaw chi hrang hrang ah an telh tam hle a ni. India pawh hi khawvel pumah mau ngah lamah pahnihna lai kan nia, a ramngaw pumpui zau zawng atanga 13% zet hi mauin a tuam a ni. Mautuai pawh hi kum zabi tamtak liam ta atang khan ei leh in ah an lo telh tawh a ni. India ah pawh hmarchhak state lam hian mau kan ngah zuala, a tuai pawh kan ei nasa bik. Kan chin leh enkawl pawh ni hlei

lo hetiang ei tur hrisel lutuk duhtawka ei tur kan han nei hi chu kan vannei ngawt mai. Aawm hun chhung lah chu a rei si lova, a vawnthat dan hria leh helama tuite chuan kumtluana ei theih turin a rep emaw a pickle ang zawng te, a tin (canned) leh um (fermented) ang zawngte hian siam hlawm se; chawhmeh tangkai leh hrisel tak a nih piahlamah sum siamna tha takte pawh a nih a rinawm. Amaherawhchu, thil reng reng a lutuk a tha lo ang hian mautuai pawh ei leh lutuk chu a tha bik chuang lo tih erawh kan hriat tel a tha ang.

@Mafaki Hnialum (Siangzi Nu)



LAWRKHAWM

BAMBOO / WOOD VINEGER (MEIHU TUI DAMDAWI)

Mizo chuan khur laiin thing kan rawh thin a, chu chu "Meihawl rawh" kan ti a, a meihawl chu thur chhuakin thlasik laia ai atan kan hmang deuh ber a, ei siam nana hmang pawh an awm thin a ni.

Japan thiamna hmangin Meihawl rawh atanga a hutui damdawi siam dan Mizoramah AMFU te hmalakna in training te an rawn pe tawh thin awm e. Tinreng damdawi atan hnam fing zawkte chuan an lo hmang nasa em em a, mihring damdawi atan chauh ni lovin ranvulh leh thlai damdawi atan a lo tha em em mai si a, chemical a tel lo va, side effect a awm bawh si lo va, a thatzia ngaihtuahin a man hi a tlawm em em mai lehngal a. Japan ho pheii chuan he Vineger tello chuan Ran vulh theihah an ngai lo hial a, thlai enkawlnan hlei hlei hian a hriselin a thianghlim a ni. Kan pi leh pute pawh khan tapchhak zawla an thingtuah hmawr lama lo so chhuak berh berh (a vineger) kha kamsir pan damdawi a ni tihte chu an lo hriatna a rei tawh mai.

Eng damdawi nge? Tinreng damdawi tia sawi mai theih khawpa a hmanna tam a ni a, a pawimawh zual han sawi ta ila:

1. Kawthalo chi hrang hrang, santen, tuihri ah hian vawi 1 eiin a reh hmak thei, glass no ah ml 5-10 vel kha tui a let 3 pawlhin in tur a ni. Kawthalo vanga kar 2/3 Damdawi ina cheng singkhat dawn i senna turah ml 5 lek vawi 2 i eiin a dam ngal dawn a nih chu.
2. Pem leh Pan (septic) ah te, hliam nasaah te hian a tha bik. Phurthak leh rannung seh ah te, Sihsen sehah te hnawih ran leh a dam rang a ni mai.
3. Pumpui ulser leh ka na leh lawng reng rengah a tha zual.
4. Luphut thak lutukah te hian a tha hle bawh.

Mihring eitur bik hi chu distil ngei a tha a, a hnawih tur chi-ah leh thlai leh ran tan chuan distil kher loh pawh a pawl lem lo.

A thatna sawi kim sen a ni lo va, a eidan, tui pawl tur zat chu a chung a sawi khi i enchiang dawn nia,

I lo hrisel a, i chawei a lo tui hian i hmel pawh a lo tha thin a ni.

-Kolasib Banglakawn, Electric Veng pengah a mamawh tan lei tur a awm reng e.

Contact No. 6009896878

LAWRKHAWM

ZALEN September 22, 2024 : Kumin June, July leh August thlaa sawhthing tam chuan Mizorama kuthnathawk chhungkua 8,507 a nghawng a. Kumin hian Mizoram chuan sawhthing quintal nuai 10 chuang a thar beisei a ni.

ZALEN-in Horticulture department thawktute hnen atanga thu a dawn danin kuminah hian Mizoram pumah sawhthing ching hi chhungkaw 23,799 an awm a, heng zinga chhungkaw 8,507 chu natna hrikin a tibuai a. August 16-30, 2024 inkar chhung khan sawhthing tam enkawl leh beih let dan tur mipute hnena zirtima, 'Operation Ginger 2024' feh chhuah runpui neih a ni a. Hemi hun chhung hian Horticulture department thawktute chuan kuthnathawktute hnenah him zawka sawhthing chin dan, sawhthing rannungin a ei/bawm enkawl dan bakah inven dan te an zirtir a ni.

Mipui hnena zirtima an kalpui chu a hlawk hle nia sawiin Horticulture department thawktute chuan, "Kan hlawhtlinna hi 60%-100% inkar niin kan ngai a. Sawhthing thenkhat chu an rawn chawrno leh hlup hlup tawh a. kan lawm hle a ni," an ti a, Sawhthing chingtu zingah a tir atanga 'tam' venna kap nghalte chuan an tuar nep deuh niin an sawi bawk.

Sawhthing tam chhan ZALEN zawhna chhangin Horticulture department a thawkte chuan, "Thlai hrim hrim hi chin tam a nih chuan natna hrik a keng tel ve hrim hrim a. Mizorama sawhthing tam pawh hi fur hunlai h an inthlahpun hun a ni a, kan thlai chinna hmun hi tlangram ni mah se ruah tu

a tam vangin lei a hnawng a, an inthlahpung chak a ni," an ti a. Sawhthing him taka ching tur chuan a chi chiah uluk a ngai tih an sawi bawk.

Mizoram sawrkarin thlai thlan bik chi li-te lei a tum vangin kuminah hian sawhthing, aieng, hmarcha leh hmunphiah ching an tam hle a. Hriat theih chinah sawhthing ching hi chhungkaw 25,154 awmin quintal 10,84,975 thar chhuah beisei a ni a. Aieng hi chhungkaw 3,414 atangin quintal 77,492, hmarchate ching chhungkaw 8,517 atangin quintal 36,774 leh hmunphiah chingtu chhungkaw 8,500 atangin quintal 1,20,000 thar chhuah beisei a ni.



KEIMAHNI HUANG

1. **PROMOTION :** Kan thawhpui promotion hmu tharte kan lawmpuiin duhsakna kan hlan e.

Sl No	Name	Designation	Promotion Post	Place of posting
1	Pi Zomuankimi	LDC	UDC	BHO, Lunglei
2	Pi Lalmuanpuii Colney	LDC	UDC	Directorate
3	Pu H. Beirasa	HD	Sr. HD	BHO, Siaha
4	Pi Maggie C. Zosangpuii	HD	Sr. HD	BHO, Serchhip
5	Pi C. Malsawmzuali	HD	Sr. HD	Horti Centre, Chite
6	Pi Vanlalzawmi	HD	Sr. HD	Directorate
7	Pi Lalnunpuii	HD	Sr. HD	DHO Champhai
8	Pi Suzie Azyu	HD	Sr. HD	DHO Siaha
9	Pu Lalawmpuia Zahau	HD	Sr. HD	DHO Kolasib
10	Pu Joseph Lalmangaiha	HD	Sr. HD	DHO Saitual
11	Pu Samuel Vanlalzara	HD	Sr. HD	BHO, Tlangnuam
12	Pu HB Laldinsanga	HD	Sr. HD	BHO, Tlangnuam

3. **PENSION :** Kan thawhpui min pension san ta te, kan uiin kan ngai dawn tak zet. An kal leh zelna turah pension life hlim taka hmang turin duhsakna kan hlan e.

Sl No	Name	Designation	Place of posting	Pension ni
1	Pu C. Lalronghaka	Dy. Director	Directorate	31.07.2024
2	Pi M. Vanlalzami	Addl. Director	Directorate	31.08.2024
3	Pu T. Lalrinsanga	Sr. HD	Central Store	31.08.2024
4	Pi Dengropuii	Dy. Director	Directorate	30.09.2024
5	Pu K. Zonunsanga	DHO	DHO, Champhai	30.09.2024
6	Pu HD Liansanga	Sr. HD	BHO, Khawzawl	30.09.2024
7	Pu Lalmuankima Sailo	Sr. HD	BHO, Tlangnuam	30.09.2024
8	Pu Kamdingliana	Driver Grade-II	Directorate	30.09.2024
9	Pi Lalhmingmawii	LDC	BHO, Rawpuichhip	31.10.2024
10	Pu V. Rodingliana	Sr. HD	BHO, Ngopa	31.10.2024
11	Pu Lalrawngbawla	Sr. HD	BHO, Champhai	31.10.2024
12	Pu Lalrinsanga	Dy. Director	Directorate	30.11.2024
13	Pi R. Lalbuatsaihi	Assistant	Directorate	30.11.2024
14	Pi J. Lalruatchhungi	UDC	DHO, Hnahthial	30.11.2024
15	Pi Lizzy Laldingliani	UDC	Directorate	30.11.2024
16	Pi K. Napaw	LDC	Directorate	30.11.2024
17	Pu Lalpianthanga	Peon	Directorate	30.12.2024
18	Pu L. Lalhmingmawia Pachuau	Addl. Director	Directorate	31.12.2024
19	Pi Roliani	Peon	DHO, Lunglei	31.12.2024
20	Pu H. Laldualova	Sr. HD	DHO, Serchhip	31.12.2024

BOOK POST O.I.G.S.O REGN. NO. NE. - 1089

HUAN ENKAWITU

To,

Despatcher,
Directorate of Horticulture
Aizawl, Mizoram