Costs, returns and resource use efficiency in organic and inorganic cotton farming in Parbhani district

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ABSTRACT

A survey was conducted during *kharif* season of 2006-2007 at Parbhani district of Maharashtra to find out the economics of cotton grown under organic and inorganic farming. Results revealed that, per hectare production of organic cotton was 19.86 quintal and inorganic cotton was 22.48 quintal. Per hectare gross return was Rs. 54,427.08 and Rs.51, 036.07 for organic and inorganic cotton, respectively. Per hectare net profit of organic cotton farming was Rs. 6,422.95 higher than inorganic cotton. Per hectare total cost required for organic cotton production was Rs.29, 085.38, which was Rs. 32,117.32 less than inorganic cotton production. Price of organic cotton was about 20 % more than inorganic cotton. Output – input ratio for organic and inorganic cotton was 1.87 and 1.58, respectively. Hence, organic cotton production was beneficial than inorganic cotton production.

INTRODUCTION

In India, green revolution has made tremendous achievement in food grain production. During 1950s food grain production was only 50Mt, now it is more than 200Mt. (Ramesh and Manjunatha, 2004). This enormous food grain production is mainly due to increased use of inorganic fertilizers, pesticides, more area under irrigation and use of high yielding varieties. Because of this, soil fertility started to decline due to indiscriminate use of inorganic fertilizers and pesticides ignoring the use of organic manures, thereby causing pollution and nutritional imbalance in soil. Therefore, in this context organic farming is gaining momentum.

The State Department of Agriculture in USA (USDA) defines organic farming as "A production system which largely excludes the use of synthetically compounded fertilizers, pesticides, growth regulators and livestock feed additives to the maximum extent. Feasible organic farming relies on such factors as crop rotation, crop residues, animal manures, legumes, green manures, off farm organic wastes, mechanical cultivation, mineral bearing rock (Rock phosphate, gypsum, Dolomite, Rock potash, bone meal, fishmeal etc.) and biological pest control to maintain soil productivity and tilth to supply nutrients and control insects weeds and other pests (Ramesh and Manjunatha, 2004).

Recently, it is opined by the scientists that, our farming system must be looked into present day agriculture and is advocated that farming system that is ecologically, biologically and socio-economically sound not only involved crop production but is also dependent upon horticulture and vegetable production etc. At its origin, the farming system concept takes care of most important components like water, soil, crops, livestock, labour etc.

Agriculture is carried out mainly through three types of farming systems namely *viz*. Natural Farming System (NFS), Inorganic Farming System (IFS) and Organic Farming System (OFS) characterized by different types of inputs and agricultural management practices used for cultivation of land and production of crop. (Thakur and Sharma, 2005)

In India, organic farming is in a nascent stage. India produces primary organic products and processed foods. Organic products grown in various agro-climatic zones are coffee, tea, spices, fruits, vegetables and cereals as well as honey and cotton. Presently organic animal husbandry, poultry and fisheries do not exist. Domestic organic market(s) and consumer(s) awareness are under developed in India but interest is growing. On the domestic market, organic food is usually sold directly from the farmer or through specialized shops and restaurants. At present, a price premium of about 20-30 % over conventional products can

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