

## ALOE

Botanical name	-	Aloe Vera L.
Family	-	Liliacea

**Aloe Vera** hi North Africa atanga awm tan (native) a ni a, mahse khawvel pumah hmuh tur a awm. Damdawi leh incheina lamah a tangkai hle a. Damdawiah te, Shampoo, incheina (cosmetics) leh anti-dandruff cream leh thil dang tamtak ah an hmang a ni. Aloe thatna em em chu kang (burn) ah te, thisen tha lo (blood disorder), vun natna (skin disease), mit thlawr (eye drop), chau leh thi chhuak dan nan leh hliam/pem damdawi atan a tha hle a ni. Damdawi atan a hman a nih avangin mamawhna (demand) a sang hle a, chuvangin nasa leh uar taka chin chi a ni.

### **LOCAL NAMES –**

1) Bengali & Sanskrit	-	Ghrit kumari
2) Punjabi	-	Kumar gandai
3) English	-	Aloe
4) Gujarat	-	Kurvar
5) Hindi	-	Ghikanvar, Gwarpatha, Ghee Gwar, Karpath
6) Kannada	-	Lolesara, Kumari, Katthaligida, Lolisar
7) Kashmiri	-	Mussabar
8) Malayalam	-	Kattavala
9) Marathi	-	Elwa, Korpad, Kunvarpata, Korkand
10) Tamil	-	Sirukantali, Kattazhai, Sirukattashai, Chirukattali
11) Telegu	-	Kalwand, Manjikattali, Chinna kalabanda
12) Urdu	-	Ghigwara
13) Persian	-	Darkhtesibra

### **LEILUNG DUH ZAWNG :-**

Aloe Vera hi lei chi hrang hrang ah a chin theih. Balu lei leh lei tak inpawlh, tui hul zung zung theiah atha duh ber. Lei chhe deuh, tui pek theih lohna lah awih tlan si, lung hmun ang chi ah te hian thlai chin atan a tha bera ngaih a ni. Tui tlin rengna hmun chu a tha lova, Ph 6.5-8.5 (neutral to alkaline) ah a tha duh ber a ni. He thlai hi hmun/ram khaw ro leh leichhiaah pawh enkawl ngai vak lovin a chin theih a. A zung hi a pawn lang a, thuk takin zung a kaih lo a ni.

Aloe hi hmun lum leh tlema vawt deuhah pawh a chin theih a, mahse vur tla (frost) a ngam lovin, vur lakah ven a ngai a ni. India ramah chuan eng hunah pawh a chin theih a ni. A tlangpuiin hmun lum leh ro a tha a ni.

### **LEILUNG BUATSAIH :-**

A zung hian 20cm vel chauh a thukin a kaih avangin lei tak chhah/thuk tak a mamawh lem lo. Kumhlun chi a ni a, chuvangun hnim leh thing kum hlun chu paih tur. Phun lai hian lei chu tha tak a leh phut tur a ni a, nipui laia leh a tha. 50 x 50cm in kar hlatin lei chu a thlurin ti pawng ila a tha, a pawngah chuan 40cm inkar hlata phun tur a ni. Lei chhia lung hmunah chuan a phunna tur lei vela lungte tihfai deuhvin, a awihtlan dan mila phun mai tur a ni.

### **PHUN HUN :-**

Phun hunt tha ber chu fur lai a ni, chu chu June-Aug vel a ni. Mahse a naranin kum tluanin a phun theih a ni. A zung peng (root sucker) phun thin a ni a. A chi atanga tih pun chu a vang hle a, a chi vak loh. Phun tur chu a zung peng hrisel atangin pawh then tur a ni. 50 x 40cm inkar hlata phunin, Hactare khatah a chi hi 60000-65000 vel a ngai. A thlurin, lei tihpawh (bund) a phun hi a tha in a hlawk ber a ni.

### **TUI PEK :-**

Tui tlakchham a ngai theiin, khawkheng a tuar thei hle. Mahse phun hlim/zawhah chuan tui vawi khat tal pek a tha a ni. Hmun hnawng leh tui tling reng a tha lo a ni.

### **HLO THLAWH :-**

Aloe hi a thang muang hle a , chuvangin a kum khatnaah chuan hnimin a dip duh hle, a bik takin hnim kum hlun (hnim thei) cynodon dactylon leh cyperus rotundus ang te hian an dip duh a ni. A tir lamah chuan vawi 3-4 thlawh a ngai a, kum 2na lamah chuan vawi 2/1 bak a ngailo. Hnim thah nan hian hnim hlo atrazine (herbicide) @ 0.5kg a.i/ha in a to hma (pre-emergence) in kah tur a ni. Hnim tihfai rual hian a thlai (Aloe) bull eh a pawng (bund) hrim hrim pawh rihvur ila a tha bik a ni.

### **A SENG :**

Phun hun a zirin, 10-15 months velah a hnah chu chemte hriam taka zai chhumin an seng thin. Thlai kum hlun a nih avangin kum tin seng theih a ni a, enkawl dan a zir te in kum 4-5 vel thlenga seng theih a ni. A hnah seng zawhah Dithane Z-78 emaw, Ridomil-M2 in kah tur.

#### **A THAR ZAT :**

Chin dan a zirte, khaw awm dan leh boruak azirin leh enkawl dan azirin a hnah thar lam seng theih hi 75-85 ton/ha emaw, a hnah malin 15000-20000 vel, ki\um khata upa-ah kum khatnaah a seng theih. Kum 3 hnuah a tlahniam ve leh hret hret a ni.

#### **ECONOMICS OF CULTIVATION :**

A. Total cost of cultivation	-	Rs. 35,000.00
B. Gross return	-	Rs. 46,000.00
C. First year net income	-	Rs. 21,000.00

Kum hnih atang chuan a letin a pung chho vin, kum 3-4 velah chuan enkawl dan a zirin ala hlawk zel dawn a ni.

Indian Firm pakhat Khoday Group of Industries chuan Amarnath Firm, Advait Biotech nen tangrualin Aloe vera based Beer an siam a. Vitamin tam tak awmna Aloe vera chuan Zu (alcohol) in pumpui/kawchhung a khawih chhiat tur a veng a ni a an ti. Tin, taksaak vitamin chi hrang hrang B<sub>1</sub>B<sub>6</sub>B<sub>12</sub>,C leh E te awlsam taka hman tur a ti pung bawk an ti a ni. Anni hian Canada ah an thawn chhuak (export) tawh a.USA leh Malaysia-ah te pawh hma lak zel an tum a ni.

#### **MINT**

Mint hi chhinna a rei tawh hle. A chi lar deuh deuh te chu – Japanese mint, pepper mint, Bergamo mint leh Spear mint te a ni. Uttar Pradesh, Punjab leh Haryanaah an ching nasa ber. Mint atanga hriak (oil) an lak chu khawvel pumah an hmang nasa telh telh a, a hriak (oil) hi toothpaste, pan masala, hair oil, chewing gum, pain bulm, face cream, shaving lotion, perfume, khuh damdawi (cough syrup) etc. ah an hmang a ni.

A chi hrang hrang leh chemical content te chu :-

**Important species  
of oil**

**Scientific name**

**Major chemical constituent**

1. Menthol mint	Mentha arvensis	Menthol
2. Spear mint	Mentha spicata	Carbone
3. Bergamot mint	Mentha citrate	Linalool & Linalool acetate
4. pepper mint	Mentha Piperurita	Menthol & Pipritone

### **LEILUNG DUH ZAWNG :**

Lei tha tak, Ph 6.0-7.5 ah a tha duh. Tui pai thei si, mahse tui luan kawr tha tak awm si ah a tha ber a ni. Sub-Tropical climate Menthol mint hian a ngeih a. Mermagot mint leh Spear mint te pawh hi Sub-Tropical ah an tha thei tho va, pepper mint erawh chu moderate climate ah a that hung a ni. Pepper mint pawh hi phaiah chuan thlasikah a chin theih tho va, temperate region, 1000-1200m MSL a sangah chuan kum hlun angin a chin theih a ni.

### **LEILUNG BUATSAIH :-**

Seed bed uluk taka buatsaih a ngai a ni. Hnim hnawk leh thing zungte paih fai vek tur a ni. A theih chuan kan china tur hmun kha nipui lain let vek ila hnim a tlem duh a ni.

### **PHUN SAWN :**

Mint hi a zung emaw, a peng emaw an phun mai thin. August thlaah 30 x 15 cm in kar hltin a zung atanga chin phun tur ho chu phun tur a ni. December/January thla velah seng/phun tur anei ang. Phun hma hian a chi (zung) chu 0.2% fungicide solution (caption)ah minute hnih vel chiah nise. 45-70cm inkar hlatin, khwar 2-5cm vela thuk siam ze zeiah chuan phun tur a ni. Chu chu leithain chhilh tur a ni. A theih chuan FYM nise, Menthol mint atan hian a chi phun tur hi hectare khat atan 350-500kg vel direct a phun dawn chuan a ngai a. Mahse phun sawn (transplanted) tur chuan 100-125kg vel a ngai a ni. Chi dang atan chuan 300-450kg/ha vel a ngai. A chi tur tam lam leh rih zawng hi a zung len leh chhah dan a zir te, a hnah a tel tam dan azirte a ni ang. Fu te, Purun sent e nen chin pawlh a pawl lem lo. Fu kha a chawr hnuah mint kha chin ve chauh tur ani.

### **LEITHA MAMAWH ZAT :-**

FYM 10 ton/ha chin dawn a leh pawlh nise. NPK hi 120-150kg N, 50-60kg leh 40-60kg nise. P leh K hi chu a vaiin vawikhatah pekin, N hi chu 30-40kg N/ha nise, a la bang zawng chu hmun thumah inzatin vawi 3 pekah hman nise. Vawi khatna chu thla khat hnu vel thlawh fai hmasak ber rualin ni sela, vawi 2na chu kar 9-10 hnu velah, a vawi thumna chu seng (harvest) hmasak ber hnuah nise.

## **TUIPEK :**

Tui pek tam a ngai hle. Lei thawleng deuh ah phei chuan pek zin a ngai lehzual. Mahse tui tling reng erawh a tha lo. A tlangpuin vawi 12-15 vel tui pek a ngai.

## **A SENG HUN :**

A seng hun chuan a hnah no/chung lam ho te chu a lo te a, a hnah hnuai lam chu a lo eng a, a par tan a. Ruah sur zawh ve leh emaw, tui pek zawh ve leh emaw a seng loh tur. Ni sat laia seng tur a ni. December-January thla a phun kha May thla velah a seng a hun ang a, seng tlai chuan a thar hlawk lo thei a ni. Vawu hnih sengna (2<sup>nd</sup> harvest) chu August thla velah a lo hun leh ang. Menthol mint-ah hian that chuan hectare khatah a hnah hring (fresh herb) 40 tonnes vel a thar thei a, chi dangah chuan 20-30 tonnes/ha a thar. A hriak (oil) thar chhuah tam dan chu thlitfim danah leh a that dan a zir te a ni ang. Hectare khatah hian direct planting ah chuan a hriak 200-225 kg a thar thei a, transplanted ah chuan 150kg/ha a hriak a thar thei a ni.

## **ECONOMICS OF CULTIVATION :**

### **Gross and net return**

Sl. No.	Crop	Oil yield (kg/ha)	Oil price (Rs/lit.)	Cost of cultivation (Rs/ha.)	Gross return (Rs/ha.)	Net return (Rs/ha.)
1	Direct planted menthol mint	250	275	37700.00	68750.00	31050.00
2	Pepper mint	200	600	-do-	120000.00	82300.00
3	Spear mint	200	500	-do-	100000.00	62300.00
4	Bergamot mint	225	300	-do-	67500.00	29800.00
5	Transplanted menthol mint	150	275	19700.00	41250.00	41250.00

## **THLAI DANG NEN A CHIN PAWLH :**

Mint hi Fu te, Purun sen (Onion) te nena chin pawlh a pawl lo. Fu nen chin pawlh hi a man hla hle a ngaih a ni, hl thlawh tur a tlem phah a ni.

October a phun Fu nena chin pawlh chuan Bergamot mint, pepper mint leh spear mint a tha. Fu thlur hnihin, mint thlur hnihin, 45cm in kar hlatin Fu kha phun nise. Thal (Spring) laia Fu chinah chuan Bergamot, spear mint leh menthol mint chin pawlh nise.

Hetianga chin pawlh a nih chuan lei tha NPK hi 300kg N, 100kg, P leh 100kg K a ngai a ni. Fu thar kha 18-38% velin ahniam phah a, mahse a pahniha a help belhkhawm chu a sang tho a ni.