

Past versus Future Situations Regarding Cost of Cultivation of Rice Crop in India: Implication to Doubling the Farmers Income

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Abstract

In the present study, the secondary time series data of cost of cultivation and profit of rice crop from 2004-05 to 2014-15 have been taken as endogenous variable with exogenous variables as cost of machine labour (CML), cost of seed(C S), cost of fertilizer & manure(CFAM), cost of insecticides(COI), irrigation charges(IC) and fixed costs(FC). The methodologies, Quantile Regression (QR) and the Box-Jenkins have been applied on the cost of cultivation and profit of rice data. On the basis of findings, it has been observed that by minimizing the variables CS, COI and FC, the profit of rice growers will be maximized as per the QR model(s). Further, the time series model(s) have been developed in order to forecast the cost of cultivation of rice crop for India. The best model for cost of cultivation was ARIMA (0 1 1) on the basis of AIC and SBIC criterion. The forecasted value for the cost of cultivation of rice crop for the year 2020-21 shall be Rs 60495.90 per hectare. In addition, the gain in profit percentage w.r.t cost have also been calculated and has been observed that the gain in profit percentage of rice crop for the forecasted year 2020-21 on the basis of proposed model shall be 120.08 percent. Rice production in India is an important part of the national economy Major cropping areas in India. The Production expanded from 53.6 million tons in FY 1980 to 74.6 million tons in year 1990, a 39 percent expansion throughout the decade. By year 1992, rice creation had arrived at 181.9 kg per individual, second on the planet just to China with its 182 kg . Since 1950 the expansion has been in excess of 350 percent. The greater part of this expansion was the aftereffect of an increment in yields; the quantity of hectares didn't increment during this period. Yields expanded from 1,336 kilograms for every hectare in FY 1980 to 1,751 kilograms for every hectare in FY 1990. The per-hectare yield expanded in excess of 262 percent somewhere in the range of 1950 and 1992. The nation's rice creation had declined to 89.14 million tons in 2009-10 harvest years (July–June) from record 99.18 million tons in the earlier year because of extreme dry season that influenced practically 50% of the nation. India could accomplish a record rice creation of 100 million tons in 2010-11 harvest a long

time on the rear of better rainstorm this year. The India's rice creation came to a record high of 104.32 million tons in 2011-2012 yield years (July–June).

