



KA RUKOM REP PHAN



Krishi Vigyan Kendra (KVK)
East Khasi Hills District
5th Mile, Upper Shillong
Meghalaya - 793003

JINGLAMPHRANG:-

U Phan u dei u jingthung ba kynja phan ba thung bun eh ha ka pyrthei. Ha ka jylla jong ngi ruh la thung ha ki jaka kiba bun bad u long u jingbam uba kongsan ha ki iing ki sem jong ngi. U Phan u long u ba kordor na ka bynta ka koit ka khiah. Ia ka um u phan im lah ban pyndonkam ha ka ban pynduna ia ka jingpynshitom na ka gastric ulcers. Lah ban pyndonkam ia u phan haba don jing ing ding, ba thang ka sngi/ sunburn, bad jing pait pdang. U Phan ba dang shu dep tih u kham bun ka Vit C ban ia u Phan ba la buh.

Nutritional value/ Ka jingkordor ka jingbam ha man ka 100 g	
Energy/ Ka bor	321 kJ (77 kcal)
Carbohydrates	19 g
Starch	15 g
Dietary fiber	2.2 g
Fat	0.1 g
Protein	2 g
Water	75 g
Thiamine (Vit. B ₁)	0.08 mg (6%)
Riboflavin (Vit. B ₂)	0.03 mg (2%)
Niacin (Vit. B ₃)	1.1 mg (7%)
Vitamin B ₆	0.25 mg (19%)
Vitamin C	20 mg (33%)
Calcium	12 mg (1%)
Iron	1.8 mg (14%)
Magnesium	23 mg (6%)
Phosphorus	57 mg (8%)
Potassium	421 mg (9%)
Sodium	6 mg (0%)

JINGPYNDONKAM IA U PHAN:

- Ha ka ba shna ia ki jingdih kum ka vodka etc.
- Jngbam na ka bynta ki jingri.
- Ha ki karkhana shna soup, sauce etc ban pynrben.
- Ha ki karkhana shna jain ban pyndambit/pynskhem ia ki ksai
- Ha ki karkhana shna kot bad lyntang.
- Kum u Jhur bad kiwei pat ki jingbam kum ki phan khleh, French-fried potatoes/chips, pancakes & kiwei kiwei de
- Ha ka ba shna dawai ba bun jait



U Syntiew phan

Ka Rukom Thung

Ki jingdonkam ha ka ban thung phan ki long kumne harum:-

1. KA KHYNDEW:

- Kaba ni ba phrui phrui, bym lang um-ba ioh lyer bha, ba lam khyndew-shyiap, ba bun ka sboh mariang ka long ka ba bit na ka bynta u phan.
- U phan u donkam ka khyndew ka ba shu sngem bad ka jinglam jew kaba 6 sharum, kaba biang eh 5-6 ka pH, kaba lam Acid ban iada na ka jingpang Scab.
- U phan u sngewtynnad ban mih ha ka jaka ba kham khriat ka bneng ha ka khyndew ba sngem bad sboh. Ka jingshit jingkhriat kaba 17-19 degree.

2. U SYMBAL:

- Jied da u ba lah dep certify/mang kyrpang, u ba lait na ki jingpang, ki khniang ne ki jingthoh ba i shan khmat.

- U symbai ba 25-50 gram ka jing khia ne heh u lah biang ban thung. Kham lah u ba tylli ban ia u ba ot.



U Symbai uba bha bad ki khmat

- Ai lad ia symbai ba un sei khmat bad shwa ban thung lada long kaba lah, wieh shwa 10-20 minutes ha ka um 1 litre ba la khleh lang bad ka Dithane M45 10 shamoit ban iada na ki jingpang.
- Pyndonkam da ki symbai HYV kum u Kufri Giriraj, Kufri Jyoti, Kufri Megha, Kufri Khasigaro, Kufri Girdhari ki ba kham khlain ka jingpynmih.

3. KA RUKOM THUNG IA U SYMBAI:

- Tih jylliew ia ka khyndew bad pyn phrui phrui da ka ba kylla bha ia ka khyndew. Pynmadan. Ka khyndew kaba bha ka ai lad ia u phan ban kha roi.



Ki nur ba lah tih

- Thung ha ki lain da kaba tih nur.
- Ka jingjingai kaba 2 phut kawei ka nur na kawei pat bad 8-10 inshi u symbai na u wei pat ka long kaba biang eh ban thung ia u phan.



Ki symbai ba lah pynnoh ha ki nur ba lah ruid lain ba beit

- Donkam 15-20 quintal u symbai ban rep ha ka jaka kaba heh kat ka madan phutbol lane 2.5 acre (Shi Hektar)

4. **POR THUNG: March-April Bad October (15th – 30th)**

5. **KA RUKOM PYNBIANG SBOH:**

- U phan u kjit sboh shibun na ka khyndew.
- Dei ban pynbiang sboh na ka bynta u phan.
- Ka bha eh ban phah leh soil testing shwa ban thung khnang ban lah ai sboh katba donkam.
- Lada ioh sboh dawai karkhana, ai sboh kumne harum:-

Jait dawai	Sboh/jingbam	Katno ban ai
Urea/mluh	Nitrogen	2.5-4.5 muna na ka bynta 1 ha/2.5 akar
SSP/dpei	Phosphorus	15 muna na ka bynta 1 ha/2.5 akar
MOP/shyiap	Potassium	2-3 muna shiteng na ka bynta 1 ha/2.5 akar

Ai ruh ka sboh mariang / eit masi kaba iarap shibun ia ka jing mih: 10- 15 ton donkam na ka bynta 1 hektar lane 2 akar shiteng ka jaka.

a. **Ki Rukom Ai Sboh Mariang**

- Ai 10-15 ton ka sboh eit masi ba lah pyut bha ha ka shi hektar
- Lah ban pyndonkam ia ka sboh niut ba lah pynkhreh bha(compost)- 10-15 ton shi hektar
- U Neem (powder) 35 quintal na ka bynta shi hektar u lah ban ai sboh nitrogen, phosphorus bad potash ba donkam bad ruh u iada na ki khniang bad jing pang
- Ki niut jyrngam ha ka khyndew(green manure) ki pynsboh ia ka khyndew bad u phan u kham sngewtynnad ia kane ka sboh ruh.

b. ***Ki Sboh Thymmai – Bio Fertilizers***

- Ki Bio fertilizers ki dei ki phngit jing im lane jingthaw barit kiba iarap ha kaba pynioh ne pynmih ne shna ia ki sboh na ka bynta u jingthung.

- Ki shna ia ka sboh na kiei kiei kiba don ha ka mariang
- Kim ktah ia ka mariang bad pynbha ia ka khyndew katba nang iaid ki por.
- U Azotobacter- ban ioh Nitrogen
- U PSB (Phosphorus Solubilising Bacteria) ban ioh Phosphorus
- U Mycorhiza na bynta shibun ki jait jingbam

c. Ka Rukom Ber Sboh Ha Khyndew:

- Lada pyndonkam dawai karkhana, ia ka sboh Urea dei ban ai tang shiteng na kaba donkam bad kiwei pat ki sboh dawai baroh kat kaba donkam ha ka por thung.
- Khleh lang ia kine ki sboh dawai. Ynda lah pynkhreh nur, ber ia kine ki dawai ha ki lain.
- Nangta pat sa pynbud da ka sboh mariang/eit masi ba la tyrkhong bha.
- Pynhap ia u symbai bad tap bha da ka khyndew haduh 5 cm.
- Ia ka sboh Urea kaba sah pat phiah ha ki bynta ba kajuh katkum ka jing ai/rah khyndew jongphi.



Pynnoh shwa ia ka dawai karkhana



Sa pynbud da ka sboh mariang bad pynnoh u symbai

“Kynmaw, lada pyndonkam da ki Phngit jingim Bio fertizers, kiar noh na ka jingpyndonkam ia ki dawai karkhana la ki long ki dawai sboh ne dawai jingpang bad khniang”.

6. KA JINGPYNBIANG UM, RAH/AI KHYNDEW BAD KIWEI DE:

- Kiar na ka jinglang um/jingsngem um palat (ki nur).
- Lada lah, ai um ha ki por ba tyrkhong palat. Ka jingdon jong ki nur ka pynryntih ia ka jing ioh um.
- Ka jing rah khyndew ka long kaba donkam bha.
- Rah/ai khyndew ynda u jingthung u lah jrong 5-8 inshi kata hadien 40-45 sngi ba lah thung.
- Lada donkam, ai khyndew kaba ar sien 2 taiew hadien kaba nyngkong.
- Pynduna ia u niut (da ki dawai/kti/tiar/rah khyndew).
- Kynmaw ban ai ia ka sboh Urea kaba sah ha ka por rah khyndew.



Ki Nur kiba khuid bad ba lah ai shoi

7. KI KHNIANG BAD JINGPANG HA U PHAN BAD KI LAD JINGIADA:

- Ki khniang dpei (Aphids):** Kine ki khniang ki sop ia ki bynta ba dang lung jong ki sla bad ki jyntang bad Ki sla kiba shah pynjulong ki ring stai, ki iap rong noh bad ki duna ka jingheh.

Ki lad jing iada-

- Pyndonkam da ki yellow sticky trap.
- Synreit da ka dawai Helicon-L / Bio power (*Beauveria bassiana*) kumba 15-16 shamoit ha ka shi pump ka um.



Ki khniang dpei (Aphids) ha u phan

- Lane synreit da ka dawai Dimethoate (Tafgor) 30EC 8 shamoit ha ka shi pump ban iada na kine ki khniang.

- b. U Ksain bam Phan (Potato Tuber Moth):** Kine ki khniang ki ban shapoh ki bam bad shna kum ki kynja thliw kiba kyllain shapoh u phan.

Ki lad jingiada-

- Tep kham bha ia u phan por thung. Tep ia u phan 10-15 cm hapoh.
- Buh ki Pheromone trap 15 tylli ha ka shi hektar.
- Weng noh ia ki phan ba lah julor na ka lyngkha.
- Wat ju ieh ia u phan ba la dep tih ha lyngkha.
- Thung khleh bad u piat ne sohmynten ne motor.
- Ia ki phan ba lah dep tih dei ban buh ha ki rynsan da kaba



U Ksain pong thliw ha u phan

siang ia u skum dieng, skop, shyiap um bad sa tap kumba 2 - 2.5 cm ka jingrben da u sla *Lantana* (Soh pang Khlieh) ba tyrkhong ba lah dep shain bha.

- Ker da ki wire ha ka jaka ba lait thliw ha sem buh phan khnang ban iada na ka jingrung u thapbalong.
- Lane lah ban synreit da ka dawai Nuvacron 40EC kumba 5 shamoit ha ka shi pump ka um ha u jingthung ha lyngkha.

c. **Niang byrnai (white grub):** Une u khniang u sam shapoh u phan bad pyn pei thliw kiba heh bad ba pyllun.

Ki lad jing iada-

- Pyndonkam da ka dawai Soldier ba lah shna kyrpang da ki kynja wieh kiba rit (EPNs) kumba 8 shamoit ha ka shi pump ka um.
- Synreit lane jrein da ka helicon-L/ Bio power (*Beauveria bassiana*) kumba 16 shamoit ha ka shi litar ka um ha ka jingthew kumba ½ shamoit ha ka shi litar ka um bad sa jrein ha khyndew.
- Lane ia ka khyndew lah ban ai da u Phorate 10G lane Carbofuran 3G kumba 2.5 - 3.0 kilo a.i, ha ka jaka ba heh shi hektar ban iada na ki khniang byrnai (White grubs).



Niang byrnai ha u phan

d. **Ki Niang khung (Cut Worms):** Kine ki ksain ki mih na ka khyndew ha ka por mynmiet da ka ki pyndkhai lut ia ki jingthung na trai bad bam ia ki bynta ba lung jong ki sla.

Ki lad jingiada-

- Synreit da ka Multineem lane Nimbicidine kumba 8 shamoit sha ha ka shi pump ka um.
- Synreit lane jrein da ka Helicon-L/ Bio power (*Beauveria bassiana*) kumba 16 shamoit ha ka shi litar ka um.
- Lane lah ruh ban synreit ia ki sla ba dang lung bad ia ki jaka thung da ka dawai Dursban 20 EC da kaba khleh 7 shamoit ha ka shi pump ka um (na ka bynta shi hektar ka jaka).



U Niangkhung ha u phan

- e. **lap iong (Late blight):** ki sla kiba shah ktah ha kane ka jing pang ki iap tyrkhong bad don ruh ki kynja pui pui kiba sop ia ki sla.

Ki lad jingiada-

- Thung da ki jait symbai phan kiba lah ban shah ia ka jingpang iap iong kum Kufri Giriraj, Kufri Girdhari, Kufri Megha, Kufri Jyoti and Kufri Kanchan.
- Shuwa ban thung pdem ia ki symbai phan kumba 15 minit ha ka *Trichoderma* ba la khleh kumba 10g ha ka shi litar ka um bad hadien kata sa thad haka jaka kaba dum kumba 15 minit.
- Lane lah ruh ban synreit da ka Indofil M-45 kumba 6 shamoit ha ka shi pump ka um bad hadien 8 sngi sa pynbud sa da ka Ridomil MZ 72 kumba 4 shamoit ha ka shi pump ka um bad lada ka jingpang ka dang don synreit biang da ka Indofil.



Ki dak ka jingpang iap iong ha u phan

- f. **lap jlop (Bacterial wilt):** Ka jingiap ryenieng jong u jingthung uba lah heh lah san.

Ki lad jingiada-

- Thung ia ki jhur kum u kubi, phul ha ka jaka ba lah shah julor.
- Ai da u Bleaching Powder kumba 12 kilo ha man la ka shi hektar bad dei ban da khleh lang bad kiwei pat ki sbob dawai ha ki nur ha ka por pynkhreh ia ka jaka thung ne ha ka por thung.



Ka jingiap jlop ha u phan

8. KA JINGOT THNING/ JYNTANG IA U PHAN:

- Ar taiew shwa ban tih ia u phan, ot noh ia ka bynta ba shabar halor ka khyndew da ki tiar ot bad lum noh shawei pat ka jaka.
- Ia kane ka jingleh la khot ka Dehulming bad kane ka iarap ia u phan ban lait na ka jingshah ktah ha ki khniang kiba rah jingpang kum ki khniang dpei lane ki Aphids.
- Ka jingot thning ka iarap ruh ia u phan ha kaban pyn eh ia u snep bad iada na ka jing mong ne khoh snep kaba lah ban pyn hiar dor ia u phan.

9. KA JINGTIH IA U PHAN:

- U Phan u ba lah biang ka rta ban tih lah ban ithuh na ka jing kylla rong stem-rongktieh bthuh ki sla bad u bynta ba shabar.
- Tih ia u Phan hadien 2 taiew ne 15 sngi hadien ka jingot thning..
- Thad ia u phan hadien ba lah dep tih ha ka jaka ba kah dum katto katne kynta shwa ban rah sha sem.



La wad jingtip bad lah pynwan sha ka ktien Khasi da

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