

# Knowledge gain by trainees through national training courses on dryland agriculture technology

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## ABSTRACT

The present investigation was carried out at CET in Dryland Agriculture Technology, Dr. PDKV, Akola (Maharashtra). Six training courses on Dryland Agriculture Technology from 1996 to 2003 were purposively selected for study. An experimental design of social research was used. Majority of trainees in all the six National Training Courses were found in medium level of per cent in gained knowledge. Mean difference between pre and post knowledge score ranges from 4.14 to 5.91 and was found significant.

## INTRODUCTION

Agriculture in general and dryland farming in particular is also a prominent feature of Indian agriculture. About 70 per cent of the net cropped area in the country depends upon the natural rain. Training is a crucial and continuous requirement for agricultural development. At national level, different Institutes under Indian Council of Agricultural Research (130) Centre's of Excellence for Training (CETs) 15, State Agricultural Universities 32, Central Government Organizations (CGOs) and National Institute for Management of Agricultural Extension (MANAGE) conduct subject matter trainings for senior and middle level extension functionaries. At regional level, four Extension Education Institutes conduct trainings in extension methods for middle level functionaries. At state level, State Agricultural Universities 32 and State Training Institutes conduct training on technology and communication for middle and field level workers. Directorate of Extension, New Delhi conducts different National Training Courses through different institutions to improve the performance of extension. Comparatively returns are not in the proportion to the investment actually made and training slots are also not being use fully by States. so, effort has been made to study the gain in knowledge by the trainees after completion of the National Training Courses (NTCs).

## METHODOLOGY

The present investigation was carried at the Centre of Excellence for Training in Dryland Agriculture Technology, Dr. Panjabrao Deshmukh Krishi Vidyapeeth, Akola (Maharashtra). From the list of total 29 National Training Courses on Dryland Agriculture Technology organized by the centre, six training courses of eight days duration specifically on dryland agriculture organized were purposively selected for the study with view to get correct picture of evaluation of these courses. Details of the training courses selected for study are given below in Table 1.

An experimental design of social research was used. A structure schedule containing 22 common topics incorporated in day to day programme of sample National Training Courses was prepared and responses of respondents were collected before and after the training into two point continuum *i.e.* Yes - 1 score and No - 0 score.

## RESULTS AND DISCUSSION

The findings of the present study as well as relevant discussion have been summarized under following heads:

### Professional position of trainees in NTCs

The data of Table 2 indicate that 25.92 per cent Agriculture Officers/Circle Agriculture Officers, Assistant Directors of Agriculture (16.66%), Assistant Soil Conservation Officers

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**Table 1: National training courses selected for study of trainees**

Sr. No.	Title of National Training Courses	No. of trainees attended the course	Population for study
1.	National Training Course on Dry land Agriculture (T <sub>1</sub> )	25	24
2.	National Training Course on Production Technology for Field Crops (T <sub>2</sub> )	23	23
3.	National Training Course on Dry land Agriculture Technology (T <sub>3</sub> )	23	23
4.	National Training Courses on Dry land Agriculture (T <sub>4</sub> ).	14	14
5.	National Training Course on Crop Production Technology (T <sub>5</sub> )	14	14
6.	National Training courses on Dry land Agriculture Technology (T <sub>6</sub> )	10	10
	Total	109	108

**Table 2: Training wise professional position of trainees participated in NTCs**

Sr. No.	Professional position/ post held	Trainingwise frequency						Total	
		T <sub>1</sub> N=24	T <sub>2</sub> N=23	T <sub>3</sub> N=23	T <sub>4</sub> N=14	T <sub>5</sub> N=14	T <sub>6</sub> N=10	No.	PC
<b>Higher level</b>									
1.	Dy. Director of Agriculture	1	-	1	-	1	1	4	3.70
2.	Fodder Development Officer	-	1	-	-	-	-	1	0.92
3.	Agriculture Development Officers	-	-	1	1	-	-	2	1.85
4.	Project Officer	-	-	-	-	1	-	1	0.92
5.	Sub Div. Soil Cons. Officer	3	2	2	-	-	2	9	8.33
6.	Horticulture Officer	-	2	-	-	-	-	2	1.85
7.	Principal of Training Centre	-	1	-	-	-	1	2	1.85
8.	Sub. Div. Agril. Officer	-	-	-	-	2	-	2	1.85
	Total	4	6	4	1	4	4	23	21.30
<b>Middle level</b>									
9.	Asstt. Director of Agriculture	7	-	6	1	2	2	18	16.66
10.	Asstt. Fodder Dev. Officer.	1	-	-	-	-	-	1	0.92
11.	Subject Matter Specialist (SMS)	-	3	-	5	-	-	8	7.40
12.	Jr. Scientist	1	-	-	-	-	-	1	0.92
13.	Training Associate	4	-	-	-	-	-	4	3.70
14.	Asstt. Soil Cons. Officer	-	6	2	2	-	-	10	9.25
15.	Asstt. Professor	1	1	-	-	-	-	2	1.85
16.	TAO/Technical Officer	-	1	1	-	-	1	3	2.77
17.	Specialist Water Management	-	-	1	-	-	-	1	0.92
18.	Asstt. Project Officer	1	-	-	-	-	-	1	0.92
	Total	15	11	10	8	2	3	49	45.37
<b>Lower level</b>									
19.	Agriculture Officer /CAO	5	2	7	4	7	3	28	25.92
20.	Senior Research Assistant	-	-	1	-	-	-	1	0.92
21.	Instructor	-	-	1	-	-	-	1	0.92
22.	Horticulture Inspector	-	1	-	-	-	-	1	0.92
23.	Agriculture Research Officer	-	3	-	-	1	-	4	3.70
24.	Incharge Agri. Officer.	-	-	-	1	-	-	1	0.92
	Total	5	6	9	5	8	3	36	33.33

(9.25%), Sub. Div. Soil Conservation Officers (8.33%) and very few numbers of other officers in all categories participated in the National Training Courses on Dry land Agriculture Technology.

Thus, it may be inferred that National Training

Courses (NTCs) were attended by various levels of trainees having different professional positions. This finding is supported by the observation made by Lambe (1999).

It is observed from Table 3 that majority of trainees in almost all 6 NTCs on Dryland Agriculture Technology

**Table 3 : Distribution of trainees according to their per cent gain in knowledge about different aspects of Dryland Agriculture**

Sr. No.	Per cent gain in knowledge levels		T <sub>1</sub>	T <sub>2</sub>	T <sub>3</sub>	T <sub>4</sub>	T <sub>5</sub>	T <sub>6</sub>	Overall
			N = 24	N=23	N=23	N=14	N=14	N=10	N=108
1.	Low (upto 10.38 pc)	Number	7	2	8	1	0	1	19
		Per cent	29.17	8.70	34.78	7.14	-	10.00	17.60
2.	Medium (10.39-31.1 pc)	Number	11	11	13	12	11	7	65
		Per cent	45.83	47.82	56.52	85.72	78.57	70.00	60.18
3.	High (above 31.1 pc)	Number	6	10	2	1	3	2	24
		Per cent	25.0	43.48	8.70	7.14	21.43	20.00	22.22

Mean = 20.74

SD = 10.36

**Table 4 : Mean per cent gain in knowledge of trainees attended different National Training Courses on Dryland Agriculture Technology**

Sr. No.	NTCs	Pre training mean knowledge score	Post training mean knowledge score	Difference in mean knowledge score	t value	Per cent gain in knowledge
1.	T <sub>1</sub>	17.33	21.62	4.29	18.12**	19.50
2.	T <sub>2</sub>	15.78	21.69	5.91	28.70**	26.86
3.	T <sub>3</sub>	17.13	21.56	4.43	29.00**	20.14
4.	T <sub>4</sub>	17.43	21.57	4.14	18.19**	18.83
5.	T <sub>5</sub>	17.07	21.64	4.57	18.71**	20.77
6.	T <sub>6</sub>	16.09	21.30	4.40	13.47**	20.00

\*\* indicates significance of value at P= 0.01

were found in medium level of per cent gained in knowledge. Similarly, 43.48 per cent of trainees in NTC on Production Technology for Field Crops (T<sub>2</sub>) and 34.78 per cent in NTC on Dryland Agriculture Technology (T<sub>3</sub>) were found in high and low level of gained in knowledge respectively. Further when all 108 trainees classified for their per cent gain in knowledge level, majority (60.18 per cent) of respondents had medium level of gain in knowledge followed by 22.22 per cent and 17.60 per cent in high and low level of per cent gain in knowledge, respectively.

Thus, it may be inferred that majority of trainees gained medium level of knowledge about different aspects of dryland agriculture technology and the gain in knowledge was between 10.39 to 31.10 per cent. The present finding is supported by Mahipal and Prasad (1997), while studying impact of training on extension personnel.

#### Mean percent gain in knowledge:

From Table 4, it is revealed that highest (26.86) per cent gain in knowledge over their pre-knowledge score was observed in trainees of NTC on Production Technology for Field Crops (T<sub>2</sub>) followed by about 20.00 per cent gain in knowledge during organization of NTCs i.e. T<sub>5</sub>, T<sub>3</sub>, T<sub>6</sub> and T<sub>1</sub>. The lowest per cent gain in knowledge (18.83%) was observed in NTC on Dryland

Agriculture Technology (T<sub>4</sub>). Mean difference between pre-post knowledge scores ranged from 4.14 to 5.91 and was found significant. The above finding is supported by Sanoria and Khare (1987) and Mahipal and Prasad (1997).

#### Conclusion:

Majority of trainees in almost all 6 NTCs on Dryland Agriculture Technology were found in medium level of per cent gained in knowledge. Mean difference between pre-post knowledge scores ranged from 4.14 to 5.91 and it was found significant. NTC on Dryland agriculture technology (T<sub>6</sub>) was perceived least effective by the participants attended this course. They were also least satisfied about different aspects. The probable reasons as discussed with organizers were the overlapping of various National level programmes and other University programmes etc. during organization of these courses, due to which the host institutes could not provide facilities up to the level of satisfaction to the trainees during the training period.

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