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## *Weed management in rice-based crops and mustard crop performance*

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## **Abstract:**

The present field experiment was conducted at Assam Agricultural University, Jorhat, Assam with Sesbania-winter rice (*Oryza sativa* L.)-Indian mustard (*Brassica juncea* L.) cropping sequence during 2017-2019 comprising 20 treatment combinations of tillage and weed management practices. The study revealed that seed, stover and oil yield of Indian mustard were increased in the year round minimum tillage with rice residue retention by 35.97, 23.41 and 38.90%, respectively due to higher crop growth characteristics and yield attributes as compared to conventional tillage. Among weed management practices, integrated weed management (IWM) showed higher weed control efficiency (WCE) and weed control index (WCI) as well as improved seed and oil yield by 39.66 and 39.61%, respectively as compared to weedy check. Combination of minimum tillage along with rice residue retention and IWM enumerated higher oil yield (6.40 q/ha) of Indian mustard grown after direct seeded rice (DSR) under minimum tillage. The findings of the experiment implied that minimum tillage with rice residue retention along with integrated weed management encouraged crop growth and productivity of Indian mustard (IM) as a succeeding crop after direct seeded rice grown under minimum tillage condition.

## **Keywords:**

Indian mustard, integrated weed management, Minimum tillage, Rice residue retention, Seed yield