

John Deere and Case IH disclose module-building picker concepts

By Owen Taylor

John Deere expects to roll out a cotton picker that produces its own modules. While the company doesn't have an introduction date, it held a sort of pre-introduction press briefing at the Beltwide Cotton Conference to share preliminary details and present a brief video that showed the machine's main features.

Company executives admitted that making this kind of early presentation is unusual for John Deere. But rumors had been circulating about its module-building picker program, and the press conference was an attempt to share information about the direction being taken with the project.

In October, Case IH announced the official US release of its Module Express 625 picker, beating Deere to the market with a picker that builds its own module. From a marketing standpoint, Deere's information release at the Beltwide positions it as a viable choice in the near future for growers considering a new picker with the module-building feature.

When will Deere's module-building picker be available? Deere executives would not speculate.



The Case IH Module Express 625 is the first commercial cotton picker with the ability to build modules while harvesting.

"It's certainly shorter term than longer term," said Jamie Flood, product marketing manager at Deere's Des Moines, Iowa, factory. "If we were expecting this in five or 10 years, we certainly would not be talking about it now."

What are the differences between the Case IH Module Express and Deere's planned machine?

- **Module shape.** Deere's modules are round, compared to the rectangular modules produced by the Case IH machine.
- **Module size.** Deere's round module measures eight feet in circumference and up to eight feet wide. Flood said the round module will hold approximately 3.5 to four bales of cotton, and four of the round modules will weigh about as much as a standard module does today. Case IH's Module Express model builds up to a 10,000 pound module measuring eight by eight by 16 feet, according to a company release.
- **Module handling.** Once the Deere picker builds a module, it ejects it onto a sort of tailgate that holds the module until the operator reaches the spot where he wants to deposit it, generally

at the end of the field. The picker keeps moving and collecting cotton as it builds the next module. The Case IH model holds the module internally until the end of the row but uses sensors to calculate load and picking rates so that modules can be dropped off at the end of the row when enough cotton has been packed by the module builder. In the John Deere video, a prototype picker eased the completed module onto the holding platform and kept picking. At the end of the field, it made a turn, then dropped the module as it moved ahead into the next set of rows.

- **Packaging.** The circumference of Deere's round module is wrapped in plastic — similar to plastic used now to wrap finished bales — while modules from the Case IH picker are conventionally tarped.

PICKERS NEVER STOP

The briefing gave Deere a way to tout features of its anticipated product, including what it calls "non-stop harvesting," meaning the picker never stops moving.

Flood said that special handling equipment for the small, round modules was underway and that announcements would be

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made later. Equipment also is being developed, he said, for use at gins. Four of the round modules can be lined up and loaded onto a regular module truck.

"But with the round modules, we have different (transportation) alternatives, like loading them on a flatbed trailer," he said. "Another advantage is that you can move them quickly if they're in an area prone to flooding and bad weather is in the forecast. With a conventional module, you've got to wait for the truck. And while (conventional) modules are a great idea, there can be problems."

Flood repeatedly stressed potential improvements in fibre quality because the plastic wrapping would reduce the potential for water damage from wicking at the bottom. Also, the round shape would more readily shed rain, he said.

Although gins might have to make some adjustments to handle round bales, ginners would benefit in the long run because less cotton would be left in the gin yards with the wrapped bales, Flood said. Also, a better protected bale should provide cotton with a more uniform moisture content, which would improve ginning efficiency and fibre quality.

"This should be a win-win for growers and ginners," he said. "We'll increase productivity and efficiency for both."

The allure of a picker-made module, of course, is the reduction in extra labor and equipment. Flood said that Deere's customer studies indicated that the average grower runs a boll buggy and a module builder, each with its own tractor, plus people to run them and maybe other workers to cover modules with tarps.

Growers who Deere surveyed estimated that during a day of harvest, picker operators spent about 10 per cent of their time waiting for the boll buggy to reach them and another 10 per cent of their time dumping the basket.

No estimates were made on how much Deere's module-building pickers might cost.

CASE IH ON-BOARD MODULE BUILDER

In October last year, Case IH announced the official US-release of the Case IH Module Express 625 — the industry's first commercial cotton picker with the ability to build modules while harvesting. The new technology, which has undergone Australian evaluation, will improve both equipment and labour efficiencies and is expected to be available for sale in Aus-

tralia after the 2007 cotton harvest.

"This is the most efficient cotton-harvesting package available," says Trent Haggard, Director of Case IH Global Marketing for cotton. "We've changed for the better the way cotton will be handled from picker to gin and will make customers even more productive by streamlining the module building process."

The Case IH Module Express was designed in collaboration with growers and ginners — including Australian representatives who took part in product reviews and focus groups over the product's many years of development.

"Growers and gins have emphasised the importance of the modules working within existing systems to maximise productivity, and the 2.44 metre by 2.44 metre by 4.87 metre modules require no modifications to existing systems.

"The module-building feature attracts attention, but this machine is the total package," he says. "With the productivity of our proven two-sided picking design, monitors that provide total system overviews from spindles to the module builder itself, and matched tank capacities to handle long harvest days, this machine has the power to handle picking in the toughest conditions."

Reduce labour and equipment

"The first question I'm always asked is 'Can I get rid of my boll buggy and separate module builder?'" Trent says. "With the Case IH Module Express 625 picker, it's one person, one machine for cotton harvesting and module building, so you reduce your equipment and labour investment dramatically."

The cotton is picked at the same pace as a traditional six row picker, but with the Module Express design, modules form simultaneously. It takes less time to unload a 4,536kg (10,000-pound) module than to empty 4,536kg (10,000 pounds) of cotton from a traditional basket.

"It's an extremely efficient process," Trent says.

Gin friendly

"The modules are the same height and width but not the length of a standard module, so other than tarps, they require no alterations in the ginning process.

"They are purposely sized to maximise gin-feeding rates without adding any contamination. In the past 30 years we've looked at modules of various shapes and sizes, similar to large hay bales, but they required changes in the handling and ginning infrastructure."

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