

# Assessment of agricultural mechanization parameters in Bundelkhand zone of Uttar Pradesh, India

■ Tarun Kumar Maheshwari and Ashok Tripathi

Received : 26.07.2019; Revised : 24.08.2019; Accepted : 12.09.2019

See end of the Paper for authors' affiliation

Correspondence to :

**Tarun Kumar Maheshwari**  
Farm Machinery and Power  
Engineering, Vaugh School of  
Agricultural Engineering  
Technology, Sam Higginbottom  
University of Agriculture,  
Technology and Sciences,  
**Allahabad (U.P.) India**  
Email : maheshwari\_tk@  
yahoo.com

■ **ABSTRACT** : UP is the fifth largest state of India (24.1 million hectares) with a projected population of 220.7 million people (roughly 16.7 % of all-India population) in 2016. It is also one of the poorest states in India with 29.4 per cent of its population below the poverty line (Tendulkar Poverty Line, 2011-12). Agriculture forms an integral part of UP's economy and the lives of its people. Nearly 69 per cent of land in the state is under cultivation. The state is also divided into 9 agro-climatic zones. Agriculture in Bundelkhand zone was vastly rain-dependent, diverse, complex, under invested, risky and vulnerable mainly because of its geographical condition. A sizeable area of 84 per cent was allocated to food grain crops in this region. Unlike other regions pulses occupied large share *i.e.* 43 per cent in GCA. Among the cereals wheat was the important crop although its area remained static. This region is lagging far behind in the adoption of the improved varieties and application of fertilizer. The district selected from Bundelkhand agro-climatic zone of Uttar Pradesh was Jhansi and Chitrakoot. Primary data were collected from 100 farmers from 10 villages of 2 districts *i.e.* 50 farmers from each district. In India, there is a need to increase the availability of farm power from 2.02 kW per ha (2016-17) to 4.0 kW per ha by the end of 2030 to cope up with increasing demand of food grains. The average value of mechanization index, power availability, cropping intensity, irrigation intensity, annual farmer income, annual input cost, human energy, mechanical energy, total energy in Bundelkhand zone of Uttar Pradesh year 2018-19 were in 0.92, 1.61 kW/ha, 124.59 per cent, 124.59 per cent, Rs.119852, Rs.32463, 26.63 kWh/ha, 400.31 kWh/ha and 426.94 kWh/ha, respectively. Still the harvesting with harvesting worker is maximum mechanize *i.e.* 0.993 then cultivator as well as diesel engine both had almost same value of degree of mechanization *i.e.* 0.469 and 0.466, respectively.

■ **KEY WORDS** : Mechanization index, Farm power, Degree of mechanization, Cropping intensity, Human energy, Mechanical energy, Total energy

■ **HOW TO CITE THIS PAPER** : Maheshwari, Tarun Kumar and Tripathi, Ashok (2019). Assessment of agricultural mechanization parameters in Bundelkhand zone of Uttar Pradesh, India. *Internat. J. Agric. Engg.*, 12(2) : 228-234, DOI: 10.15740/HAS/IJAE/12.2/228-234. Copyright@2019: Hind Agri-Horticultural Society.