

Cotton Ginning Research



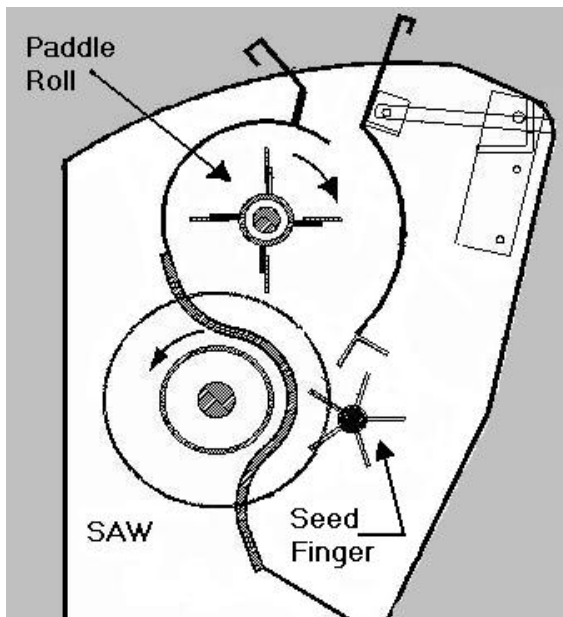
<http://msa.ars.usda.gov/gintech/>

POWERED PADDLE ROLL TECHNOLOGY IN A 16-INCH SAW GIN STAND

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The USDA-ARS ginning laboratory at Lubbock, Texas, developed a new powered paddle roll saw gin stand that produced over two percent points higher turnout from seed cotton compared to a modern high capacity gin stand. A patent was obtained through the USDA-ARS patent division for the powered paddle roll gin stand technology (U. S. Patent number

6,061,875). Powered paddle roll gin stand technology was developed on a 12-inch saw gin stand. The research effort was expanded to apply this technology on Continental Double Eagle 141 saw gin stand with 16-inch diameter saws that make up a large percentage of the commercial gin stands in the U.S.



Research trials to optimize the relationships of the various parts of the gin stand in the 16-inch saw size resulted in improved preservation of fiber properties and 27 to 37 pounds per bale higher lint yield compared to the conventional saw gin stand. The gin stand with powered roll technology was capable of ginning at 17 bales or more per hour on wet late season cotton. The conventional gin stand roll got too tight and stopped on this cotton at about 12 bales per hour. The powered roll technology gin stand in-

creased average lint turnout more than 2 percent points or over 30 pounds per bale compared to the conventional gin stand.

This technology has been licensed by PRT Marketing, LLC. Contact the lead scientist Mr. Weldon Laird at wlaird@lbk.ars.usda.gov.

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