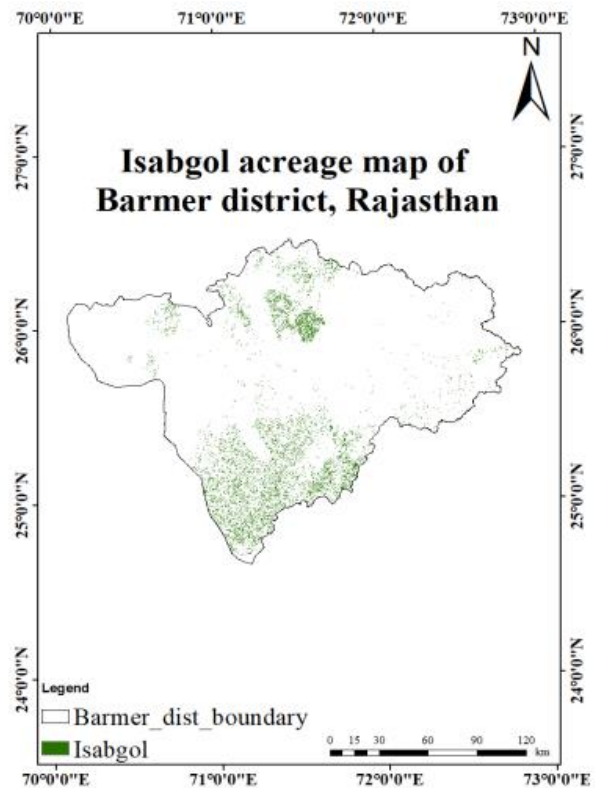
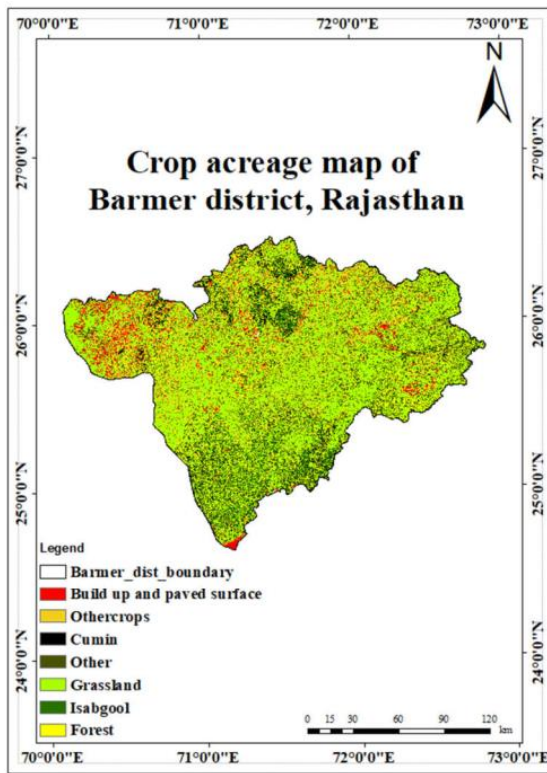




A methodology for Isabgol Crop Discrimination and Acreage Estimation

Isabgol (*Plantago ovata* Forsk.), belonging to the family *Plantaginaceae*, is a high-value medicinal crop widely cultivated in India, primarily in Gujarat, Rajasthan, and Madhya Pradesh. Its husk, commercially known as Psyllium husk, has significant medicinal and industrial uses, particularly as a natural dietary fiber and laxative. India is the world's largest producer and exporter of Isabgol, generating export earnings of approximately ₹2000 crores annually.

Despite its economic importance, precise information on Isabgol acreage and production is often unavailable due to reliance on conventional field-based surveys, which are subjective, time-consuming, costly, and prone to error. Advances in geospatial technology, particularly satellite-based remote sensing and Geographic Information Systems (GIS), have demonstrated their potential for Isabgol crop mapping. Accurate acreage estimation is critical for policy planning, export management, price regulation, and supply-demand forecasting.

Remote Sensing Applications

The methodology was developed over Gujarat and Rajasthan utilizing multi-date optical data for Isabgol crop discrimination, mapping and acreage assessment. The findings demonstrate the effectiveness of this approach for generating accurate crop area and spatial distribution maps. The spectral reflectance characteristics of Isabgol, combined with its growth pattern, allowed discrimination from other crops with classification accuracies of >85% using the developed methodology. Also district level acreage estimation has been done with less than 10% relative deviation from the reported acreage.

The following are the offerings:

- ❑ Methodology for Isabgol crop discrimination and acreage estimation

Technology Transfer

SAC/ISRO, offers to transfer this technology of the **Methodology for Isabgol crop Acreage Estimation** developed by SAC to industries in India with adequate experience and facilities. Enterprises interested in obtaining knowhow may register and submit their proposal to Indian National Space Promotion & Authorization Centre (IN-SPACe), Ahmedabad.

<https://www.inspace.gov.in>

For more details, Contact:

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https://www.sac.gov.in/SAC_Industry_Portal

