

“Core Support Project”

Sanction Number: [SP/RD/052/2007 (G)]



A Project Sponsored By
SEED Division,
Department of Science and Technology,
New Delhi

Implementing Agency:
“Centre of Science for Villages”,
Dattapur, Wardha, 442001



Name of the Project: “Core Support Project”

Sanction Number: [SP/RD/052/2007 (G)]

Implementing Agency: “Centre of Science for Villages” (CSV), Dattapur, Wardha, 442001

Approved Core Activities and Progress Made in Each Activity:

I. Farm Activity

A. Organic Farming Input: Bio Manure (Amrut Paani & BD 500) and Earth Worms compost: –

In the one hectare field 10 cubic meter biomass put and allowed to decompose. Subsequently bio-manure (Amrut Paani or microbial culture @ 3 to 4 liters per plant) or earthworm compost made using leaf litter and brush wood was added (@ 02 Kg per plant). We got very good results in different crops selected for the study and these are

- Cotton : (45% more yield than control)
- Soy Bean : (20% more yield than control)
- Pigeon’s Pea : (35% more yield than control)
- Wheat : (20% more yield than control)
- Gram : (40% more yield than control)
- Turmeric : (50% more yield than control)
- Sugar Cane : (30% more yield than control). (See Annexure I)



B. New or Innovative Crop: Following vegetable, fruits and tubers have been introduced amongst farmers as an alternate source of income.

- Midnapore Creeper (***Rivea hypocreteriformis***): It gives commercially viable leafy vegetable crop which has great demand in society. Its popularity is increasing amongst consumers and farmers.
- Phalsa (***Grewia subinaequalis***): It gives edible fruits. Its unripe fruits are used for pickling and ripe fruits are used to make squahs.
- Indian Kudzu (***Pueraria tuberosa***): Has been known to local villagers but was not used as commodity in kitchen. CSV is promoting its cultivation at different locations. We are also engaged in in situ conservation in the farm and forest land of the district.
- Papadi (***Ventilago denticuleta***): A wildy growing variety in forest of Central India its seeds are a source of “Edible Oil”. Methods are being derived to make its plantation, collect seeds and extract edible oil



C. Income Generating Activities

- **Food Processing**

- Midnapore Creeper (*Rivea hypocreтарiformis*): Its leaves are used as fresh vegetable of dozen kinds, a source of snacks, curry etc.



- Phalsa (*Grewia subinaequalis*): We are promoting its use as fresh fruit and a source of squash.



- Indian Kudzu (*Pueraria tuberosa*): Its tubers are used as an ingredient in soup, “Chyavanprash” It is being promoted as a source of soup and a sweet preparation called Petha etc. and its leaves are excellent fodder
- Potato Yam (*Dioscorea bulbifera*): Its tubers are used to make vegetables in tribal belt. Has fairly good local market in non tribal areas as well.
- Bhokar (*Cordia rothii*): Its fruits are used to make pickle and jam



- **Herbal Medicine Cultivation and Processing:**

- Gunja (*Abrus precatorious*): CSV is promoting its cultivation for its leaves to be used as an optional ingredient in beetle leaf.



- Kalihari (*Gloriosa superba*): CSV has collected mother culture from the wilderness for cultivation in the farm. Its tubers are used in making medicinal products. It is used even in massage oil for arthritic rheumatism.
- Kavach beej (*Mucuna pruriens*): Its fresh seeds are eaten after roasting by villagers. Its seeds are powdered and used for

- **Technology of NTFP Based Entrepreneurship Development**

- Bamboo (*Dendrocalamus strictus*): Its matured culms are used as construction material. Young shoots are Pickled, Shredded, used to make Murabba etc.)
- Palm Tree (*Phoenix sylvestris*): It gives soft drink Neera, its fruits are like date fruits and are processed to make items equivalent to dry fruits



- Handmade Paper and Board: Biomass from following plant species are used to make industrial items like boards.



II Non Farm Activity

- a. Evaluate Critical Parameters for Support to Entrepreneurs

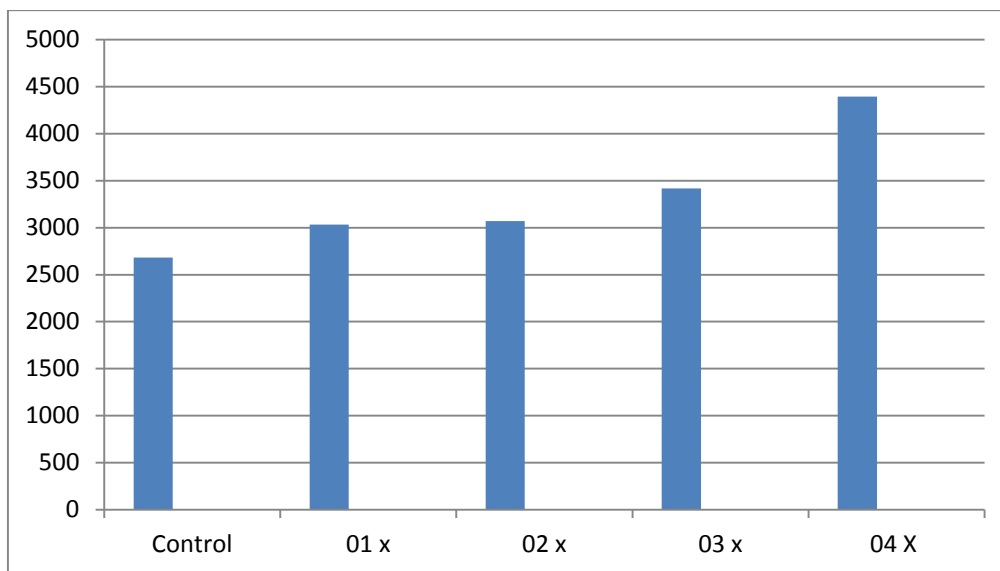
Methodology:

- i. Participatory approach to evolve method of growing Crops in Organic Fashion
 - ii. Application of Statistically Standard Methods
 - iii. Location Map of project area
 - iv. Areas of influence: village/block/district:
- Technology being generated will be applicable in the Vidarbha area of Maharashtra

Annexure I: Experimental Data

1 - Cotton (*Gossypium herbacium*):

Experiment on Cotton (<i>Gossypium herbacium</i>): Average yield			
Treatments	Plot Numbers	Yield (Grams)	Average
Control	03; 07; 17	2933; 2429; 5224	2681
One Time	05; 12; 16	2151; 3916; 7438;	3034
Two Time	01; 09; 11	3555; 2585; 4644;	3070
Three Time	02; 10; 14	3076; 3761; 5080;	3419
Four Time	04; 06; 08; 13; 15; 18	2667; 3021; 3119; 4558; 5426; 7576	4395



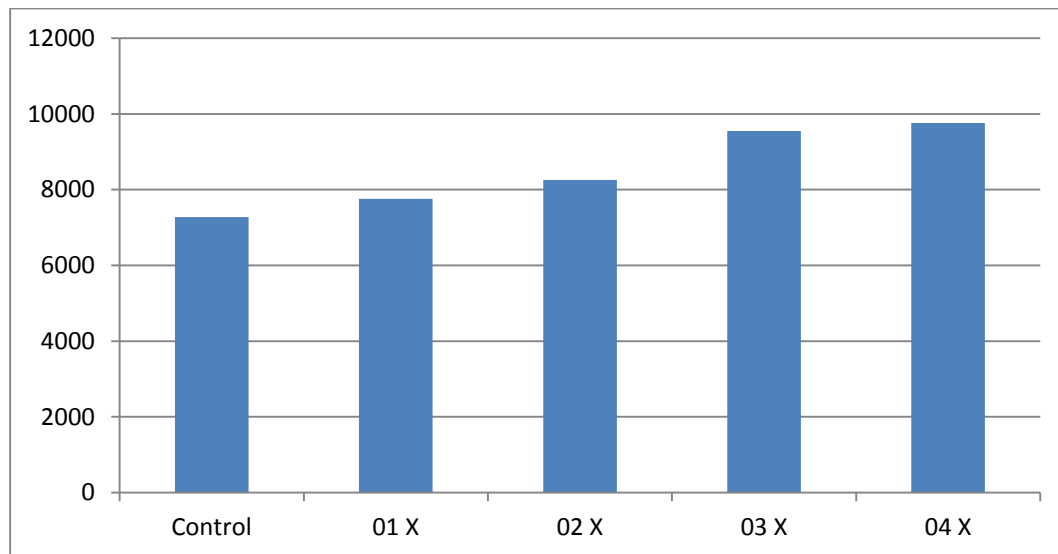
Above chart no. 1 shows yield of Cotton (*Gossypium herbacium*) in grams (x axis) five treatment namely

- i) Control
- ii) 01 x = Application of fertilizer once
- iii) 02 x = Application of fertilizer twice
- iv) 03 x = Application of fertilizer thrice
- v) 04 x = Application of fertilizer four times

Result: Above chart shows that increased administration of fertilizer in the Cotton crop has increased productivity by 164 % as compared to control.

2 - Tuar (*Cajanus cajan*):

Experiment on Tuar (<i>Cajanus cajan</i>): Average yield			
Treatments	Plot Numbers	Yield (Grams)	Average
Control	04; 09; 19; 23	7200; 8225; 13200 ; 6400	7275
One Time	03; 07; 13; 17; 27	7200; 8100; 10400 ; 8520; 7200	7755
Two Time	02;11;14;15;25	10200; 10000; 12200; 6400; 8200	8252
Three Time	01; 06; 10; 12; 16	8300; 9100; 9000; 11100; 6600; 10500; 11200; 10600	9550
Four Time	04; 09; 19; 23	8200; 9225; 13200; 8400	9756



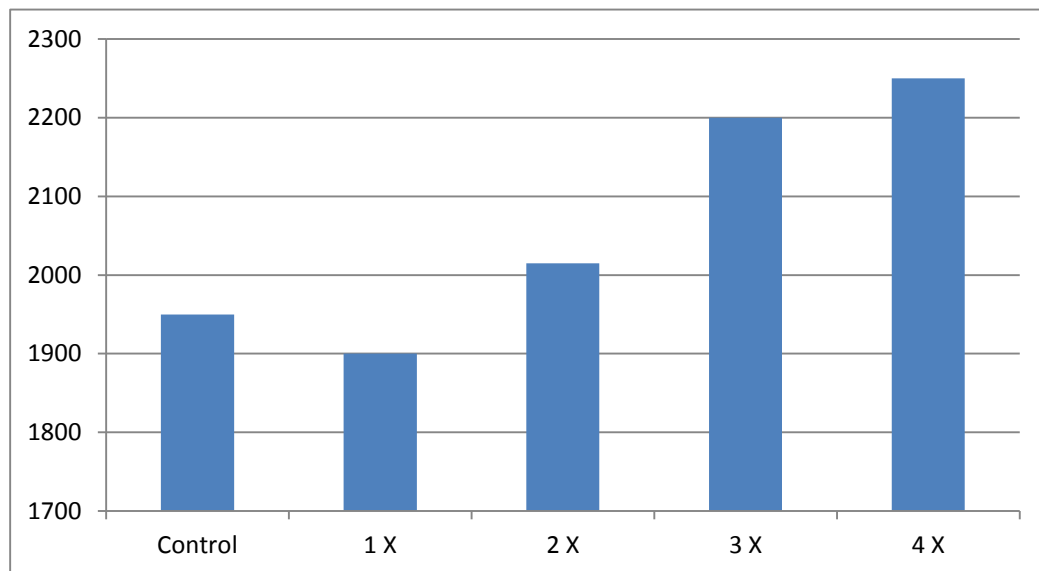
Above chart no. 2 shows yield of Arhar or Tuar (*Cajanus cajan*) in grams (x axis) five treatment namely

- i) Control
- ii) 01 x = Application of fertilizer once
- iii) 02 x = Application of fertilizer twice
- iv) 03 x = Application of fertilizer thrice
- v) 04 x = Application of fertilizer four times

Result: Above chart shows that increased administration of fertilizer in the Tuar or Arhar crop has increased productivity by 134 % as compared to control.

3 - Soy Bean Biomass (*Glycine max*):

Experiment on Soy Bean (<i>Glycine max</i>): Average yield			
Treatments	Plot Numbers	Yield (Grams)	Average
Control	04; 09; 14; 16	1500; 3200; 1500; 1800	1950
One Time	03; 06; 12	1800; 2700; 1200;	1900
Two Time	01; 08; 13; 18	3000; 2100; 1200; 1800	2025
Three Time	02; 07; 10	1800; 2800; 2000;	2200
Four Time	05; 11; 15; 17	2700; 1700; 1800; 2800	2250



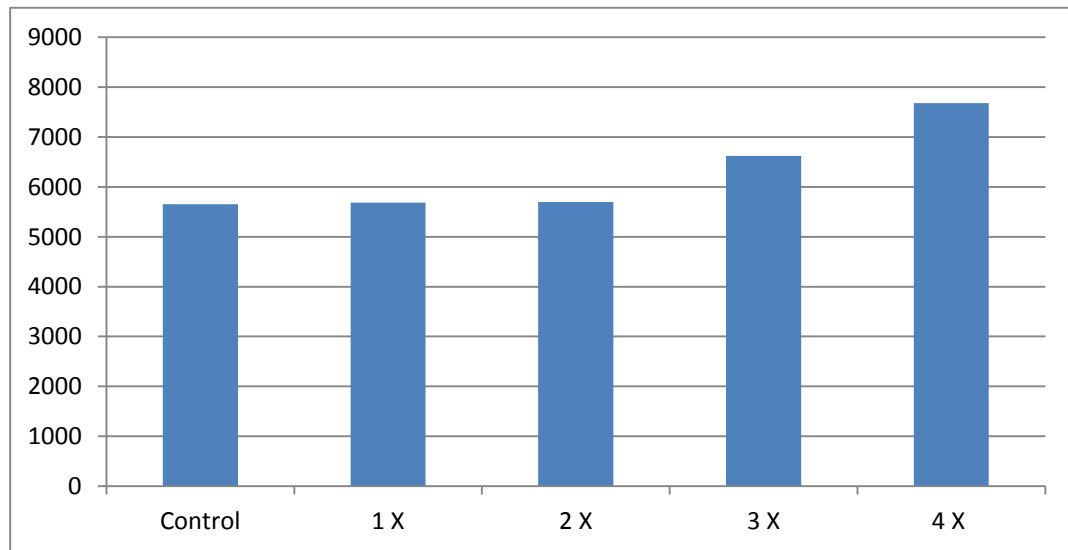
Above chart no. 3 shows yield of Soy Bean (*Glycine max*) in grams (x axis) five treatment namely

- i) Control
- ii) 01 x = Application of fertilizer once
- iii) 02 x = Application of fertilizer twice
- iv) 03 x = Application of fertilizer thrice
- v) 04 x = Application of fertilizer four times

Result: Above chart shows that increased administration of fertilizer in the Soy Bean crop has increased productivity by 115 % as compared to control.

4 - Wheat (*Triticum aestivum*):

Experiment on Wheat (<i>Triticum aestivum</i>):		
Average yield		
Treatments	Yield (Grams)	Average
Control	5900; 5470	5650
One Time	4380; 6580; 6100	5686
Two Time	5600; 6000; 5500	5700
Three Time	5300; 6320; 8250	6623
Four Time	7775; 7270; 8000	7681



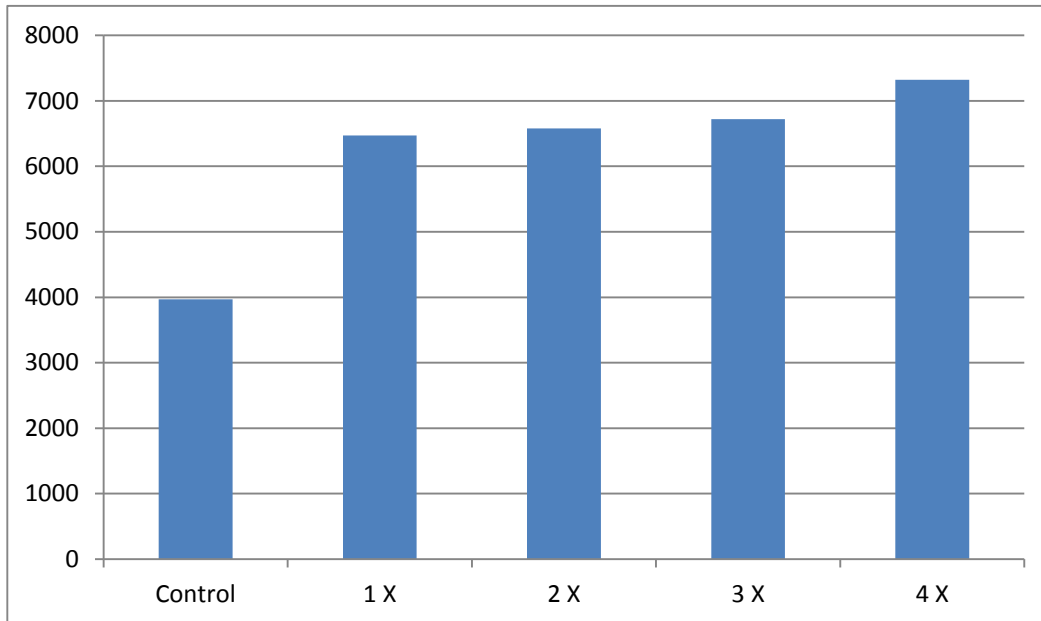
Above chart no. 4 shows yield of Wheat (*Triticum aestivum*) in grams (x axis) five treatment namely

- i) Control
- ii) 01 x = Application of fertilizer once
- iii) 02 x = Application of fertilizer twice
- iv) 03 x = Application of fertilizer thrice
- v) 04 x = Application of fertilizer four times

Result: Above chart shows that increased administration of fertilizer in the Wheat crop has increased productivity by 136 % as compared to control.

5 - Chick Pea (*Cicer arietinum*):

Experiment on Chick Pea (<i>Cicer arietinum</i>): Average yield			
Treatments	Plot Numbers	Yield (Grams)	Average
Control	13; 14	3700; 4240	3970
One Time	01; 05; 09	6130; 6600; 6690	6473
Two Time	02; 06; 10	6340; 5900; 7500	6580
Three Time	03; 07; 11	6600; 6260; 7300	6720
Four Time	04; 08; 12	5700; 8400; 7860	7320



Above chart no. 5 shows yield of Chick Pea (*Cicer arietinum*) in grams (x axis) five treatment namely

- i) Control
- ii) 01 x = Application of fertilizer once in a mnth
- iii) 02 x = Application of fertilizer twice
- iv) 03 x = Application of fertilizer thrice
- v) 04 x = Application of fertilizer four times

Result: Above chart shows that increased administration of fertilizer in the Chick Pea crop has increased productivity by 184 % as compared to control.