

## OPINION OF THE FARMERS TOWARDS BIO NPK CONSORTIUM

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### ABSTRACT

Bio-NPK product is congregate of five native bacterial cultures viz. *Azotobacterchroococcum*, *Azospirillumlipoferum* and three *Bacillus spp.* having multiple utility as biofertilizer cum biopesticide for crops. It has the potential for reducing 25 per cent of macronutrients (NPK) requirement of the crops with an additional benefit of 10-15 per cent increase in yield for eco-friendly management of diseases caused by phytopathogenic fungi and nematodes

**Keywords:** Bio-NPK Consortium, opinion of farmers

### INTRODUCTION

Liquid Bio-fertilizers are used to improve the fertility of the land by using biological wastes, which do not contain any chemicals harmful to the soil. Liquid Bio-fertilizers generate plant nutrients like nitrogen and phosphorus through their activities in the soil and make available to plants in gradual manner. They are beneficial in enriching the soil with microorganisms which increase nutrient quality of soil and also impart strength to combat with diseases. The main sources of liquid Bio-fertilizers are bacteria, fungi and cyanobacteria. The most striking relationship to these microorganisms have with plants is symbiosis in which the partners derive benefits from each other. The most important microorganisms which have symbiotic relationship with plants are mycorrhiza, rhizobium and cyanobacteria. These deliver number of benefits including plant nutrition, disease resistance and tolerance to adverse soil and climatic conditions.

### OBJECTIVES

- (1) To study the profile of farmers
- (2) To obtain the opinion of the farmers regarding Bio-NPK Consortium
- (3) To study the constraints as perceived by the farmers in use of Bio-NPK Consortium
- (4) To seek the suggestions to overcome perceived such constraints by the farmers in use of Bio-NPK Consortium

### METHODOLOGY

The present study was conducted in Gujarat in the year 2017-2018 with farmers who have used Bio-NPK consortium for at least 2 years and more will be selected as respondents for the present study. The list of farmers were

obtained from Dept. of Microbiology and Bio-fertilizer, AAU, Anand, Thus, total 100 respondents were selected randomly. Structural interview schedule prepared in accordance of objectives. The data were collected personally and tabulated, analyzed and interpreted with frequency and percentage.

### RESULTS AND DISCUSSION

**Table 1 : Characteristics of the farmers n=100**

Sr. No.	Characteristics	Number	Percent
1	<b>Age</b>		
	i. Young Age ( up to 30 years)	30	30.00
	ii. Middle Age (31 to 50 years)	49	49.00
	iii Old Age (Above 50 years)	21	21.00
2	<b>Education</b>		
	i. Illiterate	04	04.00
	ii. Primary education (up to vii std.)	42	42.00
	iii.Secondary education(viii to x)	40	40.00
	iv.Higher secondary(xi to xii)	08	08.00
v. Graduate	06	06.00	
3	<b>Type of family</b>		
	i. Joint family	41	41.00
	ii. Nuclear family	59	59.00
4	<b>Land holding</b>		
	i. Up to 1 hectare	34	34.00
	ii. 1.1 to 2 hectares	42	42.00
	iii. Above 2 hectares	24	24.00
5	<b>Social Participation</b>		
	No Membership	16	16.00

Sr. No.	Characteristics	Number	Percent
	Membership in one organization	42	42.00
	Membership in more than one organizations	38	38.00
	Membership along with position holding	04	04.00
6	<b>Occupation</b>		
	Farming only	41	41.00
	Farming + Animal Husbandry	40	40.00
	Farming + Animal husbandry+ job	08	08.00
	Farming + business	04	04.00
	Farming + Animal Husbandry + Business	07	07.00
7	<b>Annual Income</b>		
	Up to 50,000	12	12.00
	50,000 to 1,00,000	36	36.00
	1,00,001 to 2,50,000	42	42.00
	More than 3,00,000	10	10.00
8	<b>Experience of Bio-NPK consortium</b>		
	i. Two year	56	56.00
	ii. More than two year	44	44.00

Table 1 shows that nearly half (49.00 per cent) of respondents were belonging to middle age. Nearly i.e.42.00 percent and 40.00 per cent had education up to primary and secondary level, while more than half (59.00 per cent) of respondents of had joint family, (42.00 percent) had up to 2 ha. Land holding, (42.00) per cent respondents had Membership in one organization, (41.00) respondents had only farming occupation, (42.00) respondents were up to 2,50,000 , and (56.00) respondents had experience of 2 years of BIO-NPK consortium.



Table 2 : Opinion of farmers regarding Bio-NPK consortium

n=100

Sr. No.	Statements	SA	A	UD	D	SD
1	Bio-NPK consortium is eco friendly in nature	37	45	12	04	02
2	Bio-NPK consortium is not available in the local market	18	12	16	31	23
3	It is difficult to apply BIO-NPK consortiums	05	07	04	40	44
4	For sustainable agriculture Bio-NPK consortium is one of the best option	23	38	12	18	09
5	Bio-NPK consortium is economically cheaper than chemical fertilizers	34	42	08	12	04
6	Reduction in dependence of chemical fertilizers was observed after using Bio-NPK consortium	26	37	06	14	17
7	Increase in the yield was observed after use of Bio-NPK consortium.	31	38	05	16	10
8	Bio-NPK consortium increase the soil fertility	24	33	08	21	14
9	Bio-NPK consortium is compatible with other bio fertilizers and bio pesticides to apply	18	24	21	30	07
10	Use of Bio-NPK consortium improves quality of product	32	38	08	14	08
11	Bio-NPK consortium products fetched good market price	28	21	31	12	08