

## Success Story on Minimum Tillage Cultivation of Field Pea Under CFLD Pulses

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### Introduction

Pulses are the poor man's meat because of their substantial protein, vitamin, and mineral content, as well as their natural biological fixation ability, which improves soil fertility. For these reasons, they have played a critical part in sustainable crop production systems. Peas are third in importance among pulse crops worldwide, behind dry beans and chickpeas. In India, they are the third most popular Rabi pulse, behind lentils and chickpeas. The cultivation of fieldpeas during rice fallow improves the biological, chemical, and physical characteristics of the soil, hence raising its general quality. It enhances rice cultivation's productivity and profitability since it fits in well with the rice fallow. Mr. Achow Thuimai, aged 54 years, of Makhan village under Senapati district was one of the beneficiaries of Cluster Frontline Demonstration (CFLD) Pulses during 2019-20. He had a farm area of 0.4 ha located at mid hill growing paddy followed by fieldpea and winter vegetables like cabbage, potato etc. The fertility level of the soil ranges from low to medium.

**Challenges:** Rice-fallow is generally an unutilized cropland in a monocrop-based rice agroecosystem where it is uncropped once the rice is harvested. This is a potential avenue for efficient utilization of resources for sustainable crop intensification and to boost land productivity in most rice-areas. Before KVK intervention his land remains fallow after rice harvesting due to for want of water and also due lack of knowledge on minimum tillage cultivation.

**Initiative:** KVK-Senapati provided constant need based training and demonstration programme conducted to improve their skills and knowledge. Leaflets and folders on minimum tillage cultivation were provided to develop skills. After seeing his keen interest in fieldpea cultivation, KVK, Senapati under CFLD programme, included him as one of the beneficiaries and assisted him in procuring critical input like good quality seed (Fieldpea var. Prakash), plant protection materials etc.



### Details of technology demonstrated

Minimum tillage cultivation- One light ploughing. Broadcasting of seeds followed by one secondary tillage to cover the seeds.

<b>Seed treatment</b>	Seed inoculation with Rhizobium and PSB @ 25 g/kg of seed
<b>Fertilizer doses</b>	Soil test based NPK@ 20:50:20 kg/ha along with FYM 5t/ha as basal
<b>Details of insect-pest management practices</b>	Aphid- 1% EC Neem oil, Mix @ 1ml/l water and apply @ 4-4.5l/ha two times at flowering and pod setting stage.

### Results:

Performance of technology vis-à-vis Local check (Increase in productivity and returns)

Technology intervention	Yield (q/ha)	Gross cost (Rs/ha)	Gross income (Rs/ha)	Net income (Rs/ha)	B:C ratio
Before	8.86	34864	62020	27156	1.77:1
After	12.16	40321	85120	44799	2.11:1
% Increase	37.2			64.9	

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### Horizontal spread of technology

During Rabi, the village's farmers were quite excited to start growing peas. 70 numbers of farmers

got influenced and adopted the technology and some of the villagers from 6 nearby villages became aware of the technology through field visit and personal contact.

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