

# Evaluation of Mechanization in Agriculture in Jalaun District

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## Abstract

Since ancient times tools were used for help in growing and harvesting crops. The modifications of early equipment has led to improved machines for carrying out agricultural processes. The present study includes many types of implements which are being used for improving agricultural efficiency in district Jalaun. After block-wise study it was found that maximum use of agriculture equipment was in Jalaun block of the Jalaun district.

**Keywords:** Agriculture, Equipment, Mechanization.

## Introduction

In ancient times, instruments were used to increase agricultural efficiency and production capacity, which is also mentioned in the Vedas. New technology is being used prominently for excessive development of agriculture in the district. Under the new technology, various machines are being used in agricultural work for excessive production of agriculture. Therefore, at present, more and more advanced agricultural equipment are being used for the maintenance of more and more population.

## Study Area

Jalaun district is located in a quadrilateral between 25° 46' to 26° 27' N and 78° 56' to 79° 52' E. Its length from north to south is 67 km and the length from east to west is 93 km. The total population of the district is 1670,718 (as of 2011) and the total area of the district is 4565 sq km. This district is located in the Doab of Yamuna and Betwa rivers. All headquarters of Jalaun district are situated in Orai.

## Research Objective and Methodology

The main goal of this research paper is to study the production of advanced agricultural equipment and the use of maximum and minimum instruments in the district for the development of block-wise use. It also illustrates how to better use farm machinery to modernise agriculture. Primary and secondary data were used in the current analysis. In the study of the research paper, the mechanization instruments of the district have been targeted.

## Mechanization in the district

It is clear from the study of table number-01 and map number-01 that the number of machines engaged in agricultural works in the district is 93625. In which plow (27.60 percent), advanced harrow (22.78 percent), threshing machine (1.99 percent), sprayer (2.73 percent), sowing machine (maximum of 28.14 percent) and tractor number 15710 account for 16.78 percent of the district's total machines. The use of most agricultural equipment in all the development blocks of the district is found to be 10.34 percent in the development block Jalaun and 8.02 percent in the lowest development block of Mahewa. Modern machines are being used more in the urban area (18.08 percent) than in the rural area (81.92 percent) of the district.

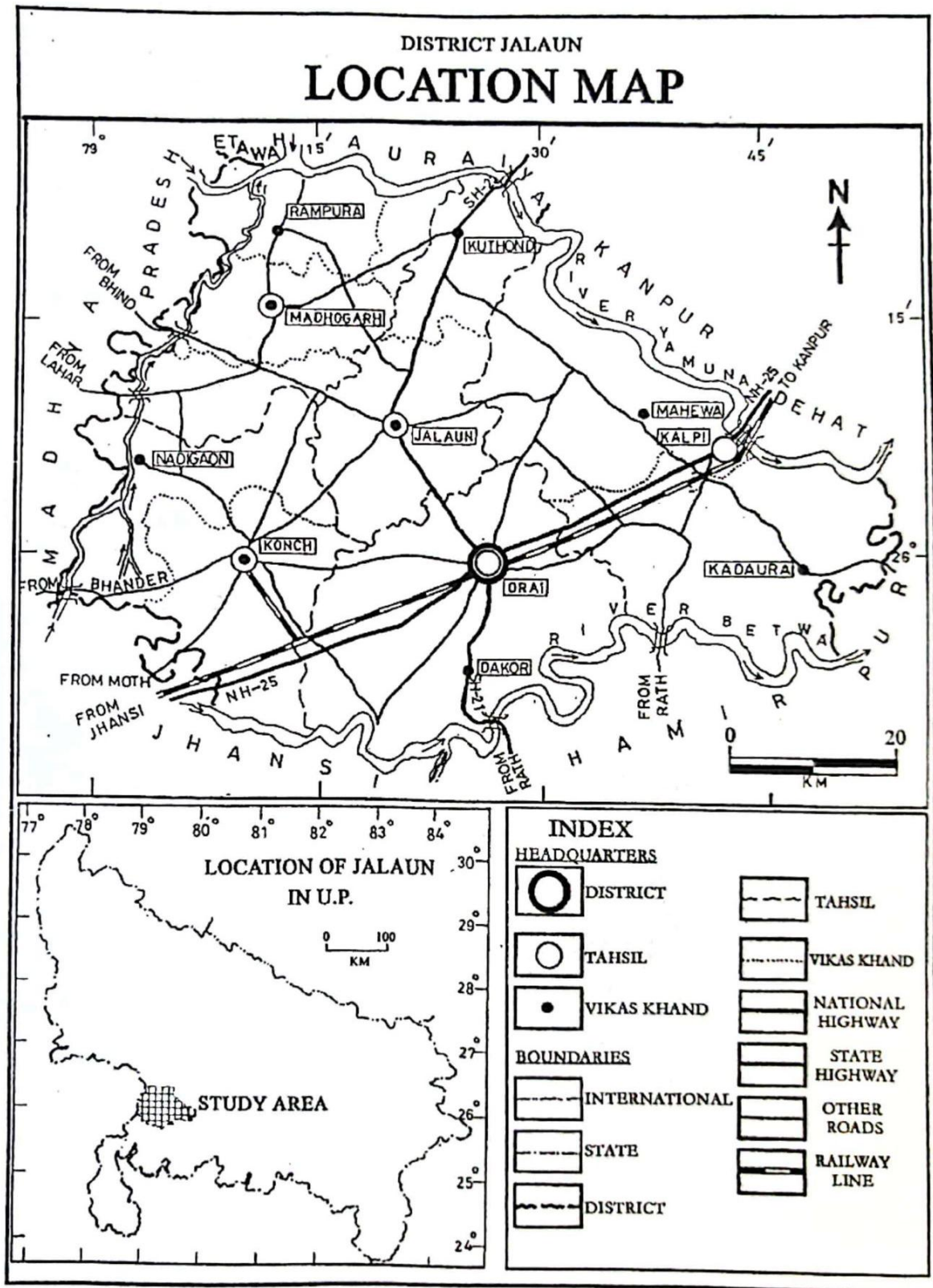
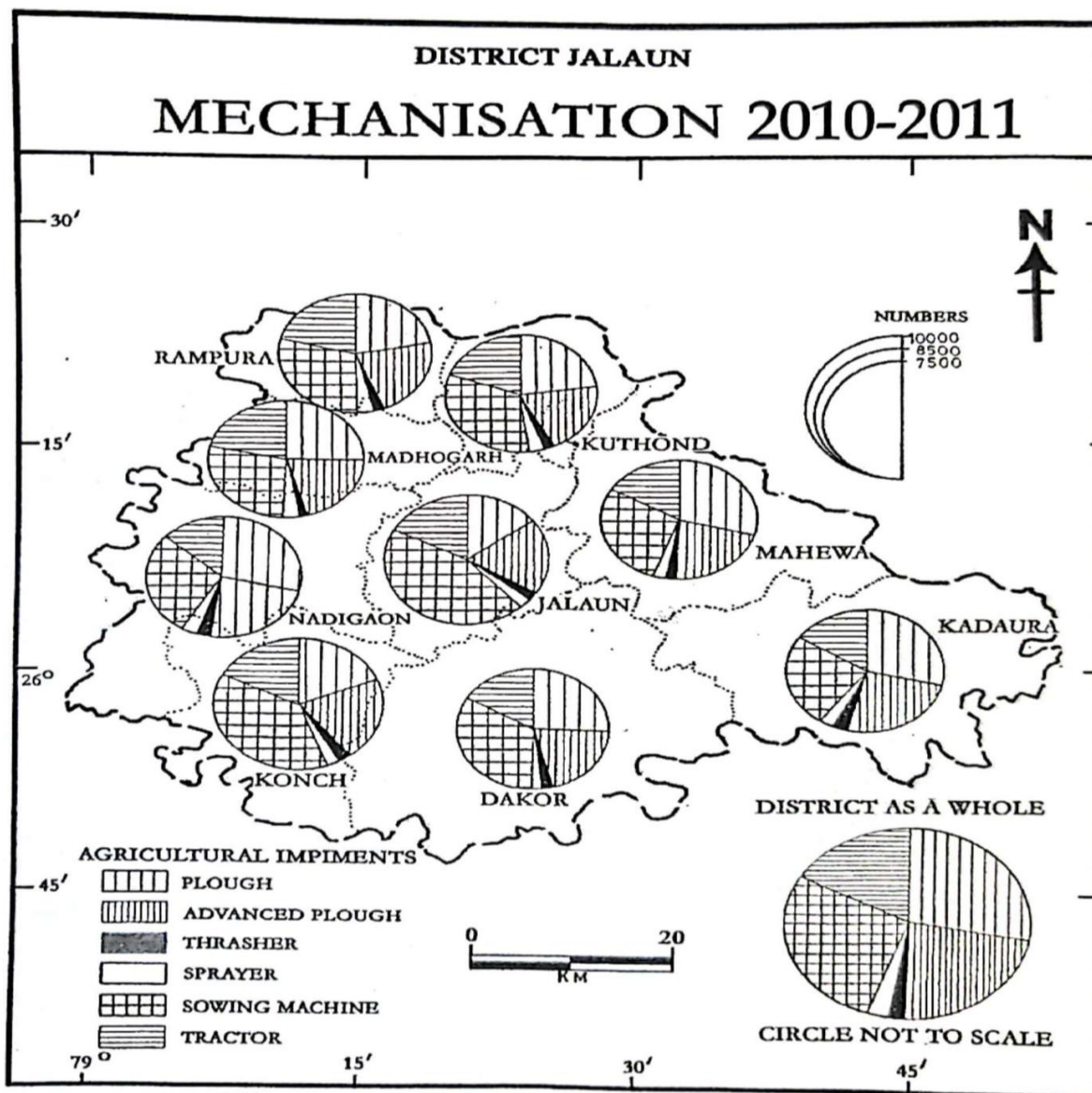


FIG. NO. .1

**Table 01**  
**District Jalaun: Advanced Agricultural Equipment 2010-2011**

<b>S. No.</b>	<b>No. of blocks</b>	<b>Plough</b>	<b>Advanced harrow</b>	<b>Threshing machine</b>	<b>Sprayer</b>	<b>Sowing machine</b>	<b>Tractor</b>	<b>Total</b>
1	Rampura	1801	1793	190	274	2430	1764	8252
2	Madhogarh	2082	1702	105	288	2332	1813	8322
3	Kuthond	2032	1732	182	276	2945	1742	8909
4	Jalaun	1390	1848	195	252	4341	1658	9684
5	Nadigaon	2243	1851	178	281	2220	1072	7845
6	Konch	1754	1842	198	208	3580	1624	9206
7	Dakor	2234	1848	172	177	2955	1482	8868
8	Maheva	2187	1603	160	165	2131	1257	7503
9	Kadora	2538	1801	275	178	2033	1282	8107
	<b>Total rural</b>	<b>18261</b>	<b>16020</b>	<b>1655</b>	<b>2099</b>	<b>24967</b>	<b>13694</b>	<b>76696</b>
	<b>Total urban</b>	<b>7582</b>	<b>5293</b>	<b>206</b>	<b>456</b>	<b>1375</b>	<b>2016</b>	<b>16929</b>
	<b>Total district</b>	<b>25843</b>	<b>21313</b>	<b>1861</b>	<b>2555</b>	<b>26343</b>	<b>15710</b>	<b>93625</b>

Source-Statistical Journal, District Jalaun, 2010-11



**Fig.No. 2**

Block-wise detailed study of advanced agricultural equipment makes it clear that the maximum use of plows in the district is done in Kadaura (31.31 per cent) and the ploughs are least used in Jalaun (14.35%). The use of advanced harrow in agricultural works is highest in Nadigaon block (23.60 percent) and in Jalaun Block minimum (19.08 percent), while the use of threshing machines in agriculture is more in block Kadaura (3.39 percent) and the lowest in block Madhogarh (1.26 percent). ). The total number of sprayers in the district is 2555, in which block-wise sprayers are used in the

development block Nadigaon (3.58 percent) and the lowest in the block area of Dakor (2.00 percent).

From the point of view of development, the maximum number of sowing devices in the district is 44.83 percent in Jalaun (4341) and 25.07 percent in the lowest block of Kadaura (2033). The most useful machine tractor in agricultural works is the most used in the district in the development block Madhogarh (21.79 percent) and the lowest level in the development block Nadigaon (13.67 percent) The total number of tractors in the district is 15710 of which 13694 tractors are found in rural areas and 2016 tractors are found in urban areas.



Table Number: 02  
District Jalaun: development block-wise agriculture equipment

S. No.	Name of block	Advance Harrow			Advance Threshing Machine			Sprayer Count			Advance Sowing Machine			Number of Tractors		
		2003-04	2008-09	2013-14	2003-04	2008-09	2013-14	2003-04	2008-09	2013-14	2003-04	2008-09	2013-14	2003-04	2008-09	2013-14
1	Rampura	598	1793	2232	109	190	317	78	274	380	2203	2430	2633	1298	1764	2210
2	Madhogarh	606	1702	2310	105	105	200	98	288	348	1964	2332	3116	1310	1813	2440
3	Kuthond	537	1732	2338	108	182	275	99	276	349	2652	2945	3285	1418	1742	2619
4	Jalaun	752	1848	2425	109	195	248	102	252	332	3252	4341	4988	1222	1658	2310
5	Nadigaon	659	1851	2548	107	178	232	109	281	395	2022	2220	2910	858	1072	2029
6	Konch	656	1842	2458	109	198	245	104	208	356	2686	3580	3815	1129	1624	2014
7	Dakor	669	1848	2332	170	172	337	79	177	310	2758	2955	3225	1046	1482	2137
8	Maheva	585	1603	2210	106	160	244	85	165	295	1934	2131	3010	927	1257	2242
9	Kadora	664	1801	2315	215	275	295	99	178	290	1938	2033	2458	840	1282	2017
	<b>Total Rural</b>	<b>5726</b>	<b>16020</b>	<b>21166</b>	<b>1075</b>	<b>1655</b>	<b>2293</b>	<b>853</b>	<b>2099</b>	<b>3055</b>	<b>21407</b>	<b>24967</b>	<b>29440</b>	<b>10048</b>	<b>13694</b>	<b>20018</b>
	<b>Total Urban</b>	<b>1679</b>	<b>5293</b>	<b>8149</b>	<b>127</b>	<b>206</b>	<b>288</b>	<b>264</b>	<b>456</b>	<b>525</b>	<b>1138</b>	<b>1376</b>	<b>1670</b>	<b>1145</b>	<b>2016</b>	<b>2984</b>
	<b>Total District</b>	<b>7405</b>	<b>21313</b>	<b>29317</b>	<b>2402</b>	<b>1861</b>	<b>2581</b>	<b>1117</b>	<b>2555</b>	<b>3580</b>	<b>22545</b>	<b>26343</b>	<b>31110</b>	<b>11193</b>	<b>15710</b>	<b>23000</b>

Resource- Vikas Bhawan, District Jalaun, Place- Orai

#### Advanced Harrow

The total number of improved harrows in the district was 7405 in 2003-2004, but by 2008-09, it had risen to 21313, an increase of 87.82 percent. By 2013-14, the district's advanced harrow population had risen to 29317, a 37.55 percent increase.

#### Advanced Threshing Machine

The total number of advanced threshing machines used in the district Jalaun in the year 2003-04 was 1202, which had increased to 1861 with an increase of 54.83 percent in the year 2008-09. The number of advanced threshing machines in the district had increased by 38.69 percent to 2581 by the year 2013-14.

#### Sprayer Number

In the district, the number of sprayer devices used in agricultural work under modern technology was 1117 in 2003-04, but it had risen to 2555 in 2008-09, a 28.74 percent increase. This number rose by 40.12% to 3580 in the year 2013-14.

#### Improved Sowing Machine

The total number of improved sowing devices in the district has increased to 22545 in the year 2003-04, which has increased by 16.85 percent

to 26343 in the year 2008-09 and to 31110 with an increase of 18.10 in the year 2013-14.

#### Tractor

The total number of tractors in the district was 11193 in the year 2003-04, which has increased to 15710 in the year 2008-09, the number of tractors has increased by 46.40 percent to 23000 in the year 2013-14.

#### Conclusions and Suggestions

Agricultural machinery such as tractors, threshers, and harrows are becoming increasingly popular in the district as a result of their ability to save time and labour in agriculture while also lowering agricultural costs. Mechanization has increased in the agricultural system of the district and this situation will help in the economic development of the district. The number of threshing machines in the district has been increasing continuously in the past years, mainly due to increasing production of traditional wheat agriculture by the farming community, which is the main food crop. Sprayer equipment is being used in general level in the district while sowing equipment is being used more in traditional agriculture in the district. On a block-wise study, it is found that between 2003-04 to 2008-09, the highest growth in

the district was in Kaudara (52.62 per cent) and Kuthund (22.85 per cent).

In order to give modern shape to agriculture, it is necessary that arrangements should be made to provide information about agricultural and agricultural equipment to the farmers at the village level itself. If farmers are informed from time to time, it will not only increase production but will also increase the income of the district.

#### **References**

1. Singh, Shashikant, : *Agricultural Conservation Schemes*, *Kurushetra, Journal February 2006*, p13
2. Ahmad, E., : "Indian Village Pattern" *Geographical Outlook, Vol. 3, 1962*
3. Arora, R.C., : *Development of Agricultural and Allied Sectors, 1972*
4. Singh, J., : *Agricultural Geography, New Delhi, Tata Mcgraw Hill, 1972*
5. Meena, Janak Singh, : *Role of Technology in Rural Development, Kurushetra, January 2005*
6. *Agricultural Technical Management Agency, District Jalaun*