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Spot and Futures Markets of Agricultural Commodities in India: Analysis of Price Integration and Volatility

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ABSTRACT

This paper deals with spot and futures price volatility of selected agricultural crops by analyzing their market integration. This helps us to understand whether spot and futures market integration explains price stability in both the markets of commodities and their similarities and differences across crops. The co-integration result found to be significant for chana, pepper, rubber, mustard seed and refreshed soy oil and no co-integrating relationship is found for guarseed. This means that the long run relation between prices exists for commodities except guar seed. The result of Granger test detects unidirectional Granger causality from futures to spot markets for pepper, mustard seed and refreshed soy oil and spot to futures markets for rubber. Bidirectional Granger causality was found in case of chana and no Granger causality was found in the case of guarseed. Volatility (Coefficient of variation is used) analysis of commodity prices show that futures market price volatility is higher than spot market for guar seed, pepper, rubber, mustard seed and spot market price volatility is higher than futures market for chana and refreshed soyoil.

Keywords: Price volatility, Market integration, Futures trading, Agriculture, India

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Though commodity futures markets are considered as risk sharing mechanisms by which commodity producers can hedge their price risk[1], its relationship with spot markets and benefits to commodity producers are intensely debated. In India, there exist contesting views on the relationship between spot and futures markets of agricultural commodities. A set of studies argue that futures market reduces spot market price volatility[2] while other set of studies opposes this view[3]. The argument that futures trading affects spot markets by increasing price volatility in spot market is based on the assumption that futures markets are thin and spot traders tend to follow price signals from futures markets[4]. It is also argued that futures market is dominated by speculative interests driving the prices away from underlying fundamentals in the spot market (Sahadevan, 2008). Speculation in the futures market and its destabilizing effect on spot market has also often led to government intervention to ensure effective functioning of commodity derivatives across the world[5]. This has also happened in the Indian context where ban of agricultural commodities from futures trading has taken place many times because

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