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Conservation and the best utilisation of available moisture in soil warrant attention in rain fed agriculture for optimum crop stand leading to higher yield. The best solution to this problem can be the use of an effective seeding device. So much so three bullock drawn seed drills (TNAU, CTAE and GORRU) were selected and each was compared with traditional method of sowing groundnut (Arachis hypogaea) and sorghum (Sorghum bicolor) under rainfed conditions. The TNAU seed drill has attained highest overall performance index when compared with other seeding devices. Hence TNAU seed drill was selected for further evaluation under field conditions, where it showed better crop stand.

As such, modifications were designed in the components of TNAU seed drill as per the need based suggestions of the farmers/users. The seed drill thus improved was subjected to various field and design tests for hopper position, seed rate setting and metering speed ratio. The draught performance was tested in the field and found bullock with an average body weight of 340-490 kg was found to be able to work with the improved seed drill for the whole day (duration of not less than 8.0 hours).

The overall performances of the Improved seed drill and TNAU seed drill were evaluated and compared with conventional method of sowing at different field locations. Improved seed drill attained highest overall efficiency factor followed by TNAU seed drill. The pay back (years) for improved seed drill was 3.38 for groundnut at the utilisation rate of 6.0 ha/yr whereas it was 3.34 at 7.0 ha/yr for sorghum.
Farmers and extension workers have observed the performance of improved seed drill and it is found suitable for sowing rainfed groundnut and sorghum. Hence improved seed drill is recommended for use under rainfed conditions especially in Dindigul Anna District more specifically for groundnut and sorghum as established by the results of this study.