

Next steps for taking Directly Seeded Rice to Scale in the Eastern Gangetic Plains of South Asia

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Directly sown rice (DSR) addresses some of the major drivers of change in the agricultural systems of the Eastern Indo-Gangetic Plains. Because of this, DSR have been the focus of targeted interactions, particularly in central Bihar where promotion has centred around districts with suitable agro ecological conditions (ex. areas with reduced weed pressure such as lowlands, assured early irrigation to control inundation and to avoid stand mortality before the chance of heavy monsoonal rains increase), adequate machinery, and high potential for productivity increases and production risk reduction through DSR. Agronomic results highlight an increased average yield of 0.34t/ha against transplanted rice under normal conditions, and an increase to 0.8t/ha when aided with one supplemental irrigation.

Despite this, supply and demand have not synced. By strengthening the service economy over the last 10 years, more than 5,000 Bihari farmers are now using DSR for the establishment of rice across regions through service providers. Yet only 10% of service providers are engaged in providing DSR services, and the scaling up of DSR has been slower than expected. This study applies an in-depth analysis through five stakeholder typologies namely: DSR service provider, DSR disadopter, DSR farmer, ZT wheat service provider and lastly, the ZT wheat farmer to explore the various dimensions of DSR adoption from farmers, as well as the experiences, challenges and opportunities faced by DSR service providers.

The results highlight the emergence of trends in farmer perspectives on DSR, as well as issues with demand for and viability of DSR services. Key themes emerged in the skill level of service providers, both for seeding and in weed management due to a more complex weed flora. There is also an increasing number of rotovator owners and operators and investment in tillage machinery that is counter to DSR service provision. In many cases, there exists an expectation of support from the department of agriculture, KVK and NGOs for operation, service and awareness creation of machine that service providers see as outside their scope. These learnings and more provide an important point of reflection for future scaling efforts on DSR.

Keywords: Direct Seeded Rice; Service provision; Lived Experience and Perspectives;