National Innovation Foundation

Consolation Award
Farm Implements: Seed cum fertilizer drill machine

Shri Hazarilal Ozha

Seed cum fertilizer drill machine

Many farmers use single vessel drill machine in which seeds and fertilizer are mixed and kept together. In such a delivery system, seeds and fertilizer fall together at the same level/ surface. Due to this, seeds get damaged from localized concentration of fertilizer during germination. The fertilizer is also not utilized by the crop roots efficiently. This increases the total need of fertilizer for a farm.

To overcome the problem, farmers started using separate drives to drill fertilizer and seeds. This method improved the yield of crop, but also imposed expense of an additional drill drive on the farmers. In 1999, Hazarilal attended an agricultural fair in Anta (Baran) where local agricultural scientists (KVK, Baran) addressed an appeal to all people to develop such a machine which could deliver fertilizer and seeds in single operation but at different depths and also suitable for hard black soils. Hazarilal took it as a challenge as he was already familiar with the operation of agricultural implements. He did intensive work on the

Shri Hazarilal Ojha (55 years) has studied upto higher secondary in Science. He has taken keen interest in technological activities from his younger days. He started a workshop for carpentry and small agricultural implements (repairing and sale) in order to fulfill his aspirations. His wife is also educated and cooperates in his activities. His son Jitendra also assists him actively. Important implements manufactured by him are hoe, sickle, spade, leveler, cultivator, ridger plough, seed drill and soil scoop.

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problem roughly for one year and developed a bullock drawn two boxed seeds cum fertilizer drill machine. This machine, on examination by scientists at KVK (Baran) was found efficient enough and received appreciation by them as well as the farmers. Encouraged by this, he started to work on the development of a tractor drawn seed cum fertilizer drill machine with higher capacity. And he successfully made it within few months. Demonstration of this machine made before several agricultural engineers/experts earned their satisfaction about its performance. They considered it an useful innovation. Hazarilal's machine comprises three main parts - box, cultivator and arm wheel. His machine is able to drill fertilizer and seeds together but delivers them separately in a single drive and also at different depths. His machine saves not only seeds and fertilizer but also supports optimum growth of saplings. The cost of his one machine is Rs 16,500.