

Energy requirement for *Kharif* maize cultivation in Panchmahal district of Gujarat

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■ **ABSTRACT** : A study was carried out to collect farm operations data of *Kharif* maize cultivation in district Panchmahal of Gujarat and to estimate and analyze the total input energy requirement in *Kharif* maize crop, both source wise and operation wise along with total output energy. To accomplish this, a survey was conducted through structured questionnaire to 93 randomly selected farmers in four rainfed villages of three talukas Kalol, Godhra and Khanpur of the district. The raw data obtained was analyzed after converting data into energy equivalents. It was concluded that total input energy requirement for *Kharif* maize cultivation in Panchmahal district was 13205.10 MJ/ha. Out of which direct energy contributed 45.44 per cent and indirect energy contributed 54.56 per cent. Fuel energy was maximum utilizing direct energy source while fertilizer energy was maximum required indirect energy source. Seed bed preparation consumed maximum operation wise direct energy with a value of 2887.78 MJ/ha. Fertilizer application was maximum indirect energy consuming operation with energy consumption of 3702.59 MJ/ha. Total output energy for *Kharif* maize cultivation was 52873.29 MJ/ha with net energy return of 39668.19 MJ/ha and energy productivity of 0.21 kg/MJ.

■ **KEY WORDS** : Energy, *Kharif*, Maize, Specific energy

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