

## Crop Combination Regions in Etah District: A Geographical Analysis

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### Abstract:

The research of the cropping pattern in the study area indicates that Kharif, which is also referred to as summer monsoon crops, are usually sown in June or July and reaped in October or November. Rabi crops, in contrast, refer to winter season crops that are sown in October or November and reaped in March or April. Collectively, these two categories of crops encompass over 98 percent of the whole cultivated land, leaving virtually no space for Zaid crops, which are cultivated from March to June. Practicing the simultaneous cultivation of many crops on the same piece of arable land, also known as combination crops, and harvesting them in succession is a highly intriguing part of cropping patterns.

The district's administrative subdivisions consist of five Tahsils, namely Etah, Kasganj, Patiyali, Aliganj, and Jalesar. The Etah district comprises a total of 15 Blocks, namely Kasganj Amapur, Sahawar, Soron, Shitalpur, Sakit, Nidhauri Kalan, Marehra, Patiyali, Sidhpura, Ganjdudwara, Aliganj, Jaithra, Awagarh, and Jalesar.

The analysis of the land area in the Etah district is mainly influenced by the interaction between physio-economic parameters, which are obtained from the general land use pattern, and the historical and current form of land use in different categories. This analysis also considers the economic value generated by each category of land. The agricultural farms in the Etah district constitute the main economic aspect of land usage in the district, as evidenced by observations. Therefore, it is inevitable that the importance of the land use region discussed in the subsequent paragraphs will be assessed based on the economic circumstances.

### Introduction:

According to the findings of the cropping pattern analysis conducted in the study area, Kharif crops, also known as Summer monsoon crops, are typically planted in June or July and harvested in October or November. Rabi crops, on the other hand, are winter season crops that are planted in October or November and harvested in March or April.

Together, these two types of crops occupy almost 98 percent of the total area of the cropped land, with almost no area under Zaid crops, which are cropped from March to June. The growing of multiple crops simultaneously on the same plot of arable land, sometimes known as combination crops<sup>1</sup>, and the subsequent harvesting of each crop is one of the most fascinating aspects of cropping pattern.

### **Geographical Background of Study Area:**

Etah District, lying in the heart of Ganga-Yamuna Doab, Etah is the Northeastern district of Agra division. It is bounded on the North by Ganga River, which separate it from the Budaun district; on the West by Aligarh, Hathras, on the south by Firozabad, Mainpuri and on the East by Farrukhabad district. The district lies between  $27^{\circ}18'$  North of latitudes and  $78^{\circ}11'$  East to  $79^{\circ}17'$  East of longitude.<sup>2</sup>

According to the district census hand book 2011, of Etah district, the total area of district is 4446 Sq. Km. The shape of the district roughly triangular. The largest length of the district from South-West to North-East is about 99 Km. and from North to South is about 69 Km. It occupies 16 position among the district of Uttar Pradesh in 2011 ranking in regard of size.<sup>3</sup>

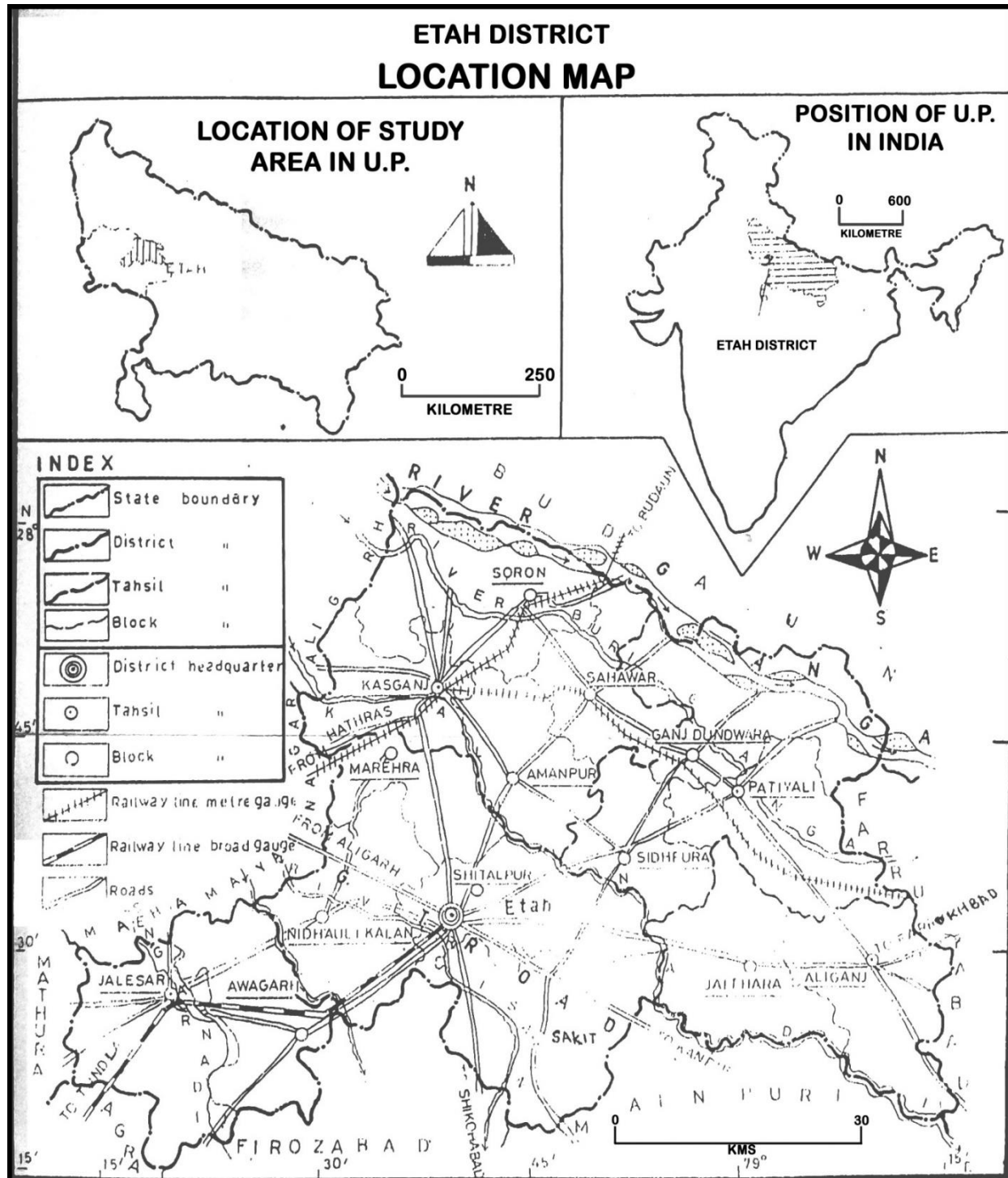
### **Administrative Set-up of Study area:**

The district is divided administratively into five Tahsils, namely-Etah, Kasganj, Patiyali, Aliganj, and Jalesar. There are 15 Blocks in Etah district as well as Kasganj Amapur, Sahawar, Soron, Shitalpur, Sakit, Nidhauri Kalan, Marehra, Patiyali, Sidhpura, Ganjudwara, Aliganj, Jaithra, Awagarh and Jalesar.

**Table No. 1**  
Administrative Set-up

<b>Tehsil</b>	<b>Blocks</b>	<b>Nyay Panchayats</b>	<b>Gram Sabhas</b>	<b>Total Villages</b>
<b>Kasganj</b>	Soron	14	70	141
	Kasganj	13	71	104
	Sahawar	09	43	83
	Amanpur	12	57	97
<b>Total</b>		<b>48</b>	<b>241</b>	<b>424</b>
<b>Patyali</b>	Ganjdundwara	09	55	114
	Patyali	08	45	90
	Sidhpur	12	51	97
<b>Total</b>		<b>29</b>	<b>151</b>	<b>301</b>
<b>Etah</b>	Marehara	08	54	86
	Nidhauri Kalan	09	61	101
	Shitalpur	10	72	128
	Sakit	11	78	175
<b>Total</b>		<b>38</b>	<b>265</b>	<b>490</b>
<b>Aliganj</b>	Jaithara	09	85	93
	Aliganj	10	57	140
<b>Total</b>		<b>19</b>	<b>142</b>	<b>233</b>
<b>Jalesar</b>	Awagarh	07	50	96
	Jalesar	08	56	65
<b>Total</b>		<b>15</b>	<b>106</b>	<b>161</b>
<b>Grand Total</b>		<b>149</b>	<b>905</b>	<b>1610</b>

Source: Administrative Atlas of Uttar Pradesh, Census operation, Lucknow. 2011



In the present study, the study of land use of a region, it is highly needed to give some light on the land use zones of that region because the supreme need is to make most use of the land in order to satisfy the varied legitimate desires of all sections of community. The study of crop combination has become more important to a geographer for the most valuable use of land in the present day. In past, it was estimated by the farmers, which crops will produce first and later on but after some year the farm of variables have been take the calculation of the mention of the crops. The land use zones and the agricultural efficiency in these zones can reflect the proper use of land which is an important phenomenon in a small region like Etah district with a big population, which is entirely dependent on land, for their livelihood.

A personal of the distribution pattern as discussed at length in the proceeding pages reveals the crops are seldom grown in absolute isolation: Various Geographical factors tend to confine these crops associations to rather restricted areas where they get requisite ecological condition.

### **Basis of statistical analysis:**

The study of land area of district Etah is chiefly the outcome of the interaction between physio-economic factors from the overall pattern of land use and the past and present form of land use of different categories of land and their return in economic value. It is observed that the economic aspect of land use in Etah district is reflected mainly in the farms of cultivation. It is therefore, natural that the importance of land use region enumerated here after will be assessed in term of the economic conditions.

The statistical processing of data on block basis the total area of the district is 446014 Hects out of which 127452 Hects or 28.50 % fall in the category of general land use. Though 318562 Hects or 71.42 % of land is net shown area or cultivated land. The double cropped area is only 200661 or 38.64 % of total cultivated land of the district. There are 42434 Hects or 9.51% fallow land in Etah district and 46238 Hects or 10.37% of the total land is not available for cultivation and 3075 Hects or 0.69 % is under forest. It is clear that agriculture is the main use of the land. A personal survey of the distribution pattern and ranking of crops as discussed in detail in the preceding pages reveals that the crops are seldom grown in absolute insulation. They appear in

combination as such it is necessary to study and analyze the closely interrelation crop combination prevalent different parts of the district.<sup>4</sup>

Crop combinations are ultimately juggled by the extent of various crops grown in one season and their sequence followed in the next season.<sup>5</sup> The crop region is defined as the areas differentiated on the basis of areal dominance of crops that the especially related and occur together in varying strength.<sup>6</sup>

**Table No. 2**  
**Etah District : Crop Combination Region 2021-22**

Tehsil	Blocks	Combination	Name of the Crops
Kasganj	Soron	Four Crops	1 Wheat, 2. Millit, 3. Maize, 4. Sugarcane.
	Kasganj	Three Crops	1 Wheat. 2. Millit, 3. Maize
	Sahawar	Five Crops	1 Wheat, 2. Millit, 3. Maize, 4. Rice. 5. Sugarcane
	Amanpur	Five Crops	1 Wheat, 2. Millit, 3. Maize, 4. Rice, 5. Moong
Patyali	Ganjdundwara	Four Crops	1 Wheat, 2. Millit, 3. Maize, 4. Sugarcane.
	Patyali	Five Crops	1 Wheat, 2. Millit, 3. Maize, 4. Rice, 5. Sugarcane
	Sidhpur	Five Crops	1 Wheat, 2. Millit, 3. Maize, 4. Rice, 5. Moong
Etah	Marehara	Five Crops	1 Wheat, 2. Millit, 3. Maize, 4. Mustard, 5. Moong
	Nidhaul Kalan	Six Crops	1 Wheat 2. Millit, 3. Maize, 4. Rice, 5. Mustard, 6. Barley
	Shitalpur	Four Crops	1 Wheat. 2. Millit, 3. Maize 4 Rice
	Sakit	Four Crops	1 Wheat. 2. Millit, 3. Maize 4 Rice
Aliganj	Jaithara	Four Crops	1 Wheat. 2. Millit, 3. Maize 4 Rice
	Aliganj	Four Crops	1 Wheat. 2. Millit, 3. Maize 4 Tobacco
Jalesar	Awagarh	Four Crops	1 Wheat. 2. Millit, 3. Moong, 4 Rice
	Jalesar	Five Crops	1 Wheat. 2. Millit, 3. Mustard 4 Rice, 5 Barley

Source: Given date have been take from Statistical Department of Etah, 2021

The distribution of these present a few example of large clusters of blocks a very striking feature of the cross-association region is the relevance dominance of the particular combination of crops in any one of the region i.e. Wheat, Millet, Rice and Maize, according to S.S. Bhatia.<sup>7</sup>

### 1. Three Crop Combination Region :

Only Soron Kasganj block has three-crop combinations. First, second, and third in each block are wheat, millet, and maize. Thus, each block has a variety of crops. Wheat covers 38.05 percent of the agricultural area in Soron and Kasganj blocks and

34.41% of Kasganj. Millet was the second most important crop in each block, occupying 18.51% and 15.03% of the planted area. Maize, the third most important crop in the region, occupies 18.01 percent of Soron's cultivated land and 13.65 percent of Kasganj's. Geography favors crop cultivation.

## **2. Four Crop Combination Region :**

Wheat is the top crop in each block in this region, despite the many mixed crops. Four crop combination zones are in blocks Ganjdudwara, Jaithra, Shitalpur, Sakit, and Awagarh. These territories are in six blocks. In Ganjdudwara Jaithra Aliganj, millet rates second, while in Shitalpur and Sakit, maize ranks second. The only second crop in Awahgarh blocks is rice. Other activities dominate this region besides sugarcane and tobacco. Tobacco ranks third in Aliganj block crops. Moong ranks fourth in Ganjdudwara block crops. Table 2 and figure 2 show it. Climate- and soil-friendly places grow a lot of these crops.

## **3. Five Crop Combination Region :**

Sahawar, Amapur, Patiyali, Sidhpura, Marehra, and Jalesar are the six blocks that have this combination. Jalesar is the fourth block. In a continuous region, there are five blocks, and the only block that is not part of this area is Jalesar. There is a wide variety of crops in this area. This is because there are a huge number of crops, and each set contains a variety of crops. Additionally, this combination includes all of the significant areas that are under cereal. Wheat is the crop that holds the highest rating on the block. Sidpura and Mahrera are the two blocks that rate maize as the second most important crop. Millret is a crop that ranks third in terms of importance in the Sahawar and Patiyali blocks. In addition to rice, mustard, moong, sugarcane, and barley, the region also produces various types of crops. These crops are located in various blocks, each of which has a separate rank structure.

## **4. Sixth Crop Combination Region :**

Within the study area, Nithauli Kalan is considered to be one of the sixth crop combination regions. It is possible to cultivate a significant number of crops in this region. Millet, Rice, Mustard, and Barley are the crops that rank second, third, fourth, fifth, and sixth in the region, respectively. Wheat, on the other hand, is the crop that ranks first in the region. In a region that is physically located in the center of the Awagarh, Shitalpur, and Marehra blocks. According to the ongoing research, it is clear

that wheat is the most dominant crop and holds the first position in virtually all of the combinations. Millet, on the other hand, is the second largest crop in the region and has the second position in eight of the blocks. Mice is the second most important crop among the five blocks, while rice is the second most important crop among the two blocks for which clay and loamy soil are present. Additionally, the introduction of a high yield variety of rice seed and the expansion of irrigation systems are also contributing factors.

## **Conclusion**

However, agriculture has considerable growth potential. As the previous study shows, adding equipment, fertilizer, manures, or holdings, as well as much-needed financing, would not change things. If the suggested changes are too expensive for certain village farmers, they should work together to maximize their resources. Therefore, addressing several agriculture, economy, and social development issues at once would be advantageous.

It is possible that the aforementioned recommendations, if implemented, will result in a significant advancement in agricultural practices. This, in turn, will enable the residents of the village to acquire the essentials of life and a sufficient level of living. In addition to this, it will establish a self-sufficient economy, allied processing businesses, and, last but not least, a food that is nutritionally balanced for the people. It is possible that this will put an end to the vicious cycle of diseases as a result of nutritional deficiencies or bad health and the lack of progress in agricultural growth.



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