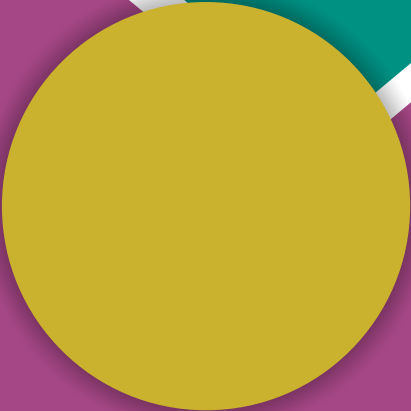


A Zone Disk Tiller Drill System



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Harvesting period of paddy and sowing period of wheat crops overlap. This delay in wheat sowing substantially reduces crop yield i.e. each day of delay in wheat sowing after third week of November, produces less wheat yield of 35-40 kg per hectare. In Pakistan, a major proportion of wheat is sown late. Wheat sowing continues till early January.

Machine Development

For successful adoption of till plant technology in rice-wheat rotation system and to avoid the delay in wheat sowing, a technically and economically acceptable tractor drawn Power Take Off (PTO) driven "Zone Disk Tiller Drill" (ZDTD) has been designed, developed, fabricated, and tested for sowing wheat in standing paddy crop residue fields directly after harvesting paddy crop.

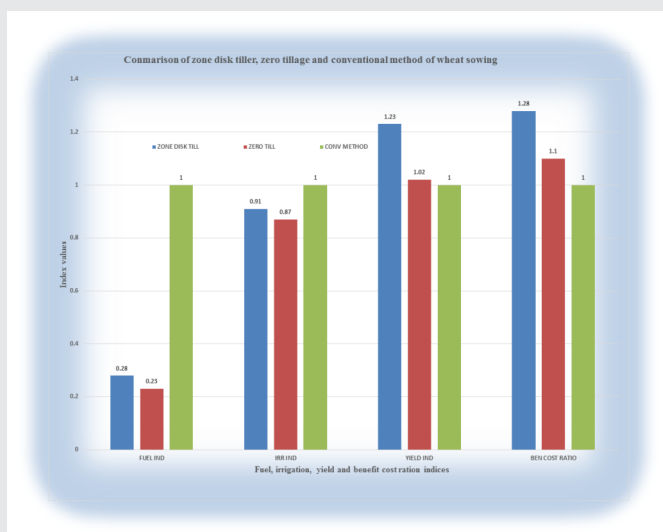
The extensive experiments were conducted in the untilled paddy fields of Sheikhpura (Mananwala) and Faisalabad (Jaranwala, University of Agri. FSD.) during the wheat growing seasons of 1998 to 2012. The crop was planted successfully in 9" rows by seven wavy coulters revolving at 172 RPM mounted on a common shaft ahead of the furrow openers. The machine is one of its own kinds in the world. The savings in diesel energy, labor, and irrigation water were found 75%, 50% & 30%, respectively, as compared with conventional method of wheat planting in Pakistan. Moreover, 14-15% yield was increased in this new system of crop planting. This machine can be used for planting maize, barley, and grams. Moreover, an extra shaft can be developed to use this machine as a rotavator if needed.



Zone Disk Tiller Drill System planting crop in residue standing field



Endowment fund secretariat, UAF team inspecting field operation of Zone Disk Tiller Drill System



Registered and patent issued by the Registration and Patent, Department Karachi Government of Pakistan. **(Patent No. 139296, Dated: June 30, 2008).** Website: www.ipo.gov.pk/patent/gazette/11-8-2007.pdf