Assessing the agricultural innovation landscape of public agricultural research organizations in India through patents

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This study extensively explores the agricultural innovation landscape of Indian public agricultural research organizations, emphasizing technological focus from the Indian Council of Agricultural Research (ICAR) institutions and State Agricultural Universities (SAUs). The findings reveal diverse concentrations of patents in agricultural engineering, chemical processes and formulations, biotechnology and food categories. The prominent themes that emerged from the patent landscape include livestock health management, animal feed, chemical formulations, agricultural machinery and aquaculture practices. However, the temporal shifts indicate an increased focus from biotechnology to food, chemical and engineering during the last three decades. Patent statistics indicate variations in technology scope, claims, inventor size and renewal term. SAUs had comparatively broader technology scope, shorter grant lag and a higher number of claims than the ICAR patents. On the other hand, inventor size and renewal term were significantly higher in the ICAR patents. Survival functions demonstrate more longevity for the ICAR patents, with evolving dynamics in patent value over different periods.

Keywords: Agricultural innovation, national agricultural research system, patent landscape, technological focus, valuation.