Evaluation of Knowledge Level among Sugarcane Farmers on Organic Farming System

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Abstract: Agriculture in developing countries must undergo a significant transformation in order to meet the related challenges of achieving food security and responding to climate. Organic farming is a production system which avoids or largely excludes the use of synthetically compounded fertilizers, pesticides, growth regulators and livestock feed additives. The study conducted those who actively participated the organic farming practices among the farmers in Chidambaram Taluk. Cuddalore District is predominantly an agricultural district with more than 75 per cent of the population directly or indirectly associated with agriculture. They are so many organic farming practices followed for the cultivation of sugarcane was identified. Most of the farmers had knowledge about the organic farming practices due to well aware about the eco-friendly farming practices. The majority of the practices were reported that medium level of knowledge possessed by the respondents in organic practice cultivation of sugarcane crop. Organic farming practices are associated with several advantages. It is the right time for academicians, administrators, scientists, policy makers to promote organic farming in reality leading a new scenario in agriculture. Based on the finding of the studies the implication was drawn to promoting organic farming practices and suggestion were made for future research.

Keywords: Organic farming, Sugarcane crop and Assess the knowledge level.

Introduction

Organic farming is a production system which avoids or largely excludes the use of synthetically compounded fertilizers, pesticides, growth regulators and livestock feed additives. To the maximum extent feasible, organic agriculture systems rely upon crop rotations, crop residues, animal manure, green manure, off-farm organic wastes, mechanical cultivation, minerals bearing rocks, and aspects of biological pest control to maintain soil productivity, till, to supply plant nutrients, and to control insects, weeds, and other pests. The concept of the soil as a living system which must be “fed” in a way that does not restrict the activities of beneficial organisms necessary for recycling nutrients and producing humus is central to this definition.

“Organic agriculture is a holistic production management system which promotes and enhances agro eco-system health, including bio-diversity, biological cycles and soil biological activity. It emphasizes the use of management practices in preference to the use of off-farm inputs, taking into account that regional conditions require locally adapted systems. This is accomplished by using wherever possible, agronomic, biological, and mechanical methods, as opposed to using synthetic materials, to fulfill a specific function within the system” (codex, 1999).

Organic farming system in India is very old and is being followed from ancient time. It is a method of farming system which primarily aimed at cultivating the land and raising crops in such a way, as to keep the soil alive and in good health by the use of organic waste (crop, animal and farm wastes, aquatic wastes) and other biological materials along with beneficial microbes (bio-fertilizer) to release nutrients to crops for increased sustainable production in an eco-friendly pollution free environment (Amita Hanglem, 2017).

Methodology

The present study was confined to one district and five revenue villages of one block with 60 samples in the year of 2019. The sample was collected by a proportionate random sampling method with highest population cultivated sugarcane in Cuddalore District in Chidambaram Block. The study need to be replication on large sampling covering the sugarcane crop growing areas of Tamilnadu, so that, the inference drawn could be generalized to a greater extent, that is warranted from the present study. The pre structured interview schedule was used to collect the information from the sugarcane farmers and the data were analysis by using appropriate statistical tools to determine the result. In this study the percentage analysis was done to predict accurate result for easy discussion by the researcher.
Result and Discussion

Distribution of respondents according to their knowledge level on organic farming practices in sugarcane cultivation

The findings on the knowledge level of respondents on organic farming practices in sugarcane cultivation are presented in Table 1.

Table 1. Distribution of respondents according to their knowledge level on organic farming practices in sugarcane cultivation

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Organic farming practices in sugarcane cultivation</th>
<th>Number of respondents</th>
<th>Per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Topping and breaking the ridges with spade after the harvest of canes before allowing for ratoon for root growth and soil aeration.</td>
<td>38</td>
<td>68.33</td>
</tr>
<tr>
<td>2</td>
<td>De-trashing the canes to control scales and mealy bugs</td>
<td>35</td>
<td>58.33</td>
</tr>
<tr>
<td>3</td>
<td>Sugarcane trashes are burnt before the next ratoon crop for killing insects and pathogens.</td>
<td>30</td>
<td>50.00</td>
</tr>
<tr>
<td>4</td>
<td>Sett treatment with Azospirillum prepare the slurry with 10 packets 200gm of azospirillum inoculums with sufficient water and soak for 10 -15 mins.</td>
<td>25</td>
<td>41.67</td>
</tr>
<tr>
<td>5</td>
<td>Practicing earthing up in sugarcane at 50 days after planting to control earth shoot borer.</td>
<td>25</td>
<td>41.67</td>
</tr>
</tbody>
</table>

The table 1 vividly revealed that the knowledge level of sugarcane cultivation practices showed that the topping and breaking the ridges with a spade after harvest of canes before allowing for ratoon for root growth (68.33 per cent), followed by de-trashing the canes to control scales and mealy bugs (58.33 per cent). It is locally called as sogajuriththal and sugarcane trashes are burnt before the next ratoon crop for killing insects and pathogens, so that the exact half proportionate of them possessed the knowledge on sugarcane trashes are burnt before the next ratoon crop for killing insects and pathogens (50.00 per cent). The sett treatment with Azospirillum prepare the slurry with 10 packets 200gm of each Azospirillum inoculums with sufficient water and soak the sets in the slurry for 10-15 mins, practicing earthing up in sugarcane @ 50 days after planting to control earth shoot borer (41.67 per cent) respectively. This might be due to the reason that the sugarcane research station in Cuddalore District gives appropriate knowledge by dissemination of innovative research activities are directly viewed by the farmers trial plot and aware about the organic cultivation and their market price. This may enhance the farmer’s knowledge and they adopt the practices in sugarcane cultivation. These finding is in line with the findings of Supriya (2018).

Conclusion

Biological research into soil and soil organisms has proven beneficial to organic farming. Varieties of bacteria and fungi break down chemicals, plant matter and animal waste into productive soil nutrients. In turn, they produce benefits of healthier yields and more productive soil for agricultural crops. Keeping in mind the advantages of organic farming practices. In the study the result vividly concluded that the sugarcane growers more than fifty percent of the respondents had knowledge about topping and breaking the ridges with spade after the harvest of canes before allowing for ratoon for root growth and soil aeration, followed by de-trashing the canes to control scales and mealy bugs, sett treatment with Azospirillum prepare the slurry with 10 packets 200gm each(10 pockets) of Azospirillum inoculums with sufficient water and soak the sets in the slurry for 10-15 minutes before planting and remaining practicing earthing up in sugarcane at 50 days after planting to control earththen border. Based on the conclusion the academicians, administrators, scientists, policy makers to promote organic farming in reality leading a new scenario in agriculture. Based on the finding of the studies the implication was drawn to promoting organic farming practices and suggestion were made for future research.

References