ISSN: 2456–5474 RNI No.UPBIL/2016/68367 Vol-2* Issue-12* January- 2018
Innovation The Research Concept

Developmental Processes and Agricultural Potentiality in Gajipur District

Kaustubh N Misra
Associate Professor,
Deptt.of Geography,
Buddha P. G. College,
Kushinagar

Abstract

With the help of agricultural potentiality, regional development system of agricultural backward areas describes. It means the development and developmental process mostly depends in any agricultural backward areas on the agricultural potentiality. In this study a backward district of Eastern Uttar Pradesh named Gajipur has selected and agricultural potentiality and different characteristics of agricultural based backward areas examined and explained in detail. Different types of cereals, cash and fruit crops potentiality described block-wise in the district. Then total potentiality of the district has explained. Not only this, at the end, it has also described that what is the potentiality of a developmental block?

Keywords: Blockwise, Developmental, Production, Agricultural, Backward, Potentiality, Cash Crops, Fruit Crops, Agricultural Population

Introduction

Agricultural potentiality represents the actual position of regional development of a backward area. If the production is high and there is more possibility to increase production, it is positive indication of backward area development. If the production is high and there is less possibility to increase production, it is negative indication of backward area development. Increase or further increase of production depends on the potentiality. The potentiality position be may explained in five stages as follows –

1. If the production is low and there is more chance to increase production– Lower Positive Indication (LPI).
2. If the production is general (supply-demand equal) and there is more chance to increase production– Moderate Positive Indication (MPI).
3. If the production is high (more production than demand) and there is more chance to increase production– High Positive Indication (HPI).
4. If the production is very low and there is limited (not at the level of demand) chance to increase production– Moderate Negative Indication (MNI).
5. If the production is very high and there is no chance to increase production – High Negative Indication (HNI).

So, the either side of the aim of this study is to understand and evalute the agricultural potentiality of Gajipur district. Where there is high population density, low literacy rate, low per capita income, higher dependency on agriculture and scarcity of infrastructure. In this study the statistical method has been used.

Aim of the Study

The aim of the study is to understand and evaluate the potentiality of a backward district of Eastern Uttar Pradesh on which the total development process depends. Because of this the district Gajipur has selected. On the basis of primary and secondary both the data agricultural potentiality has evaluated and on this basis conclusion derives.

Study Area

Gajipur district has the location, advantageous part of Eastern Uttar Pradesh. It extends from 25^0–19' to 25^0–54' north latitudes to 83^0–04' to 83^0–58' east longitudes and comprises an area of 3377 square kilometer with total population of 3169500 and density 916 person/square km. Male female ratio is 974:1000. Literacy is 61.00 percent, while female 44.39 and male literacy is 74.45 percent. (2011). It touches Mau and Ballia in the North, state of Bihar in the East; district of Jaunpur and Azamgarh in the

west and Varanasi, Chandauli district in the south, while the river Ganga and the Karmanasa makes its natural boundary. The district situated on the East boundary of Uttar Pradesh, dominated by agriculture and effected by holy river Ganga. There are 263 thousand hectare lands are under agriculture, in which 124 thousand hectares are under single cropped area and 196 thousand hectare are under irrigation. Total workers are 27 percent according to 2011 census. In which 53.2 percent farmers, 26.00 percent agricultural laborers, 5.40 percent small scale industrialist and business workers, 10 percent are engaged in transport and communication etc. The region is basically rich in agriculture. The soil of the region is highly calcareous. The soil find in the region are sandy, loamy, light clayee and user. Paddy is grown mostly on clayee and soil, which is locally known as matiyari sandy loam; particularly suited for Rabi cultivation. Due to geographical and agricultural uniqueness this district has been selected.

Data and Methodology

To know about the agricultural potentiality, differences between production and per capita calories consumption data and methodology are the best method, but it is difficult and requires tedious scientific apparatus based calculation. Therefore per capita gross agricultural production and per capita gross agricultural consumption has used for the calculation of agro industrial potentiality. There are lot of differences occur between (manufacturing industries) and agro-industries. Land, capital, labor, raw-material, transport, market etc., bears very important role in manufacturing industry, but in agro-industry only raw material based agricultural products bears important role and other elements are not so important in this respect, not in position to disturb agro industries if agricultural products are available in sufficient quantity.

Discussion

For this purpose following formula has used-

Potentiality of Cereals

According to above method crop-wise potentiality, total potentiality and block-wise potentiality is as follows–

In this study, first potentialities of each crops have been calculating to know the importance of each crops.

Potentiality of Cereal Crops

Table 1

Blocks	Rice	Wheat	Maize	Barley	Bajra	Jwar
Jakhania	.043	.039	.016	.002	.003	.003
Manhari	.035	.035	.011	.006	.006	.003
Sadat	.050	.046	.006	.008	.005	.004
Saidpur	.069	.038	.013	.005	.004	.005
Deokali	.046	.044	.007	.003	.005	.003
Birano	.048	.046	.013	.006	.007	.008
Mardah	.043	.042	.011	.002	.003	.003
Gajipur	.025	.039	.011	.007	.001	.004
Karanda	.032	.030	.008	.002	.002	.002
Kasimbad	.030	.030	.003	.004	.002	.003
Barachawer	.027	.002	.024	.012	.006	.003
Mohammadabad	.045	.043	.012	.009	.003	.008
Bhanwerkol	.041	.051	.010	.003	.005	.004
Jamania	.037	.049	.013	.014	.007	.006
Rewatipur	.042	.053	.021	.013	.002	.003
Bhadaura	.036	.046	.019	.008	.010	.005
District	**.039**	**.042**	**.013**	**.007**	**.005**	**.004**

Source: Data obtained from District Statistical Magazine, verified in the field before calculation

Cereals Potentiality Analysis

Rice is the main food crop in Gajipur district. Wheat is also dominated here to fulful the food needs. Potentiality of rice crop in the region is .039. Rewatipur, Bhanwerkol, Mohamadabad, Mardah, Birano, Deokali, Saidpur, Sadat and Jakhania development blocks have more potentiality than the regions' average. Potentiality of wheat crop in Gajipur is .042. Blocks Bhadaura, Rewatipur, Jamania, Bhanwerkol, Mohamadabad, Birano, Deokali and Sadat have more potentiality than the regions' average, while Barachawer, Kasimabad, Karanda, Gajipur, Mardah, Saidpur, Manihari and Jakhania have the less potentiality than the average. The case of Maize, Gajipur has .011 potentialities. The blocks have more than average potentialities are– Bhadaura, Rewatipur, Barachawer, Jakhania, Jamania and Saidpur, The lowest potentiality is .003 in Kasimabad development block.

In Gajipur district as Maize, barley is also grown as millet crop. The district potentiality of barley is .007. Blocks which are below to the average potentiality are– Bhanwerkol, Kasimabad, Karanda, Mardah, Birano, Deokali, Saidpur, Manihari and Jakhania? It is a known fact that among the cereals, wheat and rice dominates everywhere in the district. The potentiality of Bajra is .005 in the district. Bhanwerkol, Baranchawer and Birano have the average potentiality than the others. As Bajra, Jwar also a millet crop and not bear an important role like wheat and rice in the region and it has .004 potentialities in the region.

Potentiality of Cash Crops
Table-2

Blocks	Oilseeds	Pulses	Sugarcane	Tobacco	Potato
Jakhania	.002	.012	.097	.019	.016
Manhari	.003	.149	.011	.058	.025
Sadat	.004	.275	.022	.078	.034
Saidpur	.003	.386	.016	.047	.029
Deokali	.003	.329	.008	.044	.042
Birano	.004	.015	.510	.089	.045
Mardah	.003	.012	.365	.048	.033
Gajipur	.002	.004	.522	.011	.034
Karanda	.002	.007	.445	.030	.031
Kasimbad	.001	.003	.325	.015	.011
Barachawer	.002	.453	.002	.037	.021
Mohammadabad	.003	.011	.360	.043	.029
Bhanwerkol	.003	.098	.096	.044	.019
Jamania	.005	.040	.240	.053	.029
Rewatipur	. 004	.202	.098	.057	.037
Bhadaura	.007	.086	.182	.042	.039
District	**.005**	**.130**	**.206**	**.045**	**.030**

Source: - Data obtained from District Statistical Magazine, verified in the field before calculation.

Cash Crops Potentiality Analysis

Oilseed is the very important cash crop, which gives more return than other cash crops. The potentiality of oilseed is very low .003. Highest potentiality of oilseed is in Bhadaura development block with .007 potentiality and lowest is in Kasimabad block. Average potentiality of pulses in the region is .130, which is nearer to Manihari block. The highest potentiality found in Barachawer block and Saidpur, Deokali, Sadat and Rewatipur follow the descending order. It is a known fact that in northern India pulses are the important source of protein for vegetarians.

The highest potentiality of sugarcane .522, found in Gajipur followed by Birano, Karanda, Mohamadabad, Kasimabad, Jamania, Bhadaura, Rewatipur, Jakhania and Bhanwerkol. The average district potentiality is .206 and development block Jamania bears near about the average potentiality of the district with .240. Tobacco is an important cash crop in the district, produces exclusively in the region. Potentiality of tobacco is .045 in the region. After tobacco, potato is the second important cash crop in this region. Highest potentiality of this cash crop found in Birano block (.045) and Deokali, Bhadaura, Rewatipur, Gajipur, Sadat, Mardah, Jamania and Mohamadabad followed by Birano in descending order. Average potentiality of this cash crop is .030 and Jamania, Mohamadabad, Saidpur and Karanda bears the average position.

Potentiality of Fruit Crops
Table 3

Blocks	Banana	Lichi	Mango
Jakhania	0.406	.004	.002
Manhari	0.271	.005	.003
Sadat	0.367	.008	.004
Saidpur	0.719	.006	.003
Deokali	0.717	.005	.003
Birano	0.299	.007	.004
Mardah	0.386	.008	.005
Gajipur	0.834	.005	.008
Karanda	0.747	.008	.004
Kasimbad	0.391	.005	.003
Barachawer	1.708	.003	.003
Mohammadabad	0.488	.006	.004
Bhanwerkol	0.400	0.013	0.009
Jamania	0.386	0.010	0.007
Rewatipur	0.275	0.008	0.010
Bhadaura	0.572	0.009	0.006
District	0.560	0.007	0.005

Source: Data obtained from District Statistical Magazine, verified in the field before calculation.

Fruit Crops Potentiality Analysis

It may be said, that among all fruits, banana dominated in the region. Highest banana potentiality found in Barachawer development block (1.708) followed by Gajipur, Karanda, Saidpur, Deokali, Bhadaura, Mohamadabad and Bhanwerkol; while the lowest potentiality found in Manihari, followed by Rewatipur, Sadat and Kasimabad blocks. District's Lichi potentiality is .007. Highest potentiality found in Bhanwerkol followed by Jamania, Bhadaura, Sadat,

Mardah, Karanda, Rewatipur and Birano. Lichi production in this district is not much popular as banana. Highest lichi potentiality is .013 and lowest is .003. Highest mango potentiality in the district is in Rewatipur block .010, followed by Bhanwerkol, Gajipur, Jamania, Bhadaura and Mardah, while lowest potentiality is in Jakhania block .002, followed by Manihari, Saidpur, Deokali, Kasimabad and Barachawer.

Potentiality of Different Crops in the District
Table-4

Crops	Potentiality	Crops	Potentiality
Rice	.039	Oilseeds	.003
Wheat	.042	Sugarcane	.206
Maize	.013	Tobacco	.045
Barley	.007	Potato	.030
Bajra	.005	Banana	.560
Jwar	.004	Lichi	.007
Pulses	.130	Mango	.005

Source: Data obtained from District Statistical Magazine, verified in the field before calculation.

Analysis of Different Crops Potentiality

1. Sugarcane has the highest potentiality among all the crops, while oilseeds have the lowest potentiality.
2. Among the cereals, rice and wheat dominated with .039 and .042 potentialities respectively, while bajra and jwar has the lowest potentiality with .005 and .004 each.
3. The Highest and lowest potentiality both are found in cash crops.
4. Among all the fruit crops banana has the highest and mango has the lowest potentiality.
5. The lowest potentiality of cereal crop is .004.
6. The highest cereal potentiality is .042, while in cash and fruit crop potentiality is .206 and .560 respectively.

Block-wise total potentiality
Table – 5

Blocks	Potentiality	Blocks	Potentiality
Jakhania	0.664	Karanda	1.350
Manhari	0.618	Kasimabad	0.826
Sadat	0.911	Barachawer	2.303
Saidpur	1.331	Mohamadabad	1.062
Deokali	1.259	Bhanwerkol	0.796
Birano	1.101	Jamania	0.896
Mardah	0.964	Rewatipur	0.825
Gajipur	1.507	Bhadaura	1.067

Source: Data obtained from District Statistical Magazine, verified in the field before calculation.

Blcok-wise Total Potentiality Analysis

1. Among all the blocks Barachawer has the highest potentiality 2.323 and Manihari block has the lowest 0.625.
2. It is remarkable that only banana increases the potentiality of Barachawer block except low and lower potentiality of other crops.
3. According to the above conclusion– Saidpur, Deokali, Birano, Gajipur, Karanda, Barachawer, Mohamadabad and Bhadaura blocks have the surpluses in agricultural products with the potentiality 1.331, 1.259, 1.101, 1.507, 1.350, 2.303, 1.062 and 1.067 respectively.
4. Above calculation shows that the blocks– Jakhania, Manihari, Sadat, Mardah, Kasimabad, Bhanwerkol, Jamania and Rewatipur have deficiency in agricultural products with lower potentiality. So the Gajipur District may be divided into three potential zones.

High Potential Zone (Above – 1.200)
Potential Zone (1.201-0.800)
Low Potentiality Zone (0.800-Below)

Thus the emerging structure of Agro-Processing System in India and of course in Gajipur district is such that the unregistered segment continues to be important, but it is declining relatively and within Agro-Processing System, industries involving higher value addition has became more important as far as the growth of all Agro-Processing Systems concerned.

Conclusion

In most of the backward areas, lower positive indication (LPI) have been found, therefore in those areas like Gajipujr, Agro-based-economic-transformation (ABET) needs and it can be achieved with the help of following stages of (ABET). If there is more chance to increase production.

First Stage

This stage concerned with the infrastructure facilities – like economic, water management, transport and communication, power, market, institutional facilities. The technological availability according to the need are also necessary for the concrete establishment of infrastructure base like– modern fertilizers and implementation of all these.

Second Stage

The work of acceleration of productivity should be done. For this purpose agricultural diversity and eco-friendly intensity, balanced use of modern & bio-technological inputs; commercial agriculture, grain cash farming and live-stock rearing; substantial increase of per land yield and per capita production; reasonable price structure; stable and controlled pricing system like activities should be into action.

Third Stage

Creation of surpluses through diversities of agriculture for agricultural population dynamism is necessary. This action should operate in different type of farming like cereals, cash crops, vegetable crops, fruit and flower and every possible crop, which can be produced in the particular area of region like Gajipur.

Fourth Stage

This phase will complete after the creativity for proper commodity flow, distributive activities, storage and cold-storage efficient and frequent transport, according to the nature of goods; provision of grain & non-grain mandis; provision of transit centers for fright and passengers; upgrading transport facilities at different level like system should be develop.

Fifth Stage

Fifth stage related to; create a system of agro-business activities. In this system farm based processing unit's development; production supporting unit's development and technical training institutions development are necessary to activate and promote

any agro-business system in agricultural based backward areas.

Sixth Stage

In every agriculture dominant area or region, formation of agro based spatial organization (ABSO) needs for further backward is development and for this purpose production and non-production groups development is necessary. In production group-primary, secondary, tertiary and quaternary groups and in non-production group-socio-cultural, economic and infrastructural and money factor based groups should be developed.

References

1. *District Census Handbook (1981 & 1991): Fourth Series Uttar Pradesh (Gajipur District), Pages 12-17.*
2. *Yadav, S.M. (1997): Rural settlement Patterns, Radha Publications, New Delhi, 110002, Pages 29, 31-65.*
3. *Chaurasia, R.A. (1988): Agro Industrial Development A strategy, Pages 108-111.*
4. *Misra R.P., Sundaram K.V. (1980): Multi Level Planning and Integrated Rural Development in India, Heritage Publishers, New Delhi. Page 27-28.*
5. *Misra, K.N. (2007): Agro-Industrial Development in Indian Developing Economy, Northern Book Centre, New Delhi. Pages 17-205*.