



**KA RUKOM REP IA U
RIEWADEM**

KA RUKOM REP IA U RIEWHADEM

U riewhadem u long uwei na ki jingthung ba donkam na ka bynta ki jingdonkam ba bun rukom kum ki jingbam na ka bynta u bries bad kumjuh ruh na ka bynta ki jingri. U riewhadem u long u jingthung uba donkam bha hadien jong u kba ha ka jylla Meghalaya. Ia u riewhadem la ju thung jan ha baroh ki jylla jong ka ri India.

Ia u riewhadem la ju pyndonkam ha kiba bun rukom. Haduh 85 % u riewhadem la ju pyndonkam kum u jingbam ha ka ri India. Ia u atta (chapatti) ruh la ju shna ruh na u riewhadem. U riewhadem u don kumba 10% protein, 4% ka umphniang, 70% carbohydrates, 2.3% crude fibre, 10.40% albuminoides, 10.4% ash. U riewhadem uba don ia ka protein 'Zein' um don pat ia ki kynja vitamin 'tryptophane' & 'lysine' kiba dei ki ar tylli ki amino acid kiba donkam. U riewhadem u don ruh ia ki vitamin A, nicotinic acid, riboflavin bad vitamin E bad u kham duna ia ka calcium, bad u kham bun ia ka phosphorus.

Ka suiň bneng & ka khydew: Une u jingthung u mih bha ha ka khydew ka bym shong um, ba sboh bad ba seisoh bha. Donkam ruh ban pynbiang ia ki nala tuid um ban iada na ka jinglang ka um. Ka pH lane ka jingjew jong ka khydew kadei ban long 5.5 -7.5. U jingthung riewhadem u dei u jingthung uba mih bha ha ki jika ba kham syaid. U mih bha ha ki jika kiba kynjang haduh kumba 3000 mitar na ka sla duriaw. Ha ki jylla ba kham shatei jong ka ri India (north), u riewhadem u ju mih bha ha ki bnai July-October (Kharif), katba ha ki jylla ba kham sharum jong ka ri India (south), u riewhadem u ju mih bha ha ki bnai April-October. Ka jingshit jingkhriat na ka bynta ki tynrai jingthung kiba dang shu sdang mih ka long 21°C bad na ka bynta ka jingheh jingsan jong u jingthung kadei ban long 32°C. U jingthung riewhadem um lah ban īaishah ia ka jingshit palat jong ka suiň bneng bad ruh ia ka jingduna jong ka jingsngem ka suiň bneng (humidity) namar kane ka lah ban pynjulor ia ki sla jong u jingthung ha ka por ba dang mih syntiew bad ka lah ban pynthud ruh ia ka jingpynmih symbai na ki pui pui jong u syntiew (pollen germination).

Ki jait: RCM1-1, RCM1-2, RCM1-3, DA 61-A, RCM 75, RCM 76, Vijay Composite, HQPM-1, HQPM-2, Ganga-11, Ganga-2.

Baby Corn: HM-4, VL-42, Prakash

Ka jingkhleh symbai shuwa ban thung: Shuwa ban thung, khleh ia ki symbai bad ki dawai phngit jingim kum ki Azospirillum, Azotobacter bad PSB @20gm/kg u symbai.

Ka jingpynkhreh ia ka khyndew: Donkam ban lur ia ka khyndew kumba ar ne lai sien ha ka jingjylliew kaba 20-25 cm. Hadien ba la dep lur ia ka khyndew, donkam ban pyn ryntih ia ka khyndew da ka lyntang.

Ber da ka dawai Soldier @3-5 kg/akar da kaba khleh lang bad ka sboh FYM ban iada na ka jingpynjulor jong u ŋiang byrnai (white grub)

Katno yn donkam symbai: - Ka jingbun jong u jingthung riewhadem kumba 60-66 hajar tylli ha ka shi hektar ka jaka rep ka lah ban pynmih kham bun ka jingmih. Thung ia ki symbai riewhadem ha ka jingjngai kaba 60cm na uwei u laiň sha uwei pat bad 20-25cm ka jingjngai na uwei u jingthung sha uwei pat. Kumba 20-25 kg u symbai lah ban thung ha ka shi hektar ka jaka. Thung ia u symbai ha ka jingjylliew kaba 5-7cm. Na ka bynta ban pynmih khambun ia u jait riewhadem 'baby corn', donkam kumba 30 kg/ha bad sa thung ia ki symbai ha ka jingjngai kaba tang 10cm na uwei u jingthung sha uwei pat.

Ka por thung: Ka por thung ka īapher na kawei ka jaka sha kawei pat. Thung ia u riewhadem kumba ar tai ewie eiei shuwa ka por hap slap ha ki por lyiur ryngkat bad ka jingpynbiang ia ka um. Na ka bynta ki jaka rep kiba shaniah ha ka jinghap slap (rainfed), thung ia u riewhadem ynda la sdang ka por lyiur.

Kaba ai sboh:- Ber da ka sboh FYM kumba 15 tonne ha ka shi hektar lane ka sboh wieh (Vermicompost) kumba 2.5-3 tonne ha ka shi hektar 20 sngi shuwa ban thung ryngkat bad 150 kg rock phosphate. Lah ruh ban pyndonkam da ka sboh 18 sngi (Berkeley Compost). Ia ki sboh ŋiut kiba mih na u jingthung riewhadem, ngi lah ban ieh beit ha khyndew ba kan kylla sboh. Ia ka sboh FYM, lah ruh ban pynduna haduh kumba 10 tonne ha ka shi hektar, lada ia ka sboh wieh la ai kumba 2-3 tonne ha ka shi hektar bad ia u rock phosphate kumba 150 kg ha ka shi hektar. Lah ruh ban ai da u Neem cake kumba kumba 150 kg ha ka shi hektar ban ai jingiada na ki khňiang kiba mih na khyndew. Lah ruh ban thung ia u riewhadem ryngkat bad ki jait jingthung kiba lah ban shna ia ka jingbam Nitrogen da kaba kjit na ka haw haw (legume crops). Ki jingthung kum u 'Dhaincha' bad u 'Tephrosia' ki pynsboh bad pynbha ia ka khyndew da kaba thung ia ki haduh ba kin da heh bad ynda la kheit ia ki, la ju tep ia ki ha kajuh ka jaka hi. īa kane ka rukom ki khot da ka "green manuring".

Kaba Kara Khyndew: Ka long kaba donkam ban kara kumba shi sien ryngkat bad ka jingthiew ŋiut kumba 30-35 sngi hadien ba la dep thung ban iada na ka jingtlor noh jong u jingthung.

Ka jingai um: U jingthung riewhadem um lah ban īaishah ia ka jingbun um

palat lane ka jingduna palat ka um; bad ruh ym dei ban pynlang sah ia ka um ha kano kano ka por. Ka jingpynlang ia ka um hajuh haduh 6-7 kynta ka lah ban pynjulor ia u jingthung riewhadem. U jingthung riewhadem u lah ban īaishah ia ka jingjur slap lada pynbiang bha ia ki nala tuid um harud jong ka jaka rep. U jingthung riewhadem u donkam kumba 500-600 mm ia ka um. Ka jingduna ha ka jingai um ia u jingthung ha ka por ba u dang heh dang san ka lah ban ktah jur ia ka jingmih ia ki riewhadem.

Ka jingthiew ŋiut: Ha ki aiom lyiur, ki ŋiut ki kham bun bad ki mih naduh ba la sdang khie lung ki symbai riewhadem. Kumta donkam ban thiew ia ki ŋiut ha ka sien kaba nyngkong kumba 15-20 sngi hadien ba la dep thung ia u symbai riewhadem ha ka sien kaba ar kumba 30-35 sngi hadien ba la dep thung bad ha ka sien kaba lai kumba 50-55 sngi hadien ba la dep thung. Ka long kaba bha ban tap ia ka khydew da ki ŋiut ba la kylla sboh khnang ban iada na ka jingmih jong ki ŋiut.

Ka ba thung lang bad kiwei ki jait jingthung:

Ka long kaba bha ban thung ia u riewhadem ryngkat bad kiwi ki jait jingthung khamtam kito kiba pynbha bad pynsboh ia ka khydew. Ha ki jaka lum, thung ia u Riewhadem + Rymbai (Shi laiň ba la thung da u Rymbai hapdeng ar laiň ba la thung da u riewhadem); rymbai ktung Donkam ban kdiah ia ki ki kliar jong u rymbai ha ki jaka ba kham jur slap namar kane ka pynbha ia ka khydew da kaba pynmih haduh kumba 8-10 kg ha ka shi hektar u Nitrogen uba long u jingbam na ka bynta u jingthung riewhadem bad kane kan pynioh kham bun ruh ia u jingthung rymbai. Ha ki jaka ba pdeng bad kiba kham sharum, ka long kaba bha ban thung lang ia kine ki jingthung: - Riewhadem+ Dai Arhar (1 bynta u riewhadem: 1 bynta u Dai Arhar) lane Riewhadem+ Rymbai bad Riewhadem + Rymbai ja. Lah ruh ban thung ia kine ki jingthung ha ki ar laiň (2:2 lain).

Ki jingthung hadien ba la da dep thung ia u riewhadem:

Ha ki jaka lum: Riewhadem + Rymbai

Ha ki jaka pdeng & ki jaka ba kham sharum: Riewhadem- Phrisbin, Riewhadem- Symbai tyrso bad Riewhadem- ki jhur, Riewhadem-motor (na ka bynta ki jhur, ai por kumba 70 sngi), Riewhadem - Kba (ia ki jait kiba mih klo i lah ban thung da la kut u bnai Jylliew), Riewhadem + Rymbai (2:2)-Symbai tyrso.

Ka jingiada ia u jingthung na ki khñiang:-

Ki khñiang kiba kham pynjulor bha ia u jingthung riewhadem ki kynthup ia u Maize cob borer, stem borer bad u cut worms. Ka jingthung da ki jait (RCM 1-1 bad local yellow kiba lah ban iaisah na ka jingpynjulor jong u cut worm) bad ka jingthung ia u riewhadem ha ka por ba biang ka lah ban pynduna na ki khñiang bad jingpang. Donkam ban lur ia ka khydew ha ki por lyür khnang ban pynmih lut shalor ia ki khñiang ha ki sim ba kin bam ia ki. Ki pylleng jong ki khñiang kum ki puit, cricket, bad kiwei kiwei ki lah ban shah thang tang ha ka sngi. Donkam ruh ban lum bad thang noh ia ki jingthung kiba la shah ktah ha ka jingpang; kane kan iada na ka jingpur jong kano kano ka jingpang.

Fall armyworm:

• Ka jingap/jingsyntiat (Scouting):-

Donkam ban peitngor bha naduh ba sdang ban khie lung ki sara jingthung:

1. Naduh ka por ba sdang khie lung ki sara haduh ka por ba ki sla ki la sdang ban sop (3 haduh 4 taiew hadien ba sdang mih lung ki sla na khydew). Kumta dei ban leh eiei ban iada ia ki jingthung na ka jingshah pynjulor ha ki khñiang lada 5 na ka shispah (5%) na ki jingthung ki duh na ka jingpynjot jong ki khñiang.
2. Hapdeng jong ka 5 haduh 7 taiew hadien ba la mih ki sla, donkam ban sumar bha ban lait na ki jingpang bad ki khñiang, lada ka jingjulor ka kot sha ka 10 -20 na ka shispah (10%-20%)
3. Naduh ba sdang mih haduh ban da kut ka jingmih ki kynja shñiuh jong u riewhadem (Silking stage). Ym dei ban synreit dawai pyniap khñiang. Hynrei donkam ban leh eiei lada don kumba 10 na ka shispah (10%) ka jingshah pynjulor ia ki symboh jong u riewhadem.

Ki lad jingiada:

1. Donkam ban lur kham jylliew ia ka khydew shuwa ban thung. Kane kan pynmih lut shabar ia ki ñianglong jong une u khñiang khnang ba kiwei pat ki khñiang ba kham heh kin ioh bam ia kine ki ñianglong.
2. Dei ban thung ha ka por ba biang. Dei ruh ban kiar na ka jingthung pud sngi ne pud taiew
3. Lah ban thung ia u riewhadem bad kiwei ki jait jingthung kiba long kynja dai katkum ka jinglong jingman ka suiñ bneng bad ka jaka. Nuksa: (riewhadem+ dai iong/dai jyrngam/dai stem)

4. Ka jingpynieng ia ki kynja dieng ne ryndan ha ki lyngkha kumba 10 tylli ha ka shi akar ba kin dem ki sim khnang ba kin ioh ban puh ia une u khñiang ha ka por ba ki jingthung ki dang rit (haduh 30 sngi)
5. Thung kumba 3 haduh 4 tylli ki laiñ da ki kynja phlang ban riam ia kine ki khñiang (kum u jingthung Napier) ha ka lyngkha riewhadem bad sa synreit da ka dawai NSKE 5% lane ka Azadirachtin 3-5ml ha ka shi litar ka um, ynda haba une u jingthung uba riam ia kine ki khñiang u la sdang ban pyni ia ki dak bam khñiang
6. Donkam ban rep khuid bha bad ban pyndonkam ia ki dawai sboh kat ban biang
7. Donkam ban thung da ki jait riewhadem kiba dei ki hybrid kiba don ka snep kaba rben bad ba tap lup ia u soh baroh uwei. Kane kan pynduna ia ka jingrung jong u khñiang shapoh u riewhadem ban bam.
8. Synreit da ka um ba la khleh lang bad ka sboh ha ki bynta jong u riewhadem ba la shah ktah.
9. Hadien ba la lap ia ka jingdon jong kine ki khñiang ha lyngkha, ber da u shyiap rkhiang ha ki bynta ba sdang soh jong u riewhadem
10. Dei ban buh da ki jingriam (pheromone traps) ban pyniap ia ki khñiang shynrang kumba 15 tylli ha ka shi akar
11. Khleh da ka Metarhizum anisopliae powder @ 5gram ha ka shi litar ka um bad sa kynshait ha ki sla 15 haduh 25 sngi hadien ba dep thung. Hadien pat sa kynshait shisien haduh ar sien ha ka jingpud sngi kaba 10 katkum ka jingjur jong ka jingshah pynjulor ha ki khñiang lane pyndonkam da ka jingkhleh Nomuraea rileyi @ 3gram ha ka shi litar ka um bad kynshait ha ki sla 15 haduh 25 sngi hadien ba dep thung. Hadien pat sa kynshait shisien haduh ar sien ha ka jingpud sngi kaba 10 katkum ka jingjur jong ka jingshah pynjulor ha ki khñiang.
12. Pynroi da ki khñiang kiba bha kiba lah ban pyniap ia ki khñiang kiba pynjulor ia u jingthung riewhadem.

Ka jingiada ia u jingthung na ki jingpang:

Ka jingiapstem ki sla, ka jingthoh dak bthuh ki sla bad ka jingpang thoh sarang ki dei ki jingpang ba kham kynrei ha u riew hadem.

Thung da ki jait kum u MCU-9, COM-1, Local yellow, Local white, Vijay, MCU-204, MCU-314. Synreit da ka umphniang jong u sla neem/derisome kumba 2.5 gram ha ka shi litar ka um lane ka dawai panchgavya 3% ban iada na ki jingpang bad ruh ban ai ia ki jingbam kiba bha ia ka khyndew. Donkam

ruh ban lum bad thang noh ia ki jingthung, ki sla iap kiba la shah ktah ha ki jingpang; ka long kaba bha ruh ban thung ryngkat bad ki jhur kum u motor, phrisbin (legumes) ban iada na ki jingpang.

Ka por kheit:

Kheit ia u kob ba lah iaw bad ieh beit ia u jyntang ha ka jaka rep khnang ban pyndonkam ia u ha ka ban tap ia ka khydew ynda la sdang thung biang da uwei u riewhadem. Na ka bynta u jait 'baby corn', ia u kob dei ban kheit noh mar sien mih ki kynja shñiuh jong u riewhadem (Silking stage). Lah ban kheit ia u riewhadem 'baby corn' kumba 5-6 sien ha manla ka ar sngi.

Ban peid ia symboh:

Pyndonkam da ka kor ba la shna kyrpang na ka bynta ban pied ia u riewhadem na u kob bad kane ka pyllait na ka jingpynlehnohei ia ka por, ka pisa bad kane ka ëarap shibun ia ki nongtrei. La pynmih ia kane ka kor da ka skulbah 'ICAR Research Complex for NEH Region', Umiam, Meghalaya. Hadien ba la dep pied ia u riewhadem na u kob, thatd ia kine ki symbai riewhadem ha sngi ban pynneh ia ka jingdon ka um/ka jingsngem kumba 20-12%.

Ka jingmih:

U jingthung riewhadem u lah ban pynmih haduh 2.5-3.0 tonne ha ka shi hektar lada rep da ka rukom rep khlem pyndonkam dawai bih/kharkhana

Acknowledgement:

We are thankful to Director, ICAR Research Complex for NEH Region, Umiam and Dr. J. Layek, In-charge of organic farming for giving permission to reproduce and translate their organic book "Package of Practices for Organic Production of Important Crops in NEH Region of India" in vernacular language and for providing technical support for promotion of organic farming in Meghalaya.

References:

Das. A., Layek J., Babu S., Ramjrushna G. I., Baiswar P., Krishnappa R., Devi M.T., Kumar M., and Prakash N. 2019 Package of practices for Organic production of important crops in NEH Region of India, ICAR Research Complex for NEH Region, Umiam, Meghalay, pp 228

Firake DM, Behere GT, Babu Subhash, Prakash N. 2019. Fall Armyworm: Diagnosis and Management (An extension pocket book). ICAR Research Complex for NEH Region, Umiam-793 103, Meghalaya, India. 48p

State Biocontrol Laboratory, Upper Shillong



PUBLISHED AND PRINTED BY
AGRICULTURE INFORMATION WING,
DIRECTORATE OF AGRICULTURE, JUNE 2021