

Agritechnica Gold & Silver Medals for John Deere

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John Deere has been awarded one Gold and two Silver Medals for innovation by the DLG committee in advance of Agritechnica 2017 in Hanover, Germany (November 12 to 18).

Kemper's new StalkBuster, the Gold Medal winner, is designed to break up the crop stubble directly below a self-propelled forage harvester's header. This destroys the overwintering habitat of the corn borer pest and reduces the risk of fusarium in the soil, so an additional mulching operation is no longer necessary.

Featuring a low power requirement of no more than 4hp per row, the StalkBuster is uniquely integrated into the base frame of Kemper's rotary crop header. A special, highly wear-resistant flail crushes every row of stubble before the wheels of the forager and transport vehicles can flatten it. As a result, the stalks are not only cut down but also smashed into small pieces.

A special swinging gearbox allows optimum ground adjustment for each individual row, while a pneumatic pressure system provides additional close tracking of ground contours, ensuring that every stalk is fully chopped down to ground level.

By reducing the need for subsequent chemical applications and easing the way for following tillage operations, the total economic advantage of using the StalkBuster system is estimated at around €84/ha compared to mulching.

John Deere's new, Silver Award-winning EZ Ballast Wheel System provides a versatile ballasting solution for tractors without impeding the front and rear lift capacities. The system's flexible weight distribution is designed to ensure higher traction and lower soil compaction, and enables operators to change the front and rear wheel weights very quickly – just five minutes per wheel – without the need for additional tools or a second person to help.

Depending on the front and rear mounted implement combination, the user is able to adjust the overall weight and weight distribution very easily, supported by the John Deere Ballast Assist system running on the tractor's CommandCenter display. Each front wheel can be equipped with one 250kg weight while the rear wheels can be fitted with two 250kg weights, giving a total ballast of up to 1.5 tonnes.

On the road the EZ Ballast Wheel System allows operators to avoid unnecessary weight on the tractor and therefore reduce fuel costs by up to three per cent. Moreover, a lower overall tractor weight allows an

increase in the trailer payload, so transport capacity can be boosted by up to nine per cent.

The second Silver Medal winner, John Deere's new tractor integrated AutoTrac Implement Guidance system steers both a tractor and row-crop cultivator by combining a camera with GPS steering for high speed, high output weed control.

The time window for optimal mechanical weed control is very limited. John Deere and its subsidiary Monosem have therefore developed this active, integrated implement control system for inter-row hoeing. The system enables very high working speeds of up to 16kph without damaging the crop.

AutoTrac Implement Guidance uses a camera mounted on the hoe which calculates the predicted track along the plant rows. In addition, a John Deere StarFire satellite receiver is attached to the hoe. Steering control is thus achieved using an RTK signal and is particularly useful where plant rows are uneven or interrupted. The tractor is controlled in the same way, with both the camera and StarFire GPS receiver mounted onto the cab.

All information is shown and settings entered on the tractor's CommandCenter display. Sideways movements of the hoe are governed by an electro-hydraulic control unit on the tractor, which works with a hydraulic side stabiliser on the lower links while the three-point hitch's upper link position is continuously monitored.

The AutoTrac Implement Guidance system steers not only in straight rows but also on slopes and around corners. Corrections and cross shifts of more than 500mm of the hoe's tools are possible, while two patented hydraulic disc coulters fixed onto the tractor's hitch block ensure precise tracking accuracy, especially at high speeds.

Source: John Deere GmbH & Co. KG