

TEST OF THE OVERHEAD YIELD MONITOR FOR THE PREDICTION OF LOAD-OUT WEIGHT OF TRUCKS

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An overhead optical yield monitoring system was tested on a Case IH 8000 series harvester to determine if the unit can accurately estimate the load-out weight of trucks. Two systems were tested including a wired unit and a wireless unit. Results indicate that even though the total harvested weight was accurately predicted (0.47% error), individual truck load estimates varied widely and ranged from 0.6 to 26% error, giving an average error of 14% (Table 1). In some cases, two or three truck loads would be very close together, and then errors would change widely from one side to the next. Reasons for the large variance are thought to be from Bermuda grass trash and other debris that rode on the top of the slats in this machine.

Table 1
Wireless Monitor

Truck Load (lbs.)	Monitor Estimate (lbs)	lbs. error	Percent Error	Abs Percent error
52540	59301	6761	12.87	12.87
52550	66207	13657	25.99	25.99
52554	49168	-3386	-6.44	6.44
55240	47175	-8065	-14.60	14.60
55540	47442	-8098	-14.58	14.58
52380	63268	10888	20.79	20.79
58180	48353	-9827	-16.89	16.89
54200	54285	85	0.16	0.16
433184	435199	2015	0.47	14.04

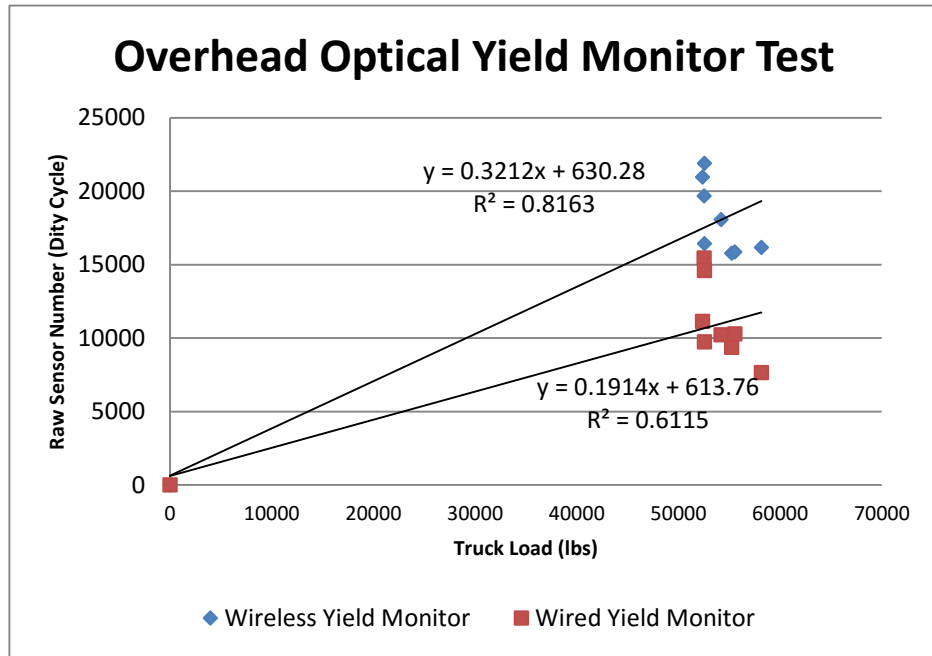


Figure 1: Result for the overhead optical yield monitor in a highly variable production setting for load out weight of truck estimation.