

A STUDY ON INTRODUCING AND DESIGNING ORGANIC FOOD PRODUCT EDUCATION: ACADEMIC SUGGESTIONS FOR AN UNDERGRADUATE CURRICULUM FOR AUTONOMOUS COLLEGE

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Abstract: Organic farming is a method of production of crop and livestock that involves a lot more than just choosing pesticides, fertilizers, antibiotics and growth of the crops and livestock. It is a method to sustain the productivity and fitness of the eco system and people. The main goal of organic farming is to assure sustainability and to protect the environment. Organic farming has a positive effect on the environment because of its control over soil degradation and erosion, controls pollution and maintains the fertility level of the soil by bio degradable waste, it also provides healthy livestock.

Organic farming is a method of production of crop and livestock that involves a lot more than just choosing pesticides, fertilizers, antibiotics and growth of the crops and livestock. The main goal of organic farming is to assure sustainability and to protect the environment. Adoption of organic farming is gradually increasing and it is practiced in nearly 100 countries, with the area under organic practices continuously growing in India. The greatest impact of organic agriculture was the change in the mindset of the people.

Introducing organic farming concept to the students will change their perspective on it. It changes the student's relationship with food, as they tend to see in a different way. Students lack the knowledge about food such as how they grow it, care for it, nurture it, and harvest it, where it comes from, and the benefits of growing and preparing Organic food. Learning about how food is produced at an early age will improve the student's knowledge on the environment and ecosystem. Students will learn how to become responsible towards their food.

Thus the study is conducted to implement organic Farming in the curriculum of Autonomous Colleges so as to create a vision of Higher Education which educates and develops socially responsible students.

Keywords: Organic Farming, Sustainable Education, Organic Farming in the Curriculum.

1. INTRODUCTION

Organic farming is a method of production of crop and livestock that involves a lot more than just choosing pesticides, fertilizers, antibiotics and growth of the crops and livestock. It is a method to sustain the productivity and fitness of the eco system and people. The main goal of organic farming is to assure sustainability and to protect the environment. Organic farming has a positive effect on the environment because of its control over soil degradation and erosion, controls pollution and maintains the fertility level of the soil by bio degradable waste, it also provides healthy livestock.

Organic farming includes crop rotation and cover crops, which helps in preserving the soil contents. The residues or the manure formed from that is left behind on the farm from the organic products are utilized to make the soil fertile for further utilization of the land to farm. The pests are also controlled by using natural pesticide medicines like sticky traps or floating row covers. The livestock has to be fed organically grown food.

Organic farms are more profitable than conventional farms. The bottom line for farmers, regardless of the practices used, is income. The 30-year side-by-side Rodale study showed that organic systems were almost three times as profitable as conventional systems.

Organic farming is more efficient than conventional farming. Conventional agriculture requires large amounts of Soil to produce transport and apply fertilizers and pesticides. Nitrogen fertilizer is the single biggest energy cost for conventional farming, representing 41% of overall energy costs. Organic systems used 45% less energy overall than conventional systems¹. The extra energy required for fertilizer production and farm fuel use in conventional systems also contributes to greenhouse gas emissions (GHG). Conventional systems emit almost 40% more GHG per pound of crop production in comparison to the organic systems.

Organic farming keeps toxic chemicals out of the environment. Conventional systems rely heavily on pesticides (herbicides, insecticides, fungicides) many of which are toxic to humans and animals. With more than 17,000 pesticide products (agricultural and non-agricultural) on the market today, the EPA (Environmental Protection Agency) is unable to keep up with adequate safety testing.

Many studies link low level exposure of pesticides to human health problems, and chemical residue from pesticides used in farming can be commonly found in air and water samples as well as in the food we eat.

1. Williams, P., & Hammitt, J. (2002). Perceived risks of conventional and organic produce: pesticides, pathogens, and natural toxins. *Risk Analysis*, 21, (2), 319-330.

Inactive ingredients in pesticide and herbicide formulations have been found to be as toxic as active ingredients, but are not tested for human health impacts.

Organic farming builds healthier soil, while short-term benefits are realized with the use of chemical fertilizers and mechanized production methods; every gardener knows that soil health cannot be compromised in the long term. Eventually, soil-depleting practices take their toll as soil structure weakens, microbial life declines and erosion removes valuable topsoil from farmland.

Our current food production system is in need of repair. We need to promote organic systems which respect the integrity of soil health and sustainable systems. Until recently it was thought that our national and global food needs were too big to be met with natural, organic food production systems. Recent studies confirm, however, that organic farming is the way of the future. Both collectively and as individuals need to support the organic food movement to enable the process to move forward with the research, seed development and farming practices needed to feed a hungry world².

Industrial agriculture has replaced human hands with machines and chemical inputs. Joel Salatin, organic farmer and author of best-selling books on sustainable farming, views young minds can be another reason for us to return to our farming roots. "People say our system can't feed the world, but they're absolutely wrong," he says, "Yes, it will take more hands, but we've got plenty of them around."

Statement of the problem

Understanding the toxic present in the consumption using non-organic fertilizers, the food consumption has become contaminated which in turn is a health hazardous. Consumers need to be conscious to adapt to Organic food which needs to be inculcated in the younger minds and to educate about the importance of Organic Food product and also to eradicate the myths associated with organic food products. Therefore a study has been conducted to implement Organic Food product Education in the curriculum of the Autonomous Colleges to impart students with the required knowledge about the importance of organic food product.

2. B. Suresh Reddy , Organic Farming: Status, Issues, Prospects- A review, *Agricultural Economics Research Review* ,vol23, 2010, pp 343-358

2. OBJECTIVES OF THE STUDY

1. To analyze the importance of organic food Products.
2. To analyze the level of awareness among the students of Autonomous Colleges.
3. To understand and Frame a Curriculum where Organic Food product can be included as a subject.

3. RESEARCH METHODOLOGY

A survey method has been employed for the purpose of collecting Data required for the study. Both primary and secondary Data has been collected.

A questionnaire was prepared and sent to the sample students of Autonomous College under Bangalore University for collecting data relating to the level of awareness of organic food. Data collection is done through random sampling, sample size of Hundred were selected from the college. Secondary data was based on Autonomous College curriculum, Agricultural Institutions, published articles in journals and magazines, books, reports, studies, websites etc.

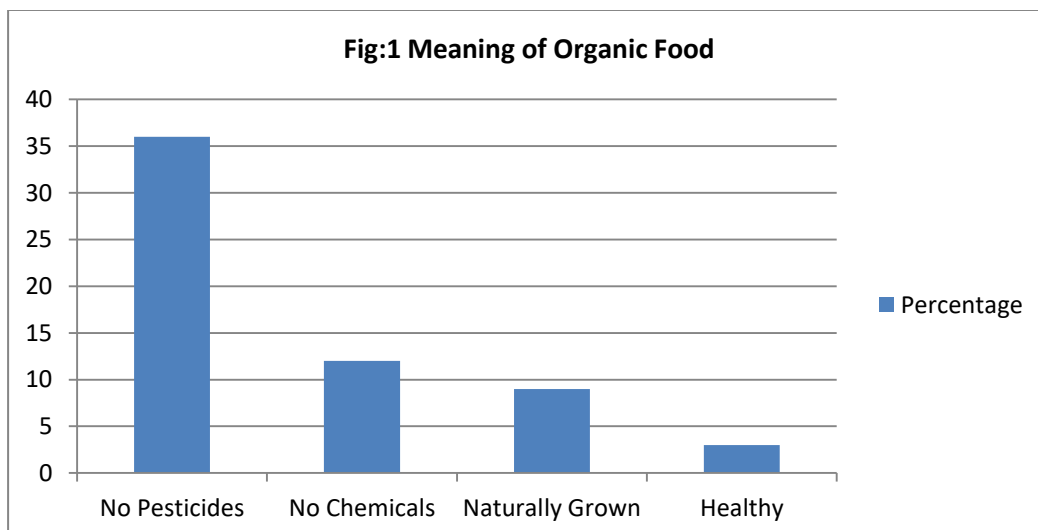
Autonomous Colleges under Bangalore University

SL.NO	NAME OF THE COLLEGES	SAMPLE
1	Jyothi Nivas College	10
2	St. Joseph's College of Arts & Science	10
3	St. Joseph's Evening College	10
4	St. Joseph's College of Commerce	10
5	The National College	10
6	The National College	10
7	Mount Carmel College	10
8	N.M.K.R.V. College for Women	10
9	CMR Institute of Management Studies	10
10	Kristhu Jayanthi College	10
TOTAL SAMPLE SIZE		100

4. ANALYSIS

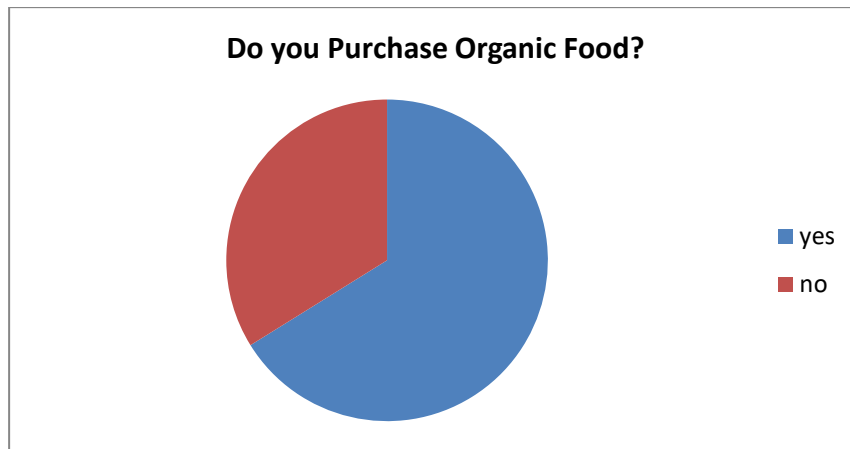
1. What do you think is the meaning of Organic food?

Thirty six students understand that organic food has no pesticides, and the remaining students are spread over the other options, which show that students are not clear about it.



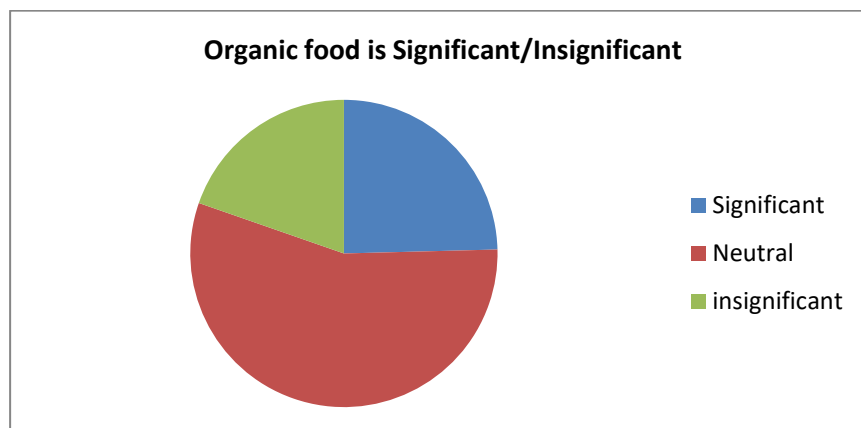
2. Do you purchase and/or consume organic foods?

More than half of the students purchase and consume organic food; this shows the level of awareness among the students.



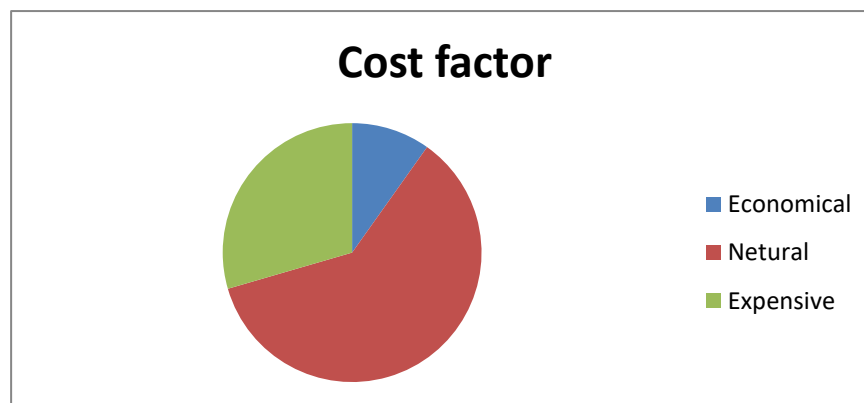
3. "I consume (or do not consume) organic food because to me, it is significant/insignificant"

Fifty percentages of students do not understand the importance or significance of Organic food. This shows that the students are unaware to understand the ill effects of conventional food on the health.



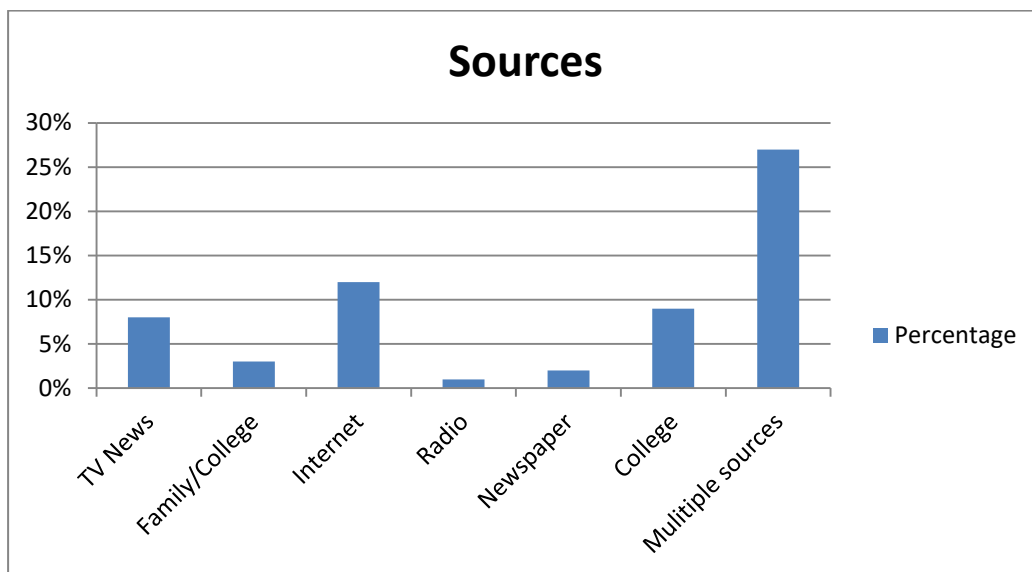
4. "I consume (or do not consume) organic food because to me, it is economical/expensive"

The Price factor of Organic Food can also be the major factor for the students not opting for the purchase.



5. Where do you get your food safety and nutritional updates from?

The below graph shows the different sources that can act as channel of promotion to educate and create awareness about the importance of Organic Food.



5. FINDINGS AND SUGGESTION

It is important to know that overall, the college student's perception towards organic food is fairly neutral as they are raised in urban and suburban areas. As a concern for the future health and environmental aspects, it is important to educate the students about the corns of conventional food and lead them to sustainable agriculture.

Autonomous colleges are discipline driven in both their curriculum and research agendas. It is the time for interdisciplinary approaches to undergraduate curriculum. Sustainable agriculture (SA) education is beginning to emerge as a way to address many complex social and environmental problems. Colleges must develop a curriculum which caters to teaching the students about organic farming. Students must have knowledge of natural and social science disciplines relating to the agri-food system.

Students learn through experiences that link the classroom to field work, engaging a broad range activity, having different teaching and learning approaches, including many practical experiences.

As Autonomous colleges have the liberty to frame their Academics, it is important to introduce organic farming and the importance of organic products in the Curriculum.

Below is the sample of curriculum developed for Commerce faculty.

Apart from the regular Curriculum, Organic Food Product or it can be termed as Organic farming Education must be included.

COURSE STRUCTURE FOR B.COM SUBJECTS AND THE POSSIBILITIES TO INTRODUCE ORGANIC FARMING	
I SEM OR II SEM	Managerial Economics – project can be given on Demand Survey for Organic Products.
III SEM	Corporate Law – Assignment on the company law provisions for organic farming and farmers. Marketing Management- Project on Marketing Implications for organic products.
IV SEM	Entrepreneurship and venture capital – Project on how to venture as an organic farmer. International Business Environment – Assignment on understanding the International concept of organic farming. Environmental Studies- (Mandatory Subject- Include Organic Farming
VI SEM	It can be included as an elective paper or one of the chapters under Marketing Elective.
B.com(Professional)	Mandatory Subject- Indian Constitution and Human rights. Mandatory project-Organic Industry oriented Research project.
B.com(Industry Integrated)	II Sem- Internet technology and E-Commerce (Assignment on how organic products can be promoted and marketed online)

	III Sem- Compulsory Internship (Summer Internship Report on Organic Farming)
	V Sem- Services Management- Assignment on introducing services agencies to aid organic product marketing.
	VI Sem- Dissertation Project on Organic Farming.
Elective Paper	Organic Farming as a module can be included in any of the following elective papers: <ul style="list-style-type: none"> • Product and Brand management • Consumer Behavior • International Marketing • Retail and Distribution Management • Advertising Management • Media Management

Apart from the regular course curriculum, Organic Farming Education can be included has an extension course in the following ways:

- Value Education Classes
- Center For Extended Education(Credit Courses)
- Choice Based Credit System (CBCS) - Interdisciplinary classes.

Considering the Education of future Generation in relation to the importance of Organic Food will Increase the level of awareness among the prospective consumers about the conventional consumption and the need for Organic Food consumption.

To develop a habit of consuming organic food must be inculcated in the minds of younger generation through which they get accustomed in understanding the healthy food habits along with being environmentally conscious.

Therefore Educational institutions must take initiatives to introduce a curriculum to create organic food awareness among the students.

The above mentioned table suggests a curriculum design proposed for a Higher Education course. The Curriculum is designed keeping in mind the Commerce Graduate Course having Semester System. The concept of Organic Food can be introduced as a Project, assignment..etc

Organic Food awareness program can be creating using different levels of approach like studying the Demand for Organic Food Products, Understanding the legal/ Government Support towards Organic Food, Marketing implications of Organic product, technology and Services aid towards marketing organic food products. Students can also be enlightened about organic food through summer internship projects.

6. CONCLUSION

The study has made to understand the importance of bringing the food education concept to the College for students, adolescents, and young adults in the city. In the present era, students are not learning about their food and nutrition. According to Jamie Oliver's Food Revolution, in the United States alone, elementary school students only receive an average of 3.4 hours of food education per year.

The results of the study are however encouraging ,that the students do have some knowledge about organic foods and they get a balanced view of the issues surrounding organic food and this can also assist farmers and organic retailers to market their product more effectively by knowing how many the consumers know about the product.

But it is more important than ever to educate and engage students in the food system, especially as farming population's age. The U.S. Department of Agriculture (USDA) reports that the average age of an American farmer is 57 years old and 60 percent of farmers in the country are over the age of 55. All over the world, the farming population is diminishing, and this is a crucial moment for students to realize the importance of farming , to analyze the consumption pattern and to be involved in all aspects of the food system--from producing and processing food to becoming agronomists at their home space, scientists, chefs, and policy-makers. Jon Previat, Executive Director of The FARM Institute, said it best in an interview with Food Tank: "students spread the fever."

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