

Purunsen

Scientific name : *Allium cepa*

Mizo : Purunsen

Hindi : Piaj

Sik leh sa :

- Ram vawt lutuk lo leh lum lutuk lo ah a chin theih
- Ruahtui tamna a ngeih lo
- Khawlum lam 12^oC -21^oC a bul siam nan a mamawh a. Bul a siam hnu chuan 15 – 25^oC a ngeih tawk.
- Ram vawt lutukah chuan a par hma(bul siam lovin)
- Khaw lum thutah chuan bul siam mumal lovin a puitling mai duh
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Leilung mamawh zawng:

- Eng leiah pawh a chin theih nain , lei thawl, dur tha siah a tha duh ber.
- pH 5.8 – 6.5 a mamawh
- hmun hniam, hnawng chual mai, tui thlit hul that theih lohna ah chin loh tur ani

Leitha (fertilizer) mamawh zat : Leitha mamawh zat hi lei that leh that loh dan a zirin a danglam hret thei a, chumi mil chuan her rem tur a ni.

Bawnggek leitha :- 20 – 25q/ha

- N : P : K :: 60 : 50 : 60
Urea – 90 Kg/ha
DAP – 108 Kg/Ha
MOP – 100 Kg/Ha
- N hi hmun thum a thena, vawi thum pek a hman tur
A hmasa ber - lei cheh phut lain
A dawttu - Phun atanga Ni 30 hnuah
A tawp ber - Ni 45-60 hnuah

A chi kui tiah dan :-

- A chi hrisel chauh hman tur
- Nursery bed, a 3m x 0.5m x 15cm a sang a siam tur
- Lei a dip tha tur a ni a, bawngek leitha dip pawlh bawk tur a ni
- A chi chu 4-5cm inkar hlatah line siamin leidip nena chawhpawlhlin phul tur a ni
- Buhpawl emaw hnim roin emaw khuh tur
- A hnawng tawk chauh a tui pek tur
- A tiah ve leh buhpawl lak sawn tur
- Ruahsur nasa lutuk atanga ven nan a chung zar tur
- Nisa lutuk in a tihchhiat loh nan partial shade siam tur
- Kar 6-7 ah phunsawn a hun(20-25cm a sang)
- A tiak upa lutuk chi a hun hmain a par duh
- A tiak naupang lutuk chu phunsawn in a thang theilo

A chin hun:

Nursery :- September – October

Phunsawn hun :- October - November

Tuipek :

- Purun hian pawnleng taka zung a kaih avangin tui tlem te in pek zin zawk tur a ni
- A bul insiam laiin tui an tlachham tur a nilo
- Tui a tlakchham chuan a bulbawk te a lo khi in a hun loah a par mai thin
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Seng hun:

- Thla 3-5 hnuah a seng theih
- A hnah a en a, a chung lampang a ro hunaha a seng a hun tlangpui
- Seng hma lutuk emaw tlai lutuk chuan a dahthat rei theih loh
- a tira a rawng (original color) a hlah hmain seng tur
- seng tlai chuan a rawn a danglam a, a par a darsarh a, hralh a har duh

Thar zat : 200 – 300q/ha

Seng hnua sawngbawl leh enkawl zui dan:

A hnuaia tarlan ang hian purun seng hnua sawngbawl leh enkawl tur a ni.

1. Curing

Curing tih hian a hnah kengtu leh a kawr hi a purunsen tui pai a kiam cha lutuk loh nan a tihro hmasak tihna a ni a. Curing ti tura thil pawimawh hmasa chu thil sat ha tak leh boruak kal chhuah zung zung theihna hmun leh boruak hnawng tam lutuk lohna hmun a ni. Hetia han tih hian a rek lai leh a kaw a ti ro a, tin a kawr pawnglang ber lei kai theihna ber chu hetia han tihro hian a tla thla mai thin a ni. Curing hi a zawh leh zawh lo hriatna chu a hnah nena in then hranna lai kha a lo chip tha a, a kawr pawnglang ber pawh han khawih hian a ri rep rep thei a ni. Tin, a rih hi 3-5% in a tla hniam thin ani.

Purunsen hi a chinna hmunah phoro nghal mai theih a nih loh chuan, tray ah lak khawm a, hmun lum tha leh ping tha, thawng baw ah dah mai tur a ni. Ram hnawng leh vawt baw siah chuan boruak sa siam chawpin 30°C vela sa a chhem mai tur a ni. Hei bakah hian a hnah chu tawn a a zarna siamah tihro ve mai theih baw a ni. Hetia daihlma tihro hian purunsen rawng a ti mawi a, hlah pawh a tlem baw a ni.

Grading

Curing tih zawh hian purunsen chu kutin thliar hran tur a ni a, thliar hran hnua a dah thatna hmunah dah a, duh hunah zawrh tura lak chhuah mai tur a ni. A hmawr(neck) chhah lutuk, a baw, a phir, a pem leh a tawihthe chu lak chhuah tur a I, tin a shape dik chiah lo pawh paih chhuah tur a ni. Dahthat hnu hian a man a lo to zawk deuh nan a thliar hran leh theih baw a ni. A kawr ro hi thliar hran lai hian a tlangpuiin an paih deuh zel a, hetia han tih hian a lang nalh duh bik a ni. Fimkhur taka thliar hran thlap a nih hnu chuan a dahthat rei theih bakah hlah a tlem deuh zawk a ni.

Khawchhung bazar a zawrh mai tur a nih chuan purunsen hi a len dan a zirin an thliar hrang mai a, chu chu Extra large onion (>6 cm dia.), Medium (4-6 cm dia.) leh Small (2-4 cm dia.). Extra large purunsen hi a to bik a hralh pawh a nuam hle a ni.

Packaging :

Packing hi tereuh te te a tih hian phurh sawn vel laiin a buaipui a awlsam a, a hralhna a awlsam dan a zir zelin a pack theih a ni. Phurh sawn lai vela a chhiat loh na 40kg te te in buara bag awng chuk chi ah thun thin tur ani.

A dahthat:

boruak pangngaiyah chuan purunsen chu 30-35° C leh 65-70% boruak hnawn lamah a dahtha theih a. Cold storage ah chuan boruak chu 0-2°C ah siam a, boruak hnawn lam chu 60-75% a ni tur a ni. A chawr tur chu ni phunsawn atanga ni 75-90 hnuat Maleic Hydrazide @ 2500 a kahin a veng tha thei a ni. . Dahthat laia a tawih tur venna atan chu chuan fai taka enkawl bakah phunsawn atanga ni 90 hnuat 0.1% Carbendazim a kah leh a seng hma hreta kah a tha. A khat tawka chawhlet a, a tawihthe a awm chuan paih, a chhia leh a chawrte pawh paih thin tur a ni.

Boruak kal vel zung zung theihna hmunah a chhawnga dahthat hian purunsen chu a chhe har deuh a ni



Agrifound White



NHRDF Red



Agrifound Light



Agrifound Rose



Thlai venhimna lampang

Natna lam:

Damping off

Hmuar chi khat *Fusarium oxysporum* – in a thlen aHei hi purunsen natna tlanglawn tak a ni. . *Pythium* sp. pawh hian a tiak natna a bula tawih ang hi a thlen bawk a ni. He nat hian 60-75% chhiatna a thlen thei a ni. A lanchhuah dan chi hnih a awm:

A tiah hmain: He hmuar natna hi a chi a zung leh a kung a lo chang tur chu a chawr chhuah hmain a ei chhe thei.

A tiah hnuah : A lei seh chinah lei depah a ei chhia a, a lo tawih a, a tawpah chuan a tiak chu a lo tlu a, a thi mai thin a ni.

He natna enkawl dan chu a chi tha natna la kai lo chauh thlan phawt tur a ni. Thiram @ 2g/kg-in a chi theh hmain pawlh tur a ni. A hmun ngai a chi kui tiak nawn kui tiah nawn loh tur a ni. Nursery lei chunglang chu thiram @ 5 g/m² area a lei huh vek tur a ni a, kar hnih danah tih nawn zel tur a ni. Tin, lei chu sarang 250-gauge polythene hmangin Ni 10 chhung a chi theh hmain khuh tur a ni *Trichoderma viride* in soil @ 1,250 g/ha pawh hi a tangkai hle a ni.

Purple Blotch:

Purple blotch *Alternaria porri* –in a thlen a. Boruak 28-30°C leh 80-90% boruak hnawn lamah a nihin he natna hi a awm duh bik a. Fur laia chin hian he natna hi a tam duh bik. A par kuang leh a hnahah chuan khuar te tak te te a bawkbawn rawngin a rawn awm a, hemi bakah hian bawkbawn rawng lian pui pui pawhin a rawn awm bawk a ni. A chin hun a zirin he natna hi a tamin a tamlo thei a. Thlasik lai chuan a thar tur 25% lai mai a tikiam thei a, fur lai chuan 50% laiin a kiam thei a ni.



Purple Blotch

A enkawl dan:

A chi tha chauh hman tur. Kum 2-3 danah purunsen nilo thlai dang chin kual tur. Mancozeb @ 0.25% or chlorothalonil @ 0.2% or rovril @ 0.25% phunsawn atang thla khat hnu atangin kar hnih danah kah thin tur a ni. Damdawi kahte a kai that theih nana kah tur damdawiah khan triton/sandovit pawlh tur a ni.

Stemphylium blight

A chi a hman torah hi 20 to 90% lai a awm thei a, a purunsen lakna tura chin chiah chuan 5 to 50% lai a awm thei a ni. A eng emaw serthlum rawng dal tak ang main a hnah lai tak chu a lo rang chho a. *Stemphylium vesicarium* – in a thlen a ni. Mancozeb @ 0.25% leh monocrotophos @ 0.18% triton nena pawlh a kahin a enkawl dam theih a ni.



Stemphylium blight

Colletotrichum blight

He natna hi *Colletotrichum gloeosporides*.- in a thlen a. rawng eng dal, tui chiah huh ang deuh a hnahah a rawn awm a, a sei tulh tulh a, a duk dum thluk pawng deuhvin a hnah laiah a kap thluk thin. He natna kai chu a hnah a lo sawng te a, a vuai hnup a. a tawp ah a ro vek thin. Mancozeb @ 0.25% or carbendazim @ 0.1% a kah hi a tha hle.



Colletotrichum blight

Onion Thrips

Thrips (*Thrips tabaci*) hi purunsen eichhetu rannung te tak te chimawm zet mai a ni a. A hnah a lo duk thliah thliah (spot) a, a tui hngang a hip ral thin avangin a var dal deuhvin a hnah chu a lo awm thet thet thin. . Thrips vang hian 50-60% vel lai a hlauh theih a ni. He natnain a beih tawh chu a thang muang a, a hnah a kawi herh thin. A tet deuh laia a khawih hman phei chuan purunsen a inseam lo tawp a, muang changing a thi a, seng hnu a dah that tawh pawh hi a eichhe thei ve tho a ni.



Onion Thrips

A enkawl dan:

Malathion (0.1%) or metasystox (0.1%) and cypermethrin (0.01%) or deltamethrin (20 ml/ha) triton or sandovit nena chawhpawlha kahin he rannung hi kah tur a ni. Leiah phorate or carbofuran granules @ 1 kg ai/ha theh pawh a tha.

Table: Cost of cultivation of Onion

Sl. No.	Agronomic Practices	Amount/Number	Rate/Unit (Rs.)	Total Cost (Rs.)
1.	Land Preparation	3 ploughings	1500/ha	4500
2.	FYM	15 tonnes	600/t	9000
	Amount of FYM	15 mandays	130/manday	1950
	Scattering of FYM & initial dose of fertilizer	Once	1500/ha	1500
	Mixing of FYM with Cultivator			
3.	Nursery Preparation	12 kg	2000/kg	24000
	Cost of seed	6 mandays	130/manday	780
	Nursery sowing & Management			
4.	Transplanting	50 mandays	130/manday	6500
5.	Irrigation			5000
6.	Hoeing, weeding, earthing up & topdressing	60 mandays	130/ mandays	7800

	(two weedings)			
7.	Cost of Fertilizers			
	Urea	174kg	Rs4.83/kg	840.00
	DAP	124kg	Rs 9.35/kg	1160.00
	MOP	100kg	Rs4.26/kg	426.00
8.	Plant Protection Measures	-	-	5000.00
9.	Cost of Harvesting & Marketing			
	Harvesting curing	30 mandays	130/ mandays	3900.00
	Cleaning, grading & packing	8 mandays	130/ mandays	1040.00
	Packing material	Baskets, crates, gunny bags etc. 300q.	- 25/q.	7500.00
10.	Transportation charges			5000.00
11.	Miscellaneous			5000.00
12.	Total			90896.00

13.	Interest on working capital @ 12% p.a. for 6 months			5454.00
	Total cost of Cultivation			96350.00
	Gross Returns (Rs./ha.)	250q	1000/q	250000
	Net Returns (Rs./ha.)			153650.00
	Benefit-Cost Ratio			1.60

