

**NORTH EAST TANA COCONUT HUAN
ENKAWL DAN
(Coconut cultivation practices for North East)**

Coconut kung hi khawvela thingkung mawi ber pawl leh mihring tana hman tangkai ber kan ti thei hial awm e. Coconut tel hi kan chin chhan ber ni mahse chaw, theitui, damdawi, fibre, thing leh thil dang siam chhuahna atana hmanraw tangkai tak a ni bawk a ni. Coconut kaihhnawih a eizawng hi india ramah vaibelchhe 10 vel an awm a, GDP ah cheng Vaibelchhe 8300 vel thawhin thlai hriak nei zingah 6% vel a chang tawh a ni. Coconut hi tuifinriat kam chauh a chin theih emaw kan tih laiin khawchhung/ramchhung pangngai ah pawh hlawhtling taka chin theih a ni. India hmarchhakah chuan Assam leh Tripura ah chin a ni deuh ber a, tunah erawh chuan Coconut Development Board chuan Mizoram leh Meghalaya ah chin tumin hma a la mek a ni.

Khawvel ram 92 velah Coconut hi chin a ni a, India ramah chuan 1.89 million Ha. velah chin niin kum tin vaibelchhe 15729.8 vel a rah thar chhuah a ni a, Ha. khatah 8303 rah vel zel thar chhuah ang a ni. North East ah vethung erawh chuan ram Ha. 18,800 velah chin niin kum tin vaibelchhe 147 rah vel a thar chhuak a, Ha. khatah nut (rah) 7824 vel zel thar chhuak ang a ni.

Varieties : Coconut kung dam rei hun chhung hu kum 100 vel pawh a ni thei a, hlawk takin kum 60 -70 vel hi arah thei a ni. A pianhmang leh rah hma dan a zirin coco-

nut hi chi hnihah a then theih a. Tall (A sang) leh Dwarf (A te chi). Hemi pahnih inthlah pawlh hybrids an tih chu a awm bawk a ni.

Tall : A sang chi hi khawvel pumpuiah chin a ni a, a dam rei in kum 80 -90 chu a dam thei a ni. Hlawhtling takin lei chi hrang hrang leh sik leh sa in ang lo tak tak a chin a ni. Phun atanga kum 7-8 velah rah tan thin a ni. He mi chi hi kung tam tak kan phun theih dawn chauh a phun chi a ni a, North East tan a chi tha thlan chhuah bik te chu - Kamampa, Assam Tall, West Coast Tall, East Coast Tall, Andaman Ordinary, Bengal Nazari etc.

Dwarfs : A te chi kan tih ang hian an tawi bik a, phun atanga kum 3-4 velah a rah tan thei. A rah that theih hun chhung pawh hi kum 30 - 35 vel a ni. A te chi hi chu rah tha tur chuan enkawl uluk a ngai bik a ni. Varieties pawimawh bik te chu - Malayam Green Dwarf (MGD), Chowghat Orange Dwarf (COD), Chowghat Green Dwarf (CGD), Malayam Orange Dwarf (MOD), Gangabondam etc.

Hybrid : Hybrid te hi an rah hma a, a chung a mite pahnih ai hian an thar hlawk bawk a ni. Hybrid chi hnih te chu T X D leh D X T. Hybrid langsar zual deuh te chu - Chandrashankara, Lakshyananga, VHC-1, VHC-2, Godawari Ganga etc. Heng hybrid te hi zir chian mek a ni a, tunah chuan North East atana recommend a la awm lo.

Climate & Soil : Coconut hi leilung leh sik leh sa chi

hrang hrangah a chin theih a ni. Thlasik leh nipui inthlahuh lutuk lohna (tropical area) ah chin a ni ber a, 20⁰N - 20⁰S latitudes inkarah an ching tlangpui. Hmun san zawng 600m above MSL aia sang lovah chin a ni deuh ber. Coconut hi ruah tui a in sem zaina hmunah chuan 1000 mm vel kum khata a tlak chuan tha takin a rah thei. Tha taka thanga, rah tur chuan 1500mm to 2000 mm vel a mamawh a ni. Ruahtui tam lutuk pawh hi a tuar thei viau a, mahse tui tling thei lo a siam erawh a tul hle a ni.

Boruak lum zawng ah chuan 27⁰C hi a duhthusam a ni a, a lum ber leh vawh ber inthlahuhna chu 7⁰C aiin tam lo se. Khua a lum lutuk chuan a par te hi a ro ve thei a ni. Chutiang bawkin khua a vawh lutuk chuan a par te a thlawn bawkin thin. Coconut hian ni eng tha tak a mamawh a, daihlim ah chuan a tha thei lo a ni.

Coconut hi lei chi tinah a tha thei a, tui pek tur kan neih that a ngai thung a ni. Lei chhungril hnai lutuka tui a tling loh a, lung chang a awm loh chuan tha takin a thang thei a ni.

A phun tan dan :

Ram leilung buatsaih : Ram awih ah chuan contour terracing emaw burding hmanga phun tur a ni a, hmun hnaimah erawh chuan lei kha 1M tal a sea level atangin chhun pawn tur a ni. Khur hi 1.2 x 1.2 x 1.2 - 1m x 1m x 1m vel lei that dan a zirin laih tur a ni. Lei a that loh chuan laih zauh mai tur a ni.

Phun inkar hlat zawng : A sang chi (Tall var.) kan phun chuan 8m x 8m hman tur a nni a, a te chi (Dwarf var.) chu 6.5 x 6.5m ah phun in hybrids ah chuan 7m x 7m a inkar hlat phun tur a ni.

A phun hun : A chi phunsawn hun atan chuan ruah tui tlak tan tirth ah a tha ber. Tui pek tur kan neih chuan ruahtui tlak hma thla 1 velah phun a tha a, ruahtui tlak hunah tha taka a lo awm hman tawhna turin. Hmun hniam lamah erawh chuan ruahtui tlak zawh hnuah phun tur a ni.

A khur laih dan : A phuunna tur khur hi kan phunsawn hma thla hnih a lo laih lawk tur a ni. A tlangpui thu in a khur laih len zawng chu 1m x 1m x 1m a ni tur a ni. A khur chanve chu lei a hnawh tur a ni a. A chi bet chu lei zawl aain 50 cm in a hniam tur a ni, khawrona hmunah phei chuan phun pawnglang miah loh tur a ni.

A phun dan : A khurah chuan lei tha leh lei chawhpawlh a hnawhin kan phun tur a ni. A chi chu khur lai taka phunin tlu lo turin kan ti nghet tur a ni. A kung bul lai tak chu lei chhilh loh tur a ni. Kan phun sawn hnu chuan 15 cm a sangin a khur hual turin bund ruah tui a khur a luh loh nan kan siam a ni. Tlumpi ei chhe tu laka ven nan a tul a nih chuan chlorophyriphos 10% 100gm chu a khurah kan phul anga sevidol 8G (5gram) kha phun hma in khurah kan phul bawk tur a ni.

A tet lai enkawl dan : Coconut kan phun sawn thar chu kar khatah wawi 2 tui kan pe thin tur a ni. Hmawlh in

emaw do in thli in a chhem thlu tur kan veng tur a ni a, a sen lai hian daihlim kan siam sak ngei ngei bawk tur a ni.

A enkawlzui dan :

Basin Siam sak : Basin siam sak hi a pawimawh em em a, basin chu 2m bial a zauin kan siam tur a ni. Basin siam lai hian a zung lo lang te chu kan khuh tha leh tur a ni a, basin dangah hian bund 15 cm a sang kan siamsak tur a ni. A kung atanga 1.5m a bial hi basin kan siam zawh hnu chuan khawih buai tawh loh tur a ni. Damdawi, leitha, tui te chu 1.5m leh 2m inkar basin ah kan pe tur a ni, a kung bulah ni lovin.

Lei tha pek dan :Coconut hian a hnah leh par achhuah reng avangin uluk taka lei tha hi a hun takah pek thin tur a ni.

Coconut kung puitling pakhatin kum khat a lei tha a mamawh zat chu urea 1000 gm + SSP 2000gm + MOP 2000gm Lei tha te hi tum hnihah pekin ruah tui tlak hma May, June ah leh a chanve dang chu September, October ah. Thlai kan phun sawn tharah chuan a kum khat naah 1/10th kum hnih naah 1/3rd, kar thum naah 2/3rd, a kum lina atangin a dose pumpui kan pe tan tur a ni. Heng bakah hian Dolomite limestone 2 - 3 kg emaw 5 kg Magnesium Sulphate hi kung khatah kum khatah kan pe bawk tur a ni. Dolomite hi lei tha dang nena pawlh lo in, fur tan tirhah basin ah kan pe tur a ni a. MgSo₄ erawh hi chu lei tha dang nena chawhpawlhlin kan pe thin tur a ni. NE lei te hian boron an tlak chham avangin borax @ 50gm/

plant hi lei tha dang nen a pawlh in kan pe bawk tur a ni a, chu chuan crown chock natna lakah a veng dawn a ni. Lei tha hi basin 1.5m a hla a khuar 20cm - 30 cm a thuk lai in lei tha chu pek a lei a khuh leh tur a ni, tui pek nghal bawk tur.

Organic Manures pek dan : Lei tha taka pek hi a pawimawh hle a ni. Organic manure hian lei a microbes te chu ti chakin lei a minerals te thlai tana hman turin a siam chuah sak thin. Bawnggek te compose te, vermicompose te hi 30 kg/plant a pek thin tur a ni. Lei tha kan pek ang chiah khan organic manures pawh hi a hmun ngaiah kan pe ve tur a ni.

Tui pek dan : Coconut hian kar khatah tui 600 - 800 litres a mamawh a. Keini NE ruahtui tlak tamna lamah chuan nipui laiin ni li danah 200 L pek a thlasik laiin kar khatah vawikhat tal pek tur a ni. Lei tha kan pekna hmunah bawk khan tui pawh hi kan pe tur a ni. Duhthusam chuan drip irrigation hi a tha a, tui leh tha te ren chem takin tangkai takin a pek theih a ni.

Tui riral tur ven dan : Lei khuh hi tui riral tur ven nan a pawimawh hle. Kan basin siamte chu a hnah ro te emaw chhawl rem changin 15 cm a chhahin kan khuh tur a ni, lei khuh hi fur zawh hma in kan ti hman tur a ni.

Tuichhe paih : Tui chhe paih hi tui pek ang bawkin a pawimawh a ni. Tui tlin theihna ah chuan a thangtha thei lo a ni.

Hnim ven dan : Coconut hmun chu fai taka thlawh tur a ni. Chutilo chuan a rah tlem phah thei em em a ni. A bik takin engtik lai pawhin a basin chu kan thlo fai reng tur a ni. Coconut kung pahnih inkar lei chu kum khatah vawi 2 May leh October a cheh dur hian hnim a veng thei hle. Tlang ramah chuan lei cheh dur hi a mual tan zawngin kan ti tur a ni. Coconut kung in kar thlai chin hian lei a ti hrisel ve thei bawk . Damdawi hmangin hnimte hi a thlawh fai theih bawk a, chungte chu 50gm fernoxone leh grammoxone 50ml tui 10 litre apawlhin emaw glycel @ 30ml kha tui 10 litre a pawlhin a hman theih.

A rah seng : Coconut hi mihring hmangin emaw mau hmawr a chem tawn betin an lo ber thin. A tlangpui thu in coconut sang chi ho chu kum 6 atanga kum 7 velah a lawh tan theih a, a hniam chi leh hybrid chi chu kum 4 atanga kum 5 naah. A rah atanga Kum 3-4 hnuah a thar tur ang tak tak a thar chhuak thin. A rah in siam tirh atang a a puitling hun chung hi thla sawm pahnih a ngai a ni. A rah no (a tui in chi) hi thla nga an tlin hma a lawh loh tur a ni a, thla 7 ah a tui a tam ber. Coconut hi thla tin vawikhat a par a chuvangin kum tluanin a rah thei a ni. North East ah thung erawh chuan thlasik laiin tum khat emaw tum hnih a par a thlak thin avangin kum khatah vawi sawm vel a thar a, a tlangpui thu in kum khatah a rah puitling tum hnih emaw tumi 3 emaw an lo a, a rah no vawi 1 emaw vawi 2 an lo thin.

THLAKIPA COCONUT ENKAWL DAN **COCONUT CALENDAR FOR NORTH EAST**

JANUARY :

A rah puitling tawh chu magbihu hma a lawh tur a ni. A hnah ro leh a par rote chu paih in, a kung bulte chu tih fai tur a ni. Kar tin tui 200 Ltrs. pek ziah tur a ni. Basin 2m bial siam tur, a zung lang zawng zawngte chu leiah rih vur tur, a kung bul chu thlawh fai a, lei khuh tih tur, a kungah chinai tah tur.

FEBRUARY :

Tui pek a, a kung buk (hnahro leh par ro) tihfai leh tur. Red palm weevil in a eichhitna uluk taka zawn tur. A kungah kua emaw rannungin a kung a kher ri kan hriat chuan Red Palm weevil a awm tihna a ni a, enkawl nghal vat tur a ni. A enkawl dan tur -

- (1) A kung bul vel tihfai vek tur.
- (2) Napthalin balls hmangin a kua hnawh tur.
- (3) A zungah monochrotophos 10ml + tui 10 ml chawhpawlh chu vawi thum ni 45 danah pek tur.
- (4) Phorate granules chu 5gm/plant in a hnah inkarah dah tur.
- (5) Monochrotophos 5ml + Dichlorvos 5ml chu a kua-ah leih luh tur.

Integrated Disease Management of Ganoderma natna atan natna enkawlna October thle a ziah angin tih bawh tur.

MARCH :

A chi lakna tur kung chhinchhiah a rawng hnawih tur: A chi lakna tur chu -

(1) Kum 20 aia upa

(2) Kum tin 80 aia tam rah leh a hnah sawm thum aia tlem lo a ni tur a ni. Huanah erawh chuan Tlumpi in a eichhiat na zawn a, a lo awm chuan :-

(i) 0.05% chlopyriphos in vawi 2, ni 20 atanga 25 inkarah lei chu leih tur.

(ii) 10% chlorpyriphos 100gm in kum khatah vawi 1 kung tinah pek tur.

Black Headed Caterpillar in a eichhiatna zawn tur. BHC tui chu a hnah hnuai lamah a awm ang.

A enkawl dan :

(1) A hnah eichhaitte chu paih a hal ral tur. A tui eichhe turin braconides (@ 20/tree leh bethylids @ 10/tree ni 15 danah vawi 5 chhuah tur. A zung chu 10 ml monochrotophos + tui 10 ml pek tur, a rah chu ni 45 chhung (pek atangin) lawh loh tur Dichlorvos 76 wsc@ 2ml/litre emaw Malathion 50 EC @ 5ml/litre a kah tur.

APRIL :

Nipui a lo intan tawh a, tui pek uar leh zual tur. Tui litre 200 kung khatah ni li danah pek tur. A chi tha thlan chhuah chu lawh a thlakhat chung daihlma dah tur. A hring a lawh tur chi thla 6-7 a upa chu thlan a, lawh tur. Black Headed Caterpillar enkawl dan kha tih leh tur. Rhinoceros beetle hnu hma zawn leh tur, chu chu a hnah a triangle (kil thum) neinin a seh bung ang.

A enkawl dan :

- a) Naphthalene balls 3-5 chu a hnah chung berah dah tur.
- b) Neem Cake Powder + Balu (1:1) 250g/pl emaw phorate granules @ 5g+100g balu chu a kua-ah leh a hnah hmasa ber bulah dah tur.
- c) Rhinolure trap @ 2 per Ha.
- d) Baculovirus 15 enkawl puitlin sa chu Ha. khat tan chhuah tur.

MAY :

Tui pek chhunzawm tur. Basin siam that a ngaih chuan siam that tur. A chi tur chu thlang leh in nursery a kui hmam thlakhat daihlim ah dah tur. Black Headed Caterpillar enkawl na kha tih leh tur. A hring a lawh tur chu thla 6-7 vel kha lawh leh tur. Crown Chocking natna a awm leh awm loh enfiah tur. A hnah thar chhuak tur chhuak thei lo a ni em, hnah kul, a hnah thar ber than tawp a awm em en tur. Heng natna a awm chuan thla hnih danah a basin ah khan 50 g borax 1kung khat zelah pek tur. Eriophid mite tihchhiat a awm em en tur. A rah no deuhah chuan rawng danglam bik, uk deuh thet thet a awm emaw triangle eng a a awm em? A awm chuan a zungah Neemazal 50,000 ppm @ 7.5ml chu tui 7.5 ml nen a pawlhah pek tur. Leitha FYM 25 kg/plant + Vermicompost 10 kg/ palm + Neem cake 5 Kg/ palm pek belh tur.

JUNE :

June kar hnihna velah fur a intan tlangpui thin a, chutiang a nih chuan tui pek a chawlhsan theih. Khur laih

tan hun a ni a, 1m x 1m x 1m khur 8m x 8m inkar ah khur laih tan tur a ni. Khur chu leitha, lei pangngai leh bawnggek chawhpawlh a 60 cm vel thleng hnawh khah tur a ni a, a chung 40 cm chu la dah awl tur a ni. Chlorpyrifos 10%, 100g chu tlumpi laka ven nan pawlh tur a ni. Ni 15 hnuah coconut tiak chu a khur laih takah phun a, leia chhilh tur a ni. A tiak hmawr a rah awm chu phun tlum tur a ni a, a kung erawh chu tihlan tur a ni. Tui tha taka pek bawk tur a ni. Bund 15 cm a sang chu ruah tui lut tur lo dan nan siam tur a ni. A chi kuina tur bed chu a sang chi a ni tur a ni a, chutah chuan 30cmx30cm inkarah kui tur a ni. Bed leh bed inkar hi 70 cm a ni tur a ni. A kung puitling erawh chu Fertilizer dose chanve 500g urea, 100g SSP, 1000g MOP, 200g MgSo₄ leh 50g borax chu a kung atang a 1.5m a hla a khur laih khuarah pek tur. Lei tha hi June kar tawp berah pek tur. Khuar laih hi 25 - 30 cm a thuk a laiin pek zawhah lei a chhilh a, tui pek nghal bawk tur a ni.

JULY :

A chi June a phunsawn hman loh kha phun sawn tur. Nursery-ah a chi kui bawk tur. Tui pek a ngai tawh meuh lo. Bud rot disease a awm em enfiah tur. A hnah chunglam 1-2 a eng ang. A kung naupang in an nei duh bik. A hnah no bul lam chu lo tawih in rimchhe deuh a pe chhuak ang..

A enkawl dan : a) A hrisek lo lai chu paih vek a, bordeaux paste hnawih tur. b) 1% bordeaux mixture emaw phytolan emaw Blitox 0.2% a kah tur. c) Pseudomonas florence @ 100g/Pl leh FYM 50 kg + Neem Cake 5 kg a kung bulah pek tur. Dithane M-45 + 150g balu chu a rim chhuah

theihna turah dahin a hnah chung 3-na ah dah tur. e) Lei chu 1% Bordeaux Mixture 40 L in leih tur. Borax dose hnihna chu crown choke natna kai kungah chuan a basin ah pek tur.

AUGUST :

June-a kan sawi ang khain uluk taka phun leh tur. Organic manure 25 kg FYM + 10Kg Vermicompost + 5 KG Neem Cake chu a basin ah pek tur. Ni 15 hnua leikhuh tih tur a ni a, 15cm a chhah a tih tur a ni. Coconut phun thar khur ah tui a awm chuan paih chhuah tur. Nursery bed chhia leh basin chhia a awm chuan siam that tur. Bud rot disease a awm em enfiah tur.

SEPTEMBER :

Organic Manures te kha August thla-ah kan pe lo anih chuan pek tur. Uluk taka a kung phun leh tur a awm chuan phun leh tur. Sazu leh thehlei tih chhiat a awm leh awm loh en tur. A awm chuan a) Raban cake chu kung 4-5 danah a kung bulah dah in 100g cake hi kung 15 tan a tawk vel. b) Zinc phosphate @ 100g + Kurtai + chhangphut + coconut oil 10ml chawhpawlh chu chah tur. c) Sazu tur/thang chi hrang hrang hman tur. d) Bud rot tan copper fungicide kah leh tur.

OCTOBER :

Fertilizer dose wavi hnihna 500g Urea, 1000g SSP, 1000g MOP. Nursery chu fai taka a thlawh tur. 1% Bordeaux mixture chu natna laka ven nan kah tur. Ganoderna (Basal Stem Rot) natna a awm em en tur - a zung tawih

emaw, a zung leiseh atanga tuihnang hnam chhuak emaw, a hnah thi ro uai thla lo a awm avang te, a rah te a tlak in, he natna hi a vei thei. He Ganoderma ven nan heng te hi thla thum danah kah tur a ni.

a) 2 ml Calixin chu tui 1 ltr. nen pawlhin a zungah hip tir tur.

b) *Trichoderma harzianum* leh *Pseudomonas Flourescens* 50gm ve ve FYM 50kg nen pawlh a pek tur.

c) Phospholbacter emaw Azotobacter 200g chu FYM 10 kg nena pawlha pek tur.

d) 1% Bordeaux mixture 40 ltr. a lei chu leih tur.

NOVEMBER :

January angin thui pek tur. Fertilizer dose vawi hnihna October thla a pek loh chuan pek tur. Stem bleeding natna a awm leh awm loh en tur, a dum uk, khuar deuh, tuihnang chhuak a kung bulah awm awm leh awm loh atangin a hriat theih.

A enkawl dan : a) A natna vei nasa kung chu paih chuah tur.

b) A natna kai lai chu tan emaw ziah thlak a, 5% calexin a hnawih tur. Calixin hi a zungah February leh May a hip tir bawk tur a ni. Calixin hi a ro hunah alkatra hnawih tur.

c) Neem cake 5 kg a basin a pek tur.

d) *Trichoderma harzianum* leh *P. flourescene* 50 kg ve ve leh 50 kgs FYM chu a basin ah pek tur.

e) Black Headed Caterpillar a tamna hmunah chuan thlasik laia a tam leh duh avangin a natna a awm a nih chuan March a mi ang khan thlasik chhung tih tur a ni.

DECEMBER :

Tui pek chhonzawm tur. A rah puitling lawh tur. A chung buk tihfai a, Chlorpyrifos tlumpi-in a tihbuai loh nan pek tur. Crown choke in a tihbuai kung chu 50 g borax pek tur. A rah puitling hma a tla chu chhan chi hrang hrang - nutrient tlakchham vangte, a bikin potash, tuitlin vang, khua ro rei lutuk vang, hormone tlakchham vang, rannung leh natna chi hrang hrang vang a ni thei a, 30% vel rah tla chu a tur ve reng a ni a, chumi piah lam chu ven ngai a ni. Natna a rahah kan hmuh chuan Indophil M-45 (0.25%) emaw Blitox (0.2%). Rannung vang a nih chuan Dichlorous (0.02%) emaw Malathion (0.05%) chu ser tiat vel a nihin kah tur a ni a, vawi thum ni 45 danah kah tur a ni a, chu chu December, February leh April ah. Tin, khua a ro chuan tui pek a, ruah a tam chuan tui tling thei lo a siam tur a ni. 500g MOP hi a rah tla nasa ah chuan pek belh theih a ni.