



# Constraints Faced by the Respondents in Recommended Fertilizer Management under Soil Health Card Scheme in Baldirai Block of Sultanpur District

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Agriculture in India has a significant history and it is still lifeline of Indian economy. Agricultural sector accounted for 16.6% of the GDP in 2009 and its economic contribution to India's GDP is steadily declining with the country's broad-based economic growth. Still, agriculture is demographically the broadest economic sector and plays a significant role in the overall socio-economic fabric of India. Over 66 years since its independence, India has made quadrupled progress towards food-grain production. Prior to the mid-1960s India relied on imports and food aid to meet domestic requirements. However, two years of severe drought in 1965 and 1966 convinced India to reform its agricultural policy and adopted significant policy reforms focused on the goal of food grain self-sufficiency. This ushered in India's Green Revolution and it began with the decision to adopt superior yielding, disease resistant varieties in combination with better farming knowledge to improve productivity. India's arable land area of 159.7 million hectares (394.6 million acres) is the second largest in the world, after the United States. Food security, nutritional security, profitability and sustainability are the main principles of present and future agricultural development. With the steady rise in human and livestock population, pressure on soils for enhancing the food production has been mounting geometrically. Our country's population is expected to reach 1.5 billion by the middle of this century; we require about 310 million tones of food grains to feed this population. More ever, the demographic projections indicate that the per capita land availability from 0.14 ha at present will be reduced to 0.10 ha in the year 2025. According to World Watch Institute; India may have to import 45 Mt of food grains by 2025 if the present growth rates of agricultural production continue.

The best option that is left with us is to improve the productivity per unit area per unit time Soil is one of the elements required for farming as it provides nutrients to the plant. Healthy soil containing all the elements for growth and development of crop and on the other hand soil deprived of one or more elements either reduces production or degrades quality of crops. Soil has to have sufficient and proportional amount of both macro and micro nutrients and it refers to the soil health. "Soil health" is an assessment of ability of a soil to meet its range of ecosystem functions as appropriate to its environment. In simple words, soil health can be defined as "the fitness of soil for use". The heart of soil health is the integration of the soil physical, chemical and biological processes and its functions A healthy soil will be balanced for all the three components. Enhancing soil physical, chemical and biological environments through various ameliorative or management measures would sustain the soil



health which in turn would improve crop, productivity over long run by which the national wealth would be improved. Importance of fertilizers in yield improvement is essential for achieving increased agricultural production; further increases because there is little scope for bringing more area under cultivation as well as majority of Indian soils are deficient in many macro and micro nutrients.

The application of essential plant nutrients, particularly major and micronutrients in optimum quantity and right proportion, through correct method and time of application, is the key to increased and sustained crop production. Fertilizer consumption in India has been increasing over the years and today India is one of the largest producer and consumer of fertilizers in the world.

### **Methodology**

As per the list provided by soil testing laboratory of Department of Agriculture, Sultanpur in October 2018, the one block i.e. Baldirai was having 120 number of soil health card holders was selected purposively. For selection of respondent systematic random sampling method was used. From the selected block every second soil health card holder was selected as respondents. So, in all 120 soil health card holders were investigated to collect the data. Thus, selected sample was comprised of 120 soil health card holders.

### **Results and Discussion**

#### **Profile Characteristics of Respondents**

More than half (51.0%) of the respondents were found to be middle aged, followed by 28.0 per cent young aged, and the remaining 21.0 per cent were old aged. With respect to education, more than one-third of the respondents (39.00%) were educated upto middle level, followed by 28.00 per cent with higher secondary education, 17.00 per cent had collegiate education, and the rest (16.00%) had primary level of education.

As far as farm size was concerned, more than two-thirds (69.00%) of the respondents had medium level of farm size, followed by 19.00 per cent in high category, and the remaining 12.00 per cent of the respondents had low level of farm size. It was also found that 40.00 per cent of the respondents were found between the income range of Rs.1,00,001-2,00,000, followed by one-fourth (25.00%) with an income range between Rs.50,001-1,00,000, 17.00 per cent was found with Rs.2,00,001- 3,00,000, 10.00 per cent was found above Rs.3,00,000, and the rest (8.00%) were found in upto Rs.50,000 income category.

**According to Dutta (2009) and Sabo (2007)**, ownership of livestock contributes to wealth status, and wealthier farmers are likely to have more motivation to adopt ISFM, and to continue to seek for and access relevant information using various channels so as to cater for their information needs. With respect to contact with extension agency, about three-fourths (73.00%) of the respondents had medium level of contact with extension agency and other sources, and the rest (27.00%) had high level of contact with extension agency and other sources.

It was also found that three-fourths (75.00%) of the respondents had medium level of shared meaning on SHM, and the rest one-fourth (25.00%) had high level of shared meaning on SHM. Further, majority (60.0%) of the respondents had medium level of value attribution to SHC recommendations, followed by more than one-third (35.0%) with high level of value attribution and the rest (5.0%) had low level of value attribution to SHC recommendations. Moreover, it was observed that half (50.00%) of the respondents had expressed that they



would regularly follow the SHC recommendations in future, followed by 47.00 per cent who stated that they may or may not follow, and the rest (3.00%) fell under the may not follow category with respect to SHC recommendations.

### Constraints faced by application of fertilizer management recommended by soil health card scheme:

Sr.no.	Constraints	Respondent's (Frequency and per centage)		
		F	per centage	Rank
1.	Non availability of skilled person.	48	40	VIII
2.	Sampling is not done in presence of farmers.	64	53.33	VII
3.	It is a time consuming process.	101	84.16	III
4.	Lack of awareness among farmers about soil health card.	84	70	V
5.	Majority of farmers being small or marginal.	79	65.83	VI
6.	Deficiency in calculating fertilizer dose based on nutrient status of soil.	95	79.16	IV
7.	Fragmentation of land.	47	39.16	IX
8.	Unable to operate internet.	31	25.83	X
9.	Time gap between soil samples taken and issuing cards is to high.	109	90.83	II
10.	Received soil health cards after crop harvest.	115	95.83	I

**Patel (2013)** in a study conducted among the soil health card users in Anand district Gujarat found that major constraints faced by the farmer were unavailability of micronutrient status of status of soil ranked first with regarding constraints expressed by farmers in utilization of soil



health card Table 4. 17 revealed that large majority of the Received soil health cards after crop harvest while making soil health card (95.83 per cent) followed by Time gap between soil samples taken and issuing cards is to high (90.83 per cent). The respondents also responded that the It is a time consuming process (84.16per cent).

### Conclusion

To sum up despite constraints, the scheme is bearing fruit up to some extent with its limited resources however another major limitation is the illiteracy factor of the farmers for whom the entire scheme is dedicated.

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