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Agricultural surplus production and establishment of agro-based industries are indicators of rural development: A case study of Sonipat District, Haryana

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Abstract

Agriculture occupies the most vital part in the Indian economy and it is the prime resource of the nation. In present study main attention is focused on agricultural surplus production & establishment of agro-based industries for analyzing the indicators of rural development in the study area. Agricultural surplus production is key to agricultural based industrial development and which leads to rural development. Rural population and crops grown have deep rooted relationships. So, surplus agricultural production has been calculated on rural population of study area. As food crops provides the maximum calories in the human diet, nine food crops have been selected for the present study, which are rice, bajra, maize, wheat, barley, gram, pulses other than gram, fruits & vegetables and sugar cane. The food crops were converted into calories according to nutritive values of Indian food, worked by the Indian Council of Medical Research, Hyderabad. The total per capita surplus calories has been calculated in simple manner, calories other than food crops like milk etc. has been left out for calculating the surplus per capita calories. Thus only 1982 calories, the standard requirements of per capita are taken into account for surplus calories. The study area has surplus per capita calories supplied by total food crops in 1970-71 was 2685.34, which increased to 4758.34 in 2000-01 and shows a 77.23% positive change. Crop rising not only significantly contributes to the basket of agricultural products to feed the people but it provides raw material to many industries called agro-based industries. The establishment of agro-based industries is the indicator of rural development. In recent years Haryana has emerged as one of the most progressive state of India in the field of agriculture. The study area is a part of Haryana state, dominated by agriculture and plenty of raw materials is available for agro-based industries. In the study area industrial development is mainly based on agro-based industries. An increase of more than 400% has been noticed in establishment of agro-based industries & same trend found persons were engaged in these industries from 1970-71 to 2000-01 in the Sonipat district. The major objective of this study is to assess the role of agricultural surplus production & establishment of agro-based industries in rural development in the study area. The present study has been brought out with a view to draw the attention of the authorities concerned on above same.

Keywords: Agricultural surplus production, establishment, agro-based industries, rural development

Introduction

In recent years the strategy of rural development planning is attaining greater importance. The rural development may be defined as a process of enabling the villagers to fulfill their needs especially, physical, economical, social and intellectual (Garg and Jindal, 1989) [2]. The emphasis on rural development in India is understandable. About half a century ago, Ghandi Ji, said, "India lives in villages" and Ch. Charan Singh, said, "India development path passes through villages". Thus it is true even today. So, rural development has recently become a fashionable slogan for national as well as state government. Rural development is a multi-dimensional activity for enrichment of the quality of life in rural areas.

In recent years Haryana has emerged as one of most progressive state of India. There is an illegitimate aspiration of people in rural areas to improve there standard of living and share fruits of development. In this paper an attempt has been made to analyses the role of agricultural surplus production & establishment of agro-based industries in rural development in the study area i.e. Sonipat district.

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Study Area

The study area Sonipat district, is a part of Upper Yamuna Plain which is composed of the deposition of the sediments brought down by Yamuna River. In the area elevations roughly vary between 213 to 235 meters above the mean sea level. The area is flat and has a master slope from north to south. The Yamuna River shares a common boundary of same 49 Kilometer between Uttar Pradesh and Sonipat district. Loam, loamy sand, sandy loam and sandy clay loam soils are found in the area.

It is one of the 22 of Haryana. It lies from 28° 48' 30" to 29° 17' 54" North Latitudes and from 76° 28' 30" to 77° 13' 40" East of Longitudes. The perennial Yamuna River marks the eastern boundary of the district. National Capital Territory, Delhi lies in the south of the study area. It is connected with Panipat district in the north. To its north-west and west is Jind district, and in the south-west Rohtak district is situated. With an area of 2130.81 square Kilometers it occupies 4.82 percent of the total area (44212 square kilometers) of the state and 9th rank among all district of Haryana. According to 2001 census, the district had 4th rank among the all district of the state with 1279175 persons, 695723 males and 583452 females. Out of total 74.87 percents population are resident of rural area.

The economy of the district is primarily agricultural. In the area where land is scarce and labour abundant, and engages about 53.15 percent of working population in agricultural activities. The socio-economic development and the rapid growth of population have led to a marked increase pressure on agricultural land leading to diversification. Out of the 22 districts of Haryana, 7 district fall in National Capital Region, Sonipat is one of them.

Objectives

The present study has been brought out with a view to draw the attention of the authorities concerned and help in future planning for rural development in the area. The major objectives of this study are as follows:-

1. To interpret and to analyses the agricultural surplus production of 1970-71 and 2000-01 in the study area.
2. To assess the role of agricultural surplus production & establishment of agro-based industries in rural development in the study area.

Hypotheses

In order to fulfill the above said objectives, the following hypothesis has been proposed. The Sonipat District having agricultural surplus production and its play a major role to establishment of agro-based industries and rural development in the study area.

Data collection and methodology

Three main approaches to the geographical study of agriculture can be suggested namely, an ecological approach, the land utilization approach and a statistical approach. (Mc Master, 1962) ^[5]. The present context is based on a combination of the second and third approach. District level data has been utilized to interrogate the agricultural surplus production & establishment of agro-based industries in 1970-71 and 2000-2001 in the study area. Data analysis has been done both with the help of statistical tabulation. This analysis is based on secondary

data, which have been collected from published and unpublished sources of various offices. The data in the study has been collected from District Statistical Office, Offices of Kangaroo of Sonipat, Ganaur, Kharkhoda and Gohana Tahsil and Office of Deputy Director Agriculture Sonipat.

Measurement of agricultural surplus production

Agricultural surplus production is key factor of rural development. According to Mahajan (2001) ^[4], (a) the food surplus will help their (rural) reaching down to the poorest of the poor through putting them on productive jobs of capital formation; (b) raise their earning capacity by providing access to these surplus grains, which with enhanced purchasing power would no longer find it difficult to buy; (c) reduce their malnutrition level and thereby encourage them to lead more healthy and purposeful life (d) help the rural areas in creating essential capital assets, the absence of which is currently mainly responsible for their isolation as well as low farm productivity.

For the proper understanding of surplus agricultural production, the analysis of calories available from each crop is necessary. So, surplus agricultural production has been calculated on rural population of study area. The calculation and analysis of calories availability from each crop has been done on the basis of (i) their per hectare yield (ii) agricultural land occupancy (iii) 16.8 percent depreciation for seeds and wastage (Chakravarti, 1971) ^[1] (iv) the differential calorific value of each crop (v) surplus and deficit of calories available from cereals, pulses, fruits and vegetables and sugarcane. Cereals provide more than half of the calories of the human diet in underdeveloped world (world resources) and in the study area food crops provide maximum calories in the human diet (Table 1). So food crops production is the best indicator of agricultural development and the nutritional status of the whole population. An attempt is therefore made here to analyse the nutritional status of the people on the basis of major food crops. Nine food crops have been selected for the present study which, include rice, bajra, maize, wheat, barley, gram, pulses other than gram, fruits & vegetables and sugarcane. The food crops were converted into calories according to the nutritive values of Indian food worked out by the Indian Council of medical Research (Gopalan *et al.*, 1977) ^[3]. The share of individual food crop in total calories available from different crops in the area is given in the Table no.1.

Surplus/Deficit Pattern of Calories

To achieve a proper and true perspective of caloric position it is essential to analysis per capita daily availability of calories and suggested standard requirement of calories for different crops, so that a final balance sheet (Surplus/Deficit) may be prepared. The study area record per capita daily available calories as 6740.34. It may be well compared with 2000 calories available in some villages of eastern U.P. which according to Shafi, (1960) is sufficient for nutrition. Stamp, (1960) advised 2460 calories a day or 900000 per capita per annum as standard nutrition unit. In the study area 2500 calories per capita per day (Gopalan, *et al.*, 1977) ^[3]. Have been taken into account as standard nutritional unit. Surplus/Deficit pattern of calories in the area has been given in the Table 1.

Table 1: Surplus/Deficient of per capita calories in the area

Crops	Standard Requirement	1970-71		2000-01	
		Per capita calories available	+ surplus -deficiency	Per Capita calories available	+ surplus, -deficiency
Cereals	1376	3278.17	+1902.17	6258.28	4882.28
Pulses	239	256.15	+17.15	23.35	-215.65
Fruits & vegetables	272	26.16	-245.84	78.38	-193.62
Sugarcane	95	1106.86	+1011.86	380.33	+285.33
Total	1982	4667.34	+2685.34	6740.34	+4758.34

Establishment of agro-based industries

Indian economy is agriculture dominated that is why economic development problem is necessarily a rural development problem. Rural development can be done by reducing of dependency of rural population on agriculture and for this the only solution is establishment of industries based on agriculture. The agro-based industries are those, which are directly or indirectly related to input-output of agriculture. These industries are mostly dependent on agricultural production. These industries are providing

employment in rural areas. The basis of distinction between small scale industries (SSI) and large & medium industries (L&M) is generally the size, capital resources and labour force of the individual unit. The investment ceiling on plant and machinery is Rs. One crore at present for SSI. The agro-based industries can be categorized into two following categories: (i) L & M and (ii) SSI. The following table illustrated the establishment of agro-based industries in the area in 1970-71 and 2000-01.

Table 2: Size wise agro based Industries in the area (1970-71 & 2000-01)

Size Category	1970-71		2000-01	
	No of units	No of Workers	No of units	No of Workers
Large & medium (L & M)	9	554	45	6400
Small Scale Industries (SSI's) including tiny and cottage units	937	3867	5009	18746

Table 2, Reveals that only nine agro based industries of L & M category were established up to 1970-1971 which increased up to 45 in 2000-01 showing 400% positive change. The same trends has been noted in SSI's (small scale industries) as in 1970-1971 there were only 937 units which increased up to 5009 in 2000-2001 and marked 435% positive change. When we come to know the position of workers engaged in agro based industries we found that 4421 persons were engaged in these industries. But it increases up to 25146 and shows 469% positive change. The above fact shows that there is a dynamic positive change noted in establishment of agro-based industries in the area during 1970-71 and 2000-2001.

From the viewpoint of rural development, agro-based industries of the area can be divided into two categories as follow: 1) Processing industries and 2) need based industries.

Processing industries

It has already seen that there are surplus productions in majority of crops (Table. 1) and the total surplus produce will have to be processed to produce consumable goods. Agricultural commodities, which enter trade, should be graded and those entering export trades should be compulsorily graded. To ensure high quality of the processed products agricultural commodities processing industries should be established. Agro-based processing industries in the area are as; i) Sugarcane based industries- One sugar mill & 664 (SSI) gur & khandasari industries working in the area in the year 2000-2001 and 7965 employed engaged ii) Cereal based industries. There are 5 large scale rice mills, 345 mini rice-pounding units, 686 mini flour mills & 40 small-scale bakery units working in the area in the year 2000-2001 in which 2031 person employed. iii) Horticulture based industries. In recent years there is a dynamic change in cropped area under fruits & vegetables in the area, which provide raw material for

industries. There is only one large industry and 140 SSI working in the area in the year 2000-2001 in which 856 person employed. iv) Cotton based industries. There are 18 large & medium industries and 552 SSI working in the area in the year 2000-2001 in which 4774 person employed. v) Other Processing industries. Many other processing industries based on crops and livestock are established in the area. There are 3 milk product industries, 2 milk chilling plant, 6 leather (L&M) and 174 (SSI), 112 meat processing (SSI), 9 bone meal (SSI) 101 dal mill (SSI), one rice & jute bag (L&M I), one juice & jams (L&M I), Oil & Vanaspati Ghee (L&M), 49 oil expeller (SSI), 27 woolen textile (SSI), 411 Ban & rope (SSI), working in the area in the year 2000-2001 in which 5630 person employed.

Need based industries

Need based industries including all types of agricultural implement manufacturing & repair unit and bio-chemical inputs production units to promote the agriculture. There are 3 large & medium industries and 847 SSI working in the area in the year 2000-01 in which 3512 person employed.

Conclusion

Agriculture occupies the most vital part in the economy of an area. Agricultural landscape had undergone considerable transformation during and after green revolution. The most tangible expression of this transformation is agricultural surplus production & establishment of agro-based industries.

This analysis of the agricultural surplus production & establishment of agro-based industries in the study area indicates a definite direction of quantitative as well as qualitative change during 1970-1971 and 2000-2001. Most remarkable feature of the cropping pattern of the study area is a dominant share of food crops in the cropped area. Keeping all the discussion in the mind it can be suggested here that geographical and economic conditions should

prevail to adopt the commercial farming in place of substantial farming.

References

1. Chakravarti AK. Food grain sufficiency in India. Geogr Rev. 1971;60(2).
2. Garg LC, Jindal S. Rural development: A critical appraisal. Sonapat: Nitasha Publications; c1989.
3. Gopalan C, Rama Sastri BV, Balasubramanian SC. Nutritive value of Indian foods. Hyderabad: National Institute of Nutrition, Indian Council of Medical Research; c1977.
4. Mahajan VS. Food surplus and rural capital formation. Yojana. 2001;45(2).
5. McMaster DN. A subsistence crop geography of Uganda. The World Land Survey Occasional Paper No. 2. London: Geographical Publications; c1962.
6. Shafi M. Land utilization in eastern Uttar Pradesh. Aligarh: Aligarh Muslim University; c1960.
7. Stamp LD. Our developing world. London: Geographical Publications; c1960.