Grow a Garden

sowing, growing and harvesting tips third edition



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Print Mudra, Pune

vanastree.org | 2018

first edition 2014 second edition 2017

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Dear Gardeners,

We are happy to bring you our third edition of a revised compact visual guide to planting and growing a food garden at home. This booklet has been in response to the numerous queries we have received from amateur and experienced gardeners over the years. We have consulted with Malnad master gardeners to gather the information and traditional knowledge for this compilation. You can find here information on

- . when and how to plant your organic, open pollinated seeds and tubers
- . transplanting details
- . harvesting
- . FAQs
- . planting calendar

This booklet covers 38 vegetable, tuber and flower species complete with botanical illustrations. The section on tubers encourages food gardeners to experiment with and grow these resilient but forgotten food crops.

Grow a garden, cultivate a future!

The Vanastree Collective Sirsi, Karnakata India

Send us your feedback to vanastree@gmail.com

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What is hybridization?

Hybridization is the cross pollination of plants, resulting in new varieties.

Natural Hybridization is one of the origins of diversification within species. This stabilizes over several generations giving rise to stable, open pollinated varieties.

Modern Hybridization is the purposeful crossing of plant varieties with desirable qualities evidently in order to "improve" them. It is done by selection of certain traits over several generations. It has become a ploy used by seed companies to ensure proprietary and breeding rights over the varieties developed by them, thus monopolising the market. The process renders future generations of those seeds almost sterile or unusable, since undesirable variations show up. Modern hybrid seeds cannot be saved and re-sown. Farmers and gardeners have to buy fresh seeds from the seed companies year after year, thereby incurring high costs.



What are open-pollinated seeds?

Open-pollinated seeds are traditionally bred seeds, which have been developed by farmers in an open, natural environment. They have been preserved for millennia, and can be saved, sown and reproduced by anyone, thus allowing farmers and gardeners independence from seed companies.

What are organic seeds?

Organic seeds are seeds grown in healthy, living soils built up entirely with natural inputs like compost and mulch. They are produced with absolutely no use of synthetic fertilizers and pesticides and are not genetically modified.

What are climbers and shrubs?

Climbers are plants that are vines and need support. Shrubs are plants that grow erect and do not need support.

What does it mean when a plant is 'self seeding'?

Self seeding is when a plant disperses it's seeds such that offspring come up in the vicinity of the mother plant. So the seeds need not necessarily be replanted by the gardener. Cosmos is an example of a self seeding plant.

What is transplanting?

Transplantation is a process where a plant is uprooted from one place and planted in another. Small seeds like those of amaranth, brinjal, chilli, capsicum, and tomato are first sown in seed beds/trays and transplanted later. Larger seeds like those of beans, lady's finger, pumpkin, cucumber and gourds can be directly planted. It is important to transplant carefully so the roots are not damaged. This is usually done when 2-4 true leaves appear on the seedling.

What is mulching?

Mulch is a layer of material spread over soil as protection. It helps prevent loss of moisture, prevents weeds from coming up and adds to soil fertility. Mulch could include grass cuttings, hay, coconut/areca husk, leaves, vegetable/fruit peels and other organic material.

How much water do plants need?

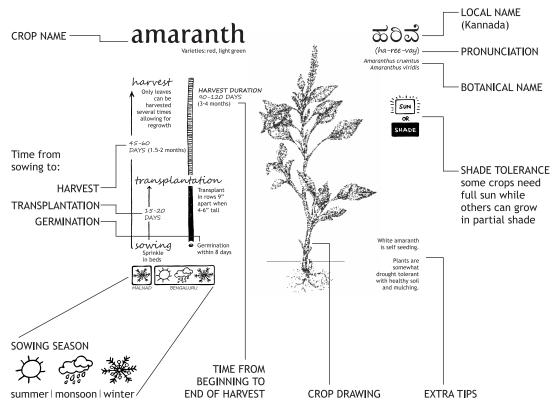
Seeds once planted, and seedlings should be watered gently with a watering can. Regular watering is a good rule of thumb so the plant does not droop. Mulching ensures that water is not lost by evaporation. Each plant has its own specific requirement. More watering is required in summer.

How must seeds be stored?

All seeds should be stored in a cool, dry, dark place, preferably in an air-tight container.



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Vegetables

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amaranth ಹರಿವೆ (ha-ree-vay) Varieties: red, light green Amaranthus cruentus Amaranthus viridis harvest HARVEST DURATION Only leaves 90-120 DAYS can be (3-4 months) harvested several times allowing for regrowth SHADE 45-60 DAYS (1.5-2 months) transplantation Transplant in rows 9" apart when 4-6" tall 15-20 DAYS White amaranth Germination is self seeding. Sprinkle within 8 days in beds Plants are somewhat drought tolerant with healthy soil and mulching. BENGALURU

30 day bean

ತಿಂಗಳವರೆ

(thing-ala-ava-ray)

popular variety.

Phaseolus vulgaris HARVEST DURATION 30 days 40 DAYS sowing Germination within 4-5 days In rows 1/2" deep, 12" apart. Stakes needed Quick growing,

MALNAD & BENGALURU

yard long bean angikase

ಅಂಗೀಕಸೆ

(ang-ee-ka-say)

Phaseolus vulgaris

Old variety.

heavy rain.

harvest

Upto 100 pods per plant

60 DAYS (2 months)

In rows 3/4" deep, 8" apart. Stakes needed



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HARVEST DURATION

180 days (6 months)

Germination within 7 days



lima bean

ಕಿಡ್ಡಿ ಅವರೆ

(kid-nee ava-ray)

Phaseolus lunatus

SUN

harvest

Upto 100 pods per plant

150 DAYS (5 months) 9

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Direct sowing.

Grow onto a

trellis or tree

Germination within 7 days

HARVEST DURATION

210 days

(7 months)

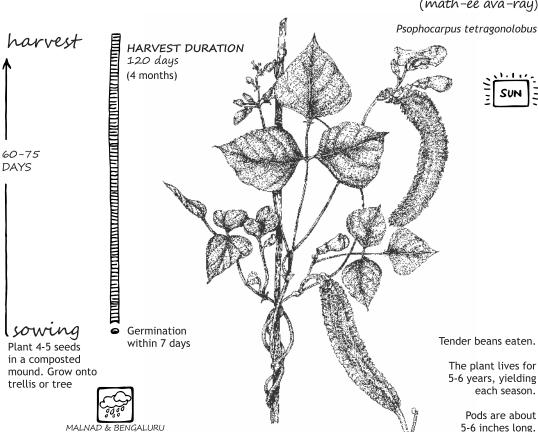
The plant is dormant during the monsoon and needs pruning. It will grow again and yield every winter for 3-4 years.

The seeds (not pods) are eaten fresh or dried.

winged bean

ಮತ್ತಿ ಅವರೆ

(math-ee ava-ray)



hyacinth bean

HARVEST DURATION

ಬಟ್ಟವರೆ

(bhat ava-ray)

Dolichos lablab

harvest

Upto 100 pods per plant

150 DAYS (5 months) O INTEGRALISMENTAL STATEMENT OF THE OWNER OF THE OWNER OF THE OWNER OF THE OWNER OWN 210 days (7 months)

sowing Direct sowing. Grow onto a trellis or tree



Germination within 7 days

The plant is dormant during the monsoon and needs pruning. It will grow again and yield every winter for 3-4 years.

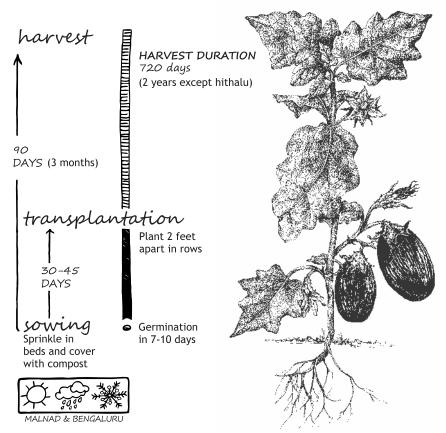
The seeds and pods can be eaten tender.

> Seeds are also dried and eaten.

brinjal Varieties: bili, bonda (metre), cholu, daas, hithalu, musuku, vadhiraja gulla

22式 (ba-dha-nay)

Solanum melangena



SUN

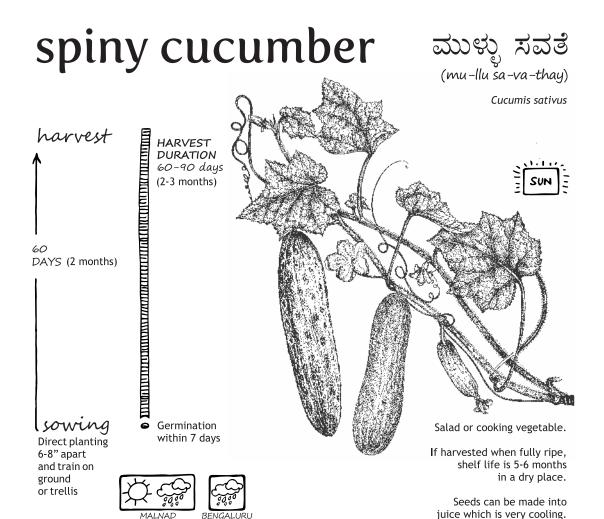
Brinjal is somewhat drought tolerant.

Each plant is known to yield upto 50 kg of brinjal over a period of 2-3 years, if cared for well.

maggay cucumber ಮಗೆ ಕಾಯಿ (ma-gay-kaa-yi) Cucumis sativus HARVEST DURATION 45 days (1.5 months) transplantation

12" apart rectz:
rr All parts of the vegetable can be eaten including seeds and skin. 12" apart in rectangular Long shelf life of upto 10 months are at least if stored in a dry, cool place. Germination Sow in beds in 7 days

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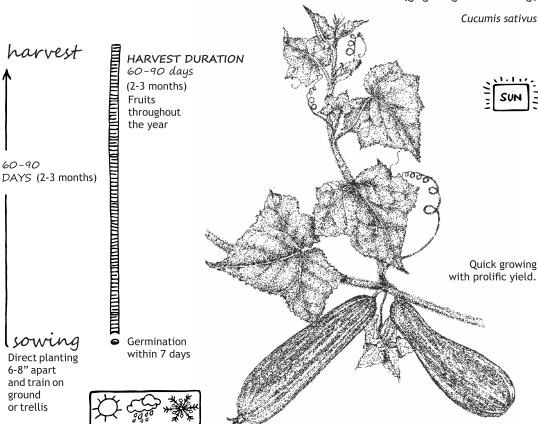


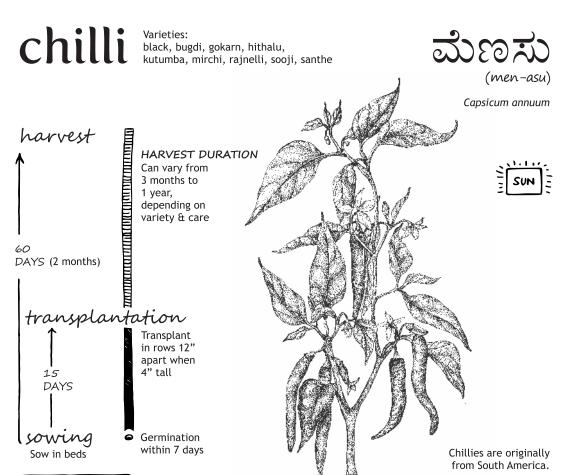
yeray cucumber

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ಎರೆ ಸವತೆ

(yay-ray sa-va-thay)







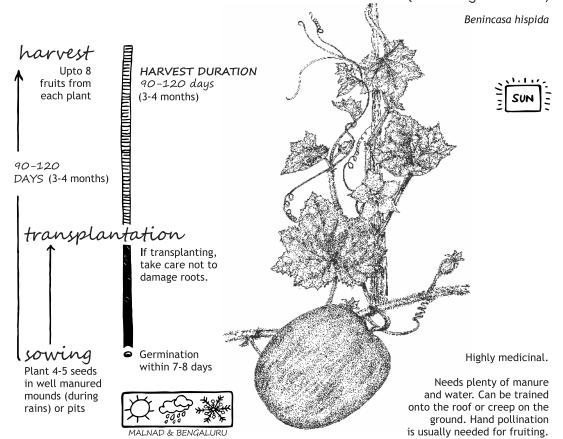
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The Malnad has numerous local varieties from sweet to pungent.

ash gourd

ಬೂದು ಗುಂಬಳ

(boo-dhu goom-ba-la)



bitter gourd Varieties:

ಹಾಗಲ ಕಾಯಿ

(ha-ga-la kaa-yee)

Momordica charantia

bili, gubbi, hasiru HARVEST DURATION 365 days (1 year)

60 DAYS (2 months)

within

Germination 8-15 days

Cattle don't forage on bitter gourd. Can be grown on trellis, stake or fence.

Plant fresh seeds as they are viable for 3-6 months at the most.



Plant in rows

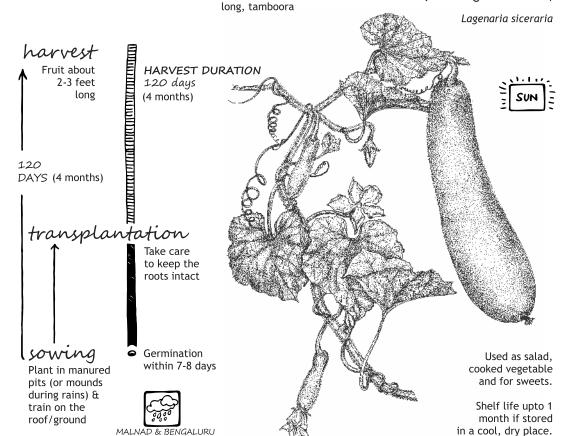
6-8" apart

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bottle gourd

ಹಾಲು ಗುಂಬಳ

(haa-lu goom-ba-la)



pumpkin

ಉರುಟು ಗೋವೆ

Varieties: long, round

(3-4 months)

(urutu go-vay) Cucurbita maxima

Upto 8 fruits from each plant

AYS (3-4 months)

transplantation

If transplake

take care not

Germination within 7-8 days Plant 4-5 seeds

in well manured mounds (during rains) or pits

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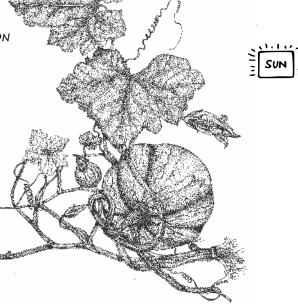
HARVEST DURATION 90-120 days

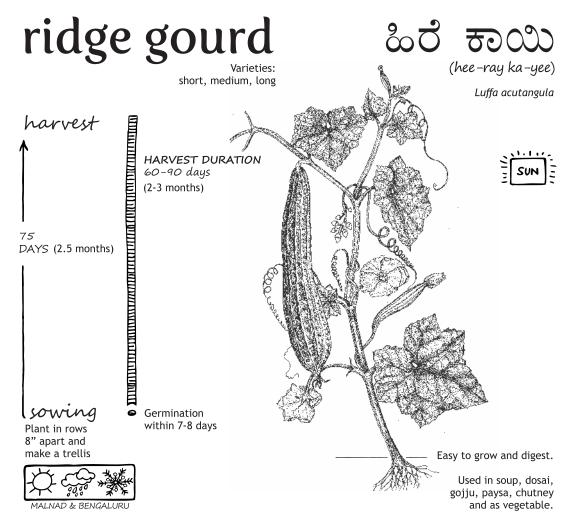
If transplanting,

Numerous varieties of different sizes and colours.

Plant needs plenty of manure and water. Can be trained onto the roof or creep on the ground. Hand pollination needed most times for fruiting. Flowers and tendrils (kudi) eaten as a vegetable in gojju, hashi and palya.

Shelf life 3-4 months.





sponge gourd

ತುಪ್ಪದ ಹೀರೆ

(thu-ppa-dha hee-ray)

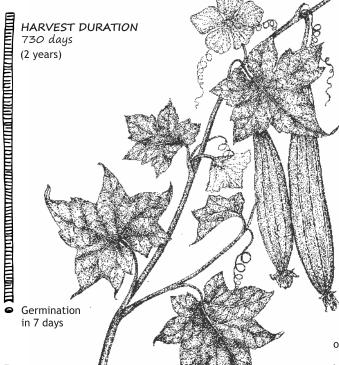
harvest

60 DAYS (2 months)

2-3 seeds in a pit at the base of a tree or support



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Luffa cylindrica syn. aegyptiaca

SUN

Prolific yield, and no known pests.

When tender, can be used as a vegetable.

When mature and dry, the outer skin and seeds are removed, and the remaining fibrous lattice can be used as a natural scrubber (loofah).

lady's finger ಬೆಂಡೆ ಕಾಯಿ (ben-day ka-yi) gubbi, kempu, elu elay, ethinakodu Abelmoschus esculentus HARVEST DURATION 90 days (3 months) 60 DAYS (2 months) Germination within 10-12 days 18" apart Hardy plant. in rows Cook with tamarind or buttermilk to reduce mucilage. Harvest regularly to keep up yield.

purslane

ಗೋಳಿ ಸೊಪು

(go-lee sop-poo)

Portulaca oleracea

OR SHADE

HARVEST DURATION 180 days

(6 months)

60 DAYS (2 months)

transplantation

15-20 DAYS

sowing Sprinkle in beds and lightly cover with compost

Plant 6" apart when seedlings have 4 leaves and are able to stand upright

Germination within 8-10 days Pour cowdung slurry once in 15-20 days.

> Keep earthing up plant base.

Pinching tips regularly helps the plant grow and spread out.

Plant rots in rain.





malabar spinach

ಬಸಳೆ

(ba-sa-lay)

Basella alba Basella rubra

SHADE

HARVEST DURATION 300 days (10 months)

transplantation
Plant 16"
in re
75-20
YS

sowing Sprinkle in beds and lightly cover

with compost

Plant 16" apart in rows when 6 leaves appear. Provide trellis/

Germination within 7 days Plant rich in iron.

Pinching tips regularly helps plant to grow vigorously.

Grows well at wash water outlets (chemical free).

Grows from cuttings also.



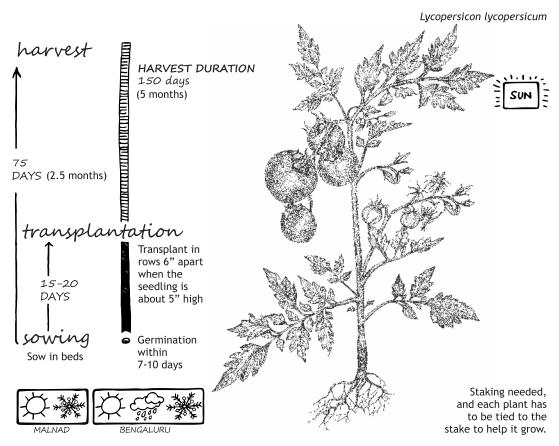
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Varieties: hasiru, kempu

tomato

ಟೊಮೆಟೊ

(toe-may-toe)



Tubers

Arrowroot
Colocasia
Elephant Foot Yam
Ginger
Mango Ginger
Sweet Potato
Tapioca/Cassava
Turmeric
Yam (Dioscorea alata) 4
Yam (Dioscorea bulbifera)

The generic term "tuber" has been used to cover tubers, rhizomes and corms.

All tubers may be planted in the ground or appropriately sized pots or sacks. They store well in the earth.

In open ground, tubers may be grown in spaces using well rings one on top of another to curtail bandicoots.

Unless specified, tubers are harvested on a one time basis.

arrowroot

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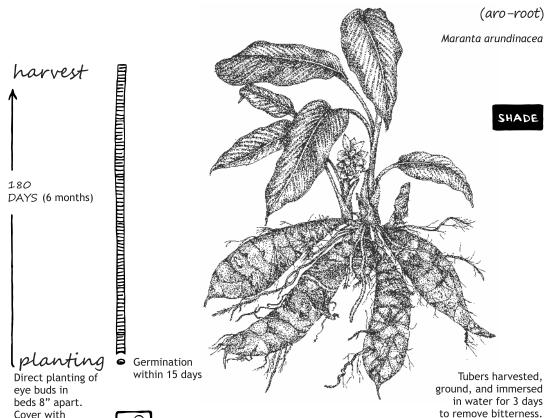
compost

ಆರೋರೂಟ್

Dried and used as baby

Long shelf life.

food or for convalescents.



33

colocasia

(kay-su)

Colocasia esculenta

180 DAYS onwards

harvest

80
PAYS onwards

Planting

Direct planting of

Direct planting of small corms to the side of the main one in beds 8" apart or in 1 foot deep trenches for bigger varieties, covered as the plant grows, with loose soil, compost and ash. Basal topping up and mulching important

Germination within 15 days



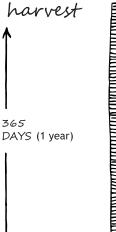
Colocasia (Taro) has many varieties from small round tubers to 5 foot long ones. Planting method depends on variety. Certain varieties like cheep kesu, mottav kesu & kari kesu need to be boiled in tamarind water to prevent itching in mouth. Shelf life is upto a year or more in a cool, dry, dark place. Leaves of some used to make patrode.

elephant foot yam

ಸುವರ್ಣ ಗಡ್ಡೆ

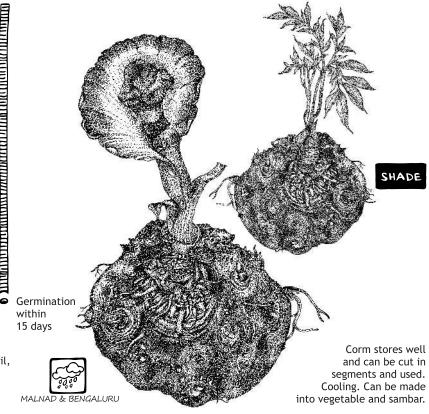
(su-var-na gad-day)

Amorphophallus spp.



planting

Direct planting of corm eye buds in 1-2 foot deep basins covered with loose soil, compost and ash. Basal topping up and mulching important



ginger

ಶುಂಠಿ

(shoon-tee)

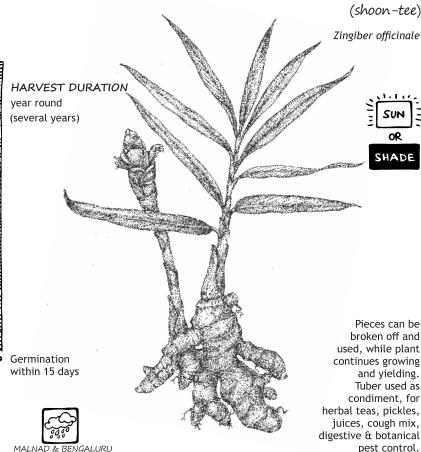
180 DAYS (6 months)

harvest

80
DAYS (6 months)

Planting
Direct planting of

Direct planting of rhizome eye buds in beds 6 inches apart covered with loose soil, compost and ash. Basal topping up and mulching important



mango ginger

ಮಾವಿನ ಶುಂಠಿ

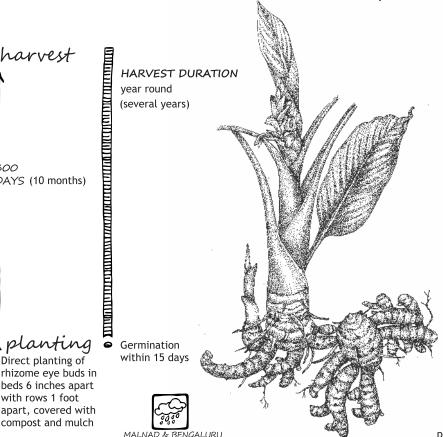
(maa-vee-na shoon-tee)

Curcuma amada

SHADE

300 DAYS (10 months)

Direct planting of rhizome eye buds in beds 6 inches apart with rows 1 foot apart, covered with compost and mulch



Tuber belongs to the ginger family. Exudes aroma of unripe mango and used to make fresh chutney, pickle and tambuli.

sweet potato

ಸಿಹಿ ಗೆಣಸು

(see-hee ge-na-su)

Ipomoea batatas

harvest

180 DAYS (6 months)

planting

Direct planting of stem cuttings in beds 1 foot apart with rows also 1 foot apart. Earth up for better production Takes root within 15 days







Root eaten steamed with salt and lemon, or as vegetable, in sambar and even made into holigay. Young leaves good as greens.

tapioca

ಬರಗಾಲ ಗೆಣಸು ಮರ ಗೆಣಸು

(ba-ra-ga-la ge-na-su)

(ma-ra ge-na-su)

SUN

SHADE

Tapioca is also

upto a week post harvest.



• International constant and a second of the contract of the c

240 DAYS (8 months)

> Takes root within 15 days



Direct planting of cuttings in rows with mulching



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turmeric

ಆರಿಷಿಣ

(ah-ree-she-naa)

SHADE

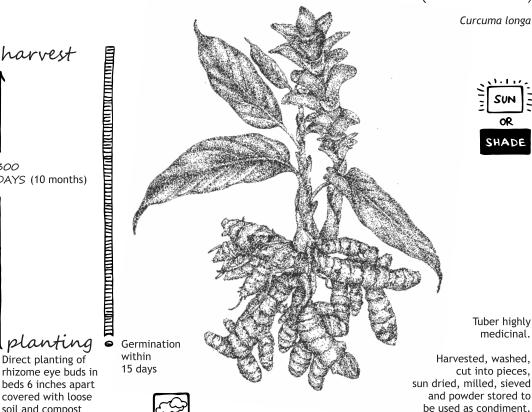
Tuber highly medicinal.

Fresh tuber used in cooking, pickles, tambuli, & gojju.

300 DAYS (10 months)

Direct planting of rhizome eye buds in

beds 6 inches apart covered with loose soil and compost



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yam

ನೆಗಿಲು ಗೆಣಸು

(nay-gilu gay-na-soo)

Dioscorea alata

180 DAYS (6 months)

harvest

80

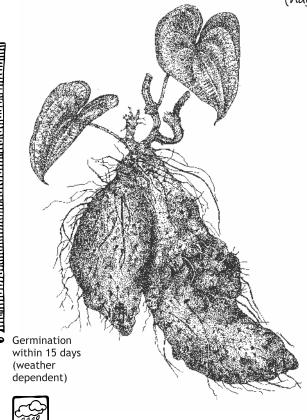
AYS (6 months)

Planting

Direct planting of Direct planting of eye buds in pits,

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next to trees or trellis. Cover with compost/ rich manure



Several Dioscorea species exist including wild ones. Shelf life of harvested tuber up to 6 months. Yields aerial, edible tubers which can also be planted. Mother tuber eaten, roasted boiled or steamed.

yam

ಹಡಿಗೆ ಗೆಣಸು

(hey-dee-gay gay-na-soo)

Dioscorea bulbifera

harvest

A0-365
AYS
3 months to 1 year)

Planting
Direct planting of 240-365 DAYS (8 months to 1 year)

Direct planting of eye buds in pits, next to trees or trellis. Cover with compost/ rich manure

Germination within 15 days (weather dependent)



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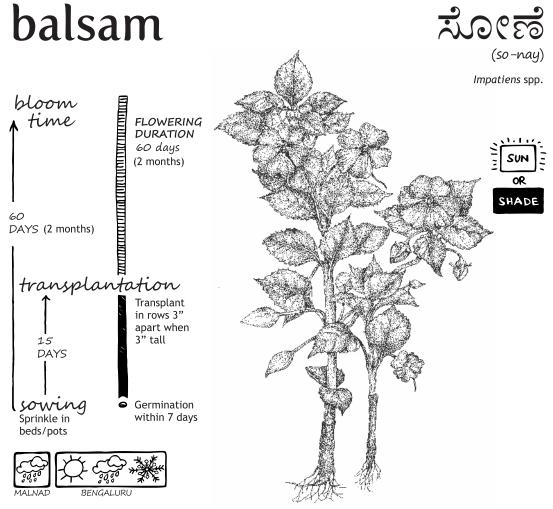
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Several Dioscorea species exist including wild ones. Shelf life of harvested tuber up to 6 months. Yields aerial, edible tubers which can also be planted. Mother tuber eaten, roasted boiled or steamed.

Flowers

Balsam	44
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Zinnia	50



butterfly pea

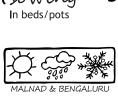
ಶಂಖ ಮಷ

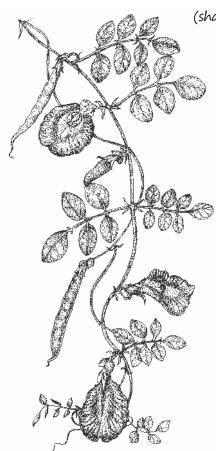
90 DAYS (3 months)

FLOWERING DURATION perennial that will flower for many years

Germination

within 8-10 days





(shan-kha push-pa)

Clitoria terneata

SHADE

Flower medicinal, used to make juice and in religious rituals.

canna

ಕಾಬಾಳೆ

(kaa-ba-lay)

Canna spp.

90 DAYS (3 months)

In beds/pots

FLOWERING
year round p
year round p

Germination FLOWERING DURATION

year round perennial

SUN SHADE

within 10 days

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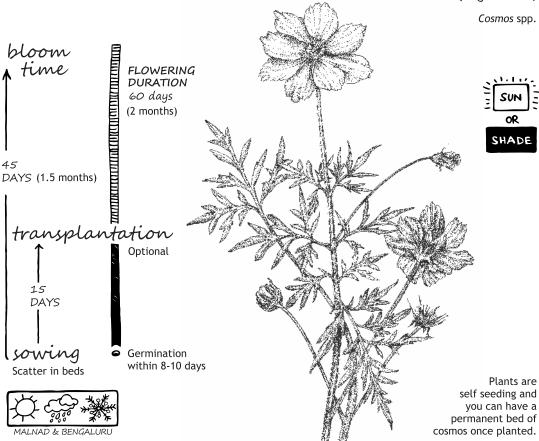
Thrives in water logged areas.

> Suckers also used for planting.

cosmos

ಕೇತಕಿ

(kay-tha-ki)



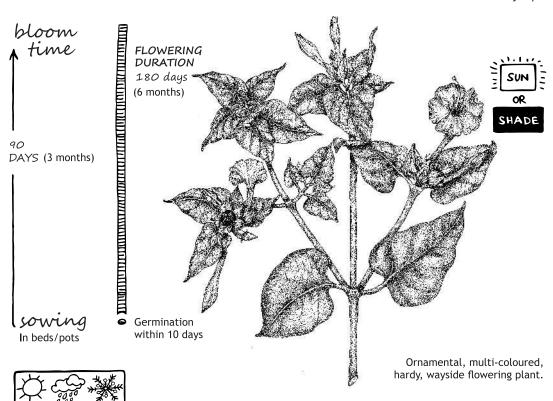
four O'clock flower

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ಸಂಜೆ ಮಲ್ಲಿಗೆ

(san-je ma-lli-gay)

Mirabilis jalapa



marigold ಚೆಂಡು ಹುವು ಗೊಂಡೆ ಹೂವು (chen-doo hoo-vu) (gon-day hoo-vu)

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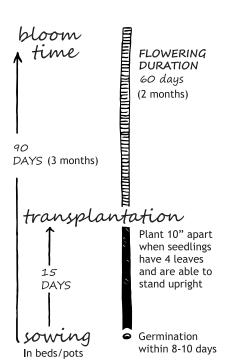
Tagetes spp. **FLOWERING** DURATION 60 days SUN (2 months) DAYS (2 months)

transplantation SHADE DAYS (2 months) Optional 6" apart 15 DAYS Hardy plant - ideal for Germination borders and hedges. Sprinkle in within 7 days beds/pots Flowers and leaves have insecticidal properties. Used as companion plants in food gardens.

zinnia

ಜಿನಿಯಾ

(jin-niya)





Planting Calendar

Vegetables	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Amaranth (green)												
Amaranth (red)												
Ash Gourd												
Bean, Sword												
Bean, Winged												
Bean, Hyacinth												
Bean, Yard Long (angikase)												
Bean, 30 Day												
Bitter Gourd												
Bitter Gourd (gubbi)												
Bottle Gourd												
Brinjal (other varieties)												
Brinjal (hithalu)												
Chilli												
Cucumber, Spiny												
Cucumber, Yeray												

Planting Calendar

Vegetables	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Cucumber, Maggay												
Lady's Finger												
Malabar Spinach												
Purslane												
Pumpkin												
Ridge Gourd												
Snake Gourd												
Spinach												
Sponge Gourd												
Tomato												
Tubers												
Arrowroot												
Colocasia (Taro)												
Elephant Foot Yam												
Ginger												
Mango Ginger												

Planting Calendar

Tubers	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Sweet Potato												
Tapioca (Cassava)												
Turmeric												
Yam (Dioscorea)												
Flowers												
Balsam												
Butterfly Pea												
Canna												
Cosmos												
Four O'clock Flower												
Marigold												
Zinnia												

This is a seasonal planting chart for the Malnad where the monsoon rains are heavy (250-800 cm per annum). Bengaluru and other drier areas would have a longer planting (sowing) season.

	= planting period
--	-------------------