with neutral in reaction (7.2 to7.6 pH). The wheat variety K 307 (Shatabdi) was sown in line through ZT drills from mid to end of November in each year. Results on average basis also reveal that demonstration yield lies in between 10.0 q/ha lower than potential production and higher than farmer's practices. Per cent change in yield over the check had fluctuated over the years in increasing order from 31.8 to 38.9% respectively. A wider technology gap identified during last two years of study than preceding years. However, production year 2010-11 was the only year which recorded maximum grain yield (47.7 q/ha) by narrowing the technological gap (7.30 q/ha) than remaining years. Actual monetary gain of Rs. 7482 per hectare was received by least investment of Rs. 3018 per hectare as an additional cost. It also indicates that a double income can be obtained by adoption of scientific practices as per the need & situations of crop from seeding to harvesting.

SOIL ENZYME ACTIVITIES AS BIOLOGICAL INDICATORS OF SOIL HEALTH

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Abstract

soil enzyme activities have great potential to provide a unique integrative biological assessment of soils and the possibility of assessing the health of the soil biota. Some enzymes only facilitate the breakdown of organic matter (e.g. hydrolase, glucosidase), while others are involved in nutrient mineralization (e.g. amidase, urease, phosphatase, sulfates) With the exception of phosphatase activity, there is no strong evidence that directly relates enzyme activity to nutrient availability or crop production. The soil enzymes are the mediators of organic matter decomposition and soil transformations. Nutrient cycling in soils involves biochemical, chemical and physicochemical reactions. All biochemical reactions are catalyzed by enzymes, hence making enzymes suitable as indicators of biological activity. Enzymes are the indicator of soil biological quality, responding to soil management changes much before other soil quality indicator changes are detectable. In the dynamic climate change era, the influence of climate change on soil productivity can be assessed by monitoring soil enzyme activities as well as changes occurring in soil properties. Thus, knowledge of soil enzymes is essential to design and evaluate new sustainable crop management practices. Soil enzyme activity is a good indicator of agricultural management practices, as well as of the impact of pollution or severe perturbations on soil health, and of the efficacy of remediation activities. Finally, although certainly a promising indicator of soil health, the use of soil enzyme activity requires sound judgment in the interpretation of the data.

RELATIONSHIP BETWEEN ARRIVALS AND PRICES OF WHEAT IN DIFFERENT REGULATED MARKETS OF MADHYA PRADESH

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Abstract

The study has been under take in different grade regulated markets to analysing the pattern of market arrivals and prices in Madhya Pradesh for wheat as it is the main crop of the state. The present investigation is restricted to the four different grade of regulated markets (Krishi UpajMandi) of wheat i.e. Sehore, Mhow, Kalapipal and Katangi, which have been selected randomly from each grade (A, B, C and D Grade) regulated markets in Madhya Pradesh. The arrivals and prices in different grade of regulated markets exposed that there was found weak correlation between arrivals and price in wheat in different months of the year. Whereas the prices increases the arrivals also increases in the market. But it's not true in the in the case of D grade regulated market, which is might be due to lack of facilities in this particular grade of regulated market. Therefore, the policy implication lies in encouraging the farmers to dispose their produce at the opportune time to get good remunerative prices. It requires providing finance to farmers and better storage facilities either at village level or at market level to be created so as to spread the arrivals reasonably in the lean months of the year. Marketers need to design creative solutions like e-marketing to overcome challenges typical of the rural environment such as physical distribution, channel management