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A Study of Understanding Agrarian Impasse in Bihar

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ABSTRACT

After a century-long stagnation, agriculture in eastern India experienced a turnaround in 1980s with rapid groundwater development. Especially, West Bengal and eastern Uttar Pradesh performed very well with growth rates in production becoming as high as 4-6 per cent during 1981-82 to 1991-92. Agricultural production and productivity levels in the 'middle state' Bihar also witnessed a growth higher than the long-term growth trend of the state [Pandey and Pal 2000]. Yet, agriculture in the state grew at a slower pace, over a smaller base, for a shorter time after which the momentum was lost in spite of an impressive expansion of tube well irrigation.

Keywords : Agriculture, Tubewell Irrigation, And Crop-Economics

I. INTRODUCTION

This paper tries to explore the reasons for this relapse. The first section of the paper presents a review of literature available from the existing body of research on reasons for the persistent agrarian stagnation in eastern India. The second section explores the latest trends in tubewell irrigation and discusses the structure of water markets and their productivity and equity implications based on data from a primary survey. The third section of the paper discusses various macroeconomic factors which limit farmers' ability to leverage the newly created pump capital to increase crop productivity and raise incomes. This understanding is based on the knowledge of larger reality of agricultural scenario in Bihar and observations from field survey. The last and the concluding section discusses various alternatives for raising crops yield and farm incomes based on studies of well-performing farms in the region.

II. Methodology Used in Study

The study involved an extensive review of literature available on issues of agrarian structure and production relations, agricultural growth, groundwater development and water markets in eastern India and primary data collection using focused group discussions and interview schedules. The primary data were collected from field studies carried out in eight villages from six districts of Bihar in 2003. Two of our villages are from Nalanda and Bhabhua districts of south Bihar while the rest six are from districts, viz, Muzaffarpur, Saran Gopalganj, Darbhanga and Madhubani in north Bihar. While Darbhanga and Madhubani are agriculturally least developed, Nalanda and Bhabhua are agriculturally the most developed districts. Muzaffarpur, Saran and Gopalganj fall in between these two extremes. This paper is an attempt to distill the lessons learned during the fieldwork in these eight villages and put them in

perspective of the larger reality of agricultural development in Bihar.

III. Declining Output-Input Price Ratio

This issue was raised repeatedly in focus group discussions with farmers during the fieldwork and in all the eight villages covered in the study the response was unanimous: sharp increase in diesel prices is the principal factor affecting agricultural growth. Today diesel has replaced muscle as the main motive power in agriculture and its price has increased more than three times in last eight years (from 1995 to 2003) resulting in a corresponding increase in costs of irrigation, land preparation and threshing (Table 3). Since diesel is available only on cash payment, there has been a substantial increase in the cash outlay of agriculture with increased dieselization and rising diesel prices, resulting in a resource squeeze in these credit starved villages.

IV. Decapitalisation of the Rural Areas

Reduced rate of public capital formation and virtual collapse of infrastructure (such as rural roads, power supply, major and medium irrigation systems, sugar mills, etc) has further worsened the situation. Empirical results for a period 1980-98 of an all India level study suggest that gross domestic product of agriculture (GDPA) is strongly influenced by: (a) capital formation in agriculture; and (b) terms of trade [Gulati and Bathila 2001]. Traditionally, public capital formation in agriculture in India has been mainly in form of major and medium irrigation systems, whereas in the 1970s and 1980s the focus shifted towards expanding well irrigation by providing increasing amount of electricity to agricultural sector [Dhawan 1996].

With all these structural and macroeconomic constraints facing agriculture in Bihar, what are the options available for an individual farmer to expand his production and profit margins? To understand this, an analysis of best practices in agriculture was carried out in one of our study villages, in which the agricultural practices and crop-economics of a small group of farmers who achieved the highest productivity levels were studied and compared with that of the modal group of farmers. The comparison revealed two important points. First, the yield obtained by most of the farmers was just enough to cover their input costs and there was hardly any surplus left even for consumption, let alone capital formation. This resulted in continued poverty and stagnation of agrarian economy. Also, with just 28 per cent increase in cost of cultivation, the productivity increased by 85 per cent and the net returns increased by more than 250 per cent. This means that most of the farmers in Bihar are practising what Tushaar Shah calls 'cost-covering agriculture' and from this point if the crop yields are raised even by 20-25 per cent, the net incomes of farm households would increase by 60-70 per cent making a significant dent in rural poverty in the state. Second, farmers who made more intensive use of inputs and incurred higher costs towards cultivation were more efficient and competitive producers with much lower per quintal cost of cultivation. This shows that input intensification to increase yields is one possible way of reducing per quintal cost of production and increasing profit margins. IWMI research in north China shows that it is through relentless intensification and raising crop yields that Chinese farmers have retained the viability of their farming in the face of declining global food grain prices and rising input costs and local taxes [Shah, Giordano and Wang 2004].

Rural electrification is one state initiative which can provide major boost to agriculture in Bihar. It can bring down the cost of irrigation and improve the working capital situation of farmers. It can also trigger growth in storage and processing infrastructure which will permit value addition and the much needed crop diversification in the State. Cheaper access to irrigation with electricity will also encourage farmers

to bring larger areas under summer crops where higher yields can be obtained under more controlled conditions.

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