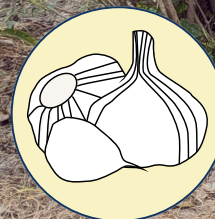


HOW TO

increase income through the
chilli-garlic intercropping



Resource person:

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need does the playbook address?

- A majority of Indian farmers have small landholdings, which makes agriculture a particularly perilous occupation. Chilli cultivation is particularly susceptible to virus attacks and can lead to major annual losses for farmers
- While chilli can be intercropped with other crops like onion, green peas etc, garlic was chosen for this playbook considering maximising the income of farmer.
- Incomes from these small parcels of land are low, forcing families to migrate elsewhere for work.
- By maximising the combination of crops that can be grown in small fields, incomes for small and marginal farmers can increase.
- Through trial and error, TCL has found that cultivation of chilli and garlic produces the best results for farmers with small landholdings. The two crops complement each other in terms of resource usage.

This playbook is designed using the expertise of Trust Community Livelihood (TCL), which works on augmenting incomes among socio-economically disadvantaged communities & landless/marginal farmers in the Gangetic plains of Northern India.

This solution can be adopted if:



Your average landholding size is 0.2 acre or lesser



You have access to groundwater or irrigation channels in the cultivation season



You have sandy loam or loam soil

Who can use this Playbook: Trainer, practitioner, Community Resource Persons

are the benefits to farmers through chilli-garlic inter-crop?

01

bhiga or lesser



Income increases even on small landholdings, as additional earnings come **from the second crop**. Ideal for farms as small as **1 bigha or less**.

Even if one crop fails, income from the other can sustain the farmer



Mitigate



Growing two crops **mitigates** the **risk of pest, disease attacks, or climate and market** fluctuations in one crop.

This is particularly true for chilli, which is susceptible to pests and diseases.



Better utilisation

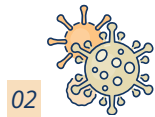


There is **better utilisation** of **soil nutrients, labour and time**.

It also leads to better income

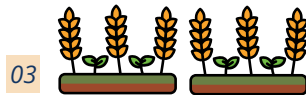


Both chilli & garlic are high-value crops



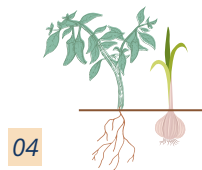
02

Chilli is susceptible to virus attacks, while Garlic is relatively-good at repelling pests. The cultivation of the Garlic can aid the cultivation of chilli.



03

Chilli can be harvested in batches: ensuring steady income and to maximise for high rates



04

Root zones are different for both crops: Garlic has a shallow root zone and Chilli has a deep root zone



05

Canopy competition is offset: by the time garlic matures, it is time to sow chilli.



06

Water requirements match between both plants



07

Different nutrient requirement: both plants do not compete for nutrients from the soil



08

They do not have diseases in common with each other as these crops are from different families

01/Setting up the farmland



Ideal in area of 1 bhiga or 20 biswa(800 sqm)



This is because both crops are **labour intensive**

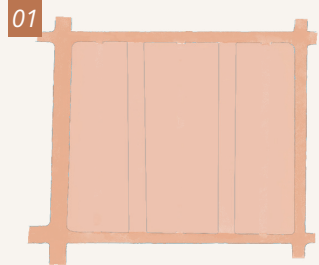


Soil type : **Sandy loam/loam**. Clay is not preferred as tubercrops can't be grown.

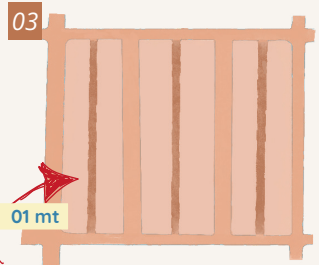
Easier to convince garlic farmers to take up chilli inter-cropping because they are used to creating the ridges needed.



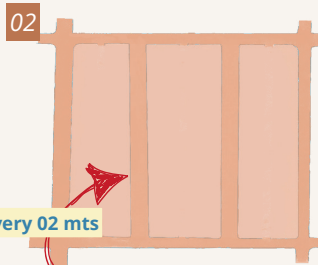
02/Creating the farm beds



All **four sides** of the farmland has a **mud embankment** (called Maed)

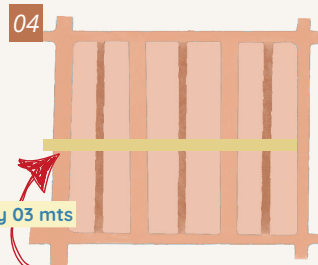


At a distance of **1m**, **ridges** are made



Every **02 mts**

Every **two meters**, **furrows** are made **between the embankment** allowing for seepage of water into the beds.



Every **03 mts**

Horizontally, a small **embankment** is made at a distance of **3m** creating **beds of 1m by 3m**.

If land is levelled, bed size is bigger. If land is unlevelled or soil has clay content, then smaller beds is made)



03/Irrigation technique

An opening is created for each of the 1*3m beds to let water enter from the embankment then to the furrow then to the beds

01 When water (from the furrows) fills **80%** of the bed, it is closed and an opening is made in the next bed

02 Standing Water for 1 hour upto **2/3rd** of the ridge height

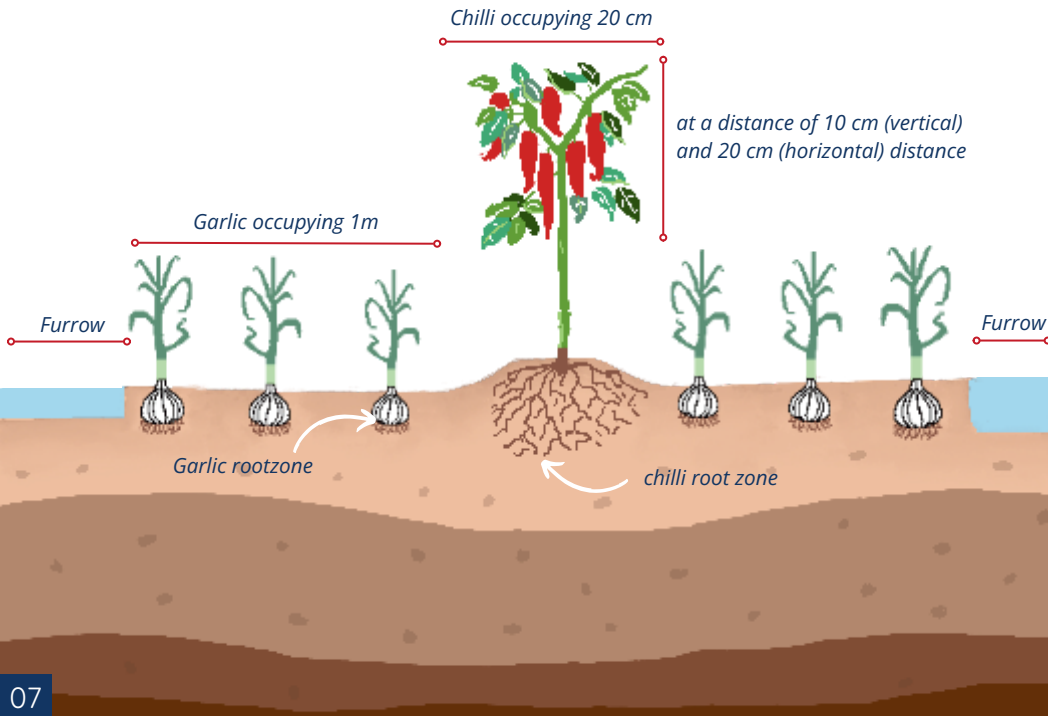
80%





04/Sowing technique

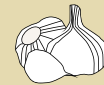
Rows of chilli is planted on the ridges in-between rows of garlic. The growth of garlic will not be impeded by the canopy of chilli.



05/Cultivating the farmland



Plantation

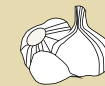


Garlic is planted in the:
End of October



Chilli is planted one month later
November-end

Harvesting



Harvesting time for Garlic:
March-middle to April



Chilli: between
March and July

Garlic

October	November	December	January	February
March	April	May	June	July

Chilli

October	November	December	January	February
March	April	May	June	July

Sowing

Growing





Chilli-garlic must be planted
Every Alternate year



One year to other crops
Ensures good soil health

Approximate profits, calculated for 0.2 acre (or, 1 bhiga in Uttar Pradesh)

Chilli



Maximum of
Rs. 60,000

per bhiga (assuming proper care of plants and no disease attacks)

Garlic



Maximum of
Rs. 40,000

per bhiga (assuming proper care of plants and no disease attacks)

Intercropping



Maximum of
Rs. 80,000

per bhiga (assuming proper care, no disease attacks and use of family members for labour work)

**All figures are approximate and assumes proper care of the plants, no loss due to disease or climate-related events, and involvement of household members to keep labour costs down to a minimum*