What are the dangers today?

HEADLINE: Truck *driver dies when straw bales fall off truck and strikes him*

"Farm employers should develop a bale loading procedure to minimize the possibility of load shift and/or bale movement and physical requirements."

-Michigan public transportation investigation statement

- "Agriculture is the second most dangerous occupation only second to construction" *–The National Safety Council*
- *"I don't want a load of bales falling off and killing a family. I don't want that on my conscience and I don't want my truck involved in a wreck. None of us can afford an accident. Everything we do has to be done right or I don't want to do it, so we're going to do whatever is the safest." – Iver Amen 30 year Hay Hauler*

STINGER INC

A million bales hauled each year… What could go wrong?

Deformed bales

Throwing straps in the wind

Extra problems Extra time

Load and strap at same time – Is it safe?

5 days a week = Rotator cuff surgery

Not a safe location while loader is straightening the load

The Stinger Solution

The Stinger ALSS will allow you to load and secure a 36-42 bale load of biomass in 6-8 minutes.

Squeeze type loading system allows loader to handle 6 – 9 bales at a time.

***A**utomatic **L**oad **S**ecuring **S**ystem*

Allows the load to be secured without the driver ever leaving the cab of the tractor.

The safest and quickest possible loading system.

STINGER INC

The safest solution

* Maximum operator safety = No drivers slipping on ice or mud, less workman's comp claims
* In cab controls = Operators never leave the safety of the cab
* Reduced number of employees
* Load and secure in as little as 6 minutes = Secure time 60 seconds vs. 15-20 minutes traditionally
* Lowest overall cost per ton
* Lower total equipment cost
* Meets and exceeds federal load secure standards for larges square bales.

Tipped to 45 degrees

Tipped to 32 degrees

Tested and developed since 2010

STINGER INC.

How much will the ALSS save?

300,000 Tons
500,000 Bales

13 Semi & trailer units $155,000 each
$120,000 Semi, $35,000 Trailer
Average 4 loads per day
4 Case 621F Wheel Loaders
@ $165,000 Each
Total Equip. Investment
$2,675,000

9 ALSS units & Semi $215,000 each
$120,000 Semi, $95,000 Trailer
Average 6 loads per day
2 Caterpillar 966 Wheel Loaders
@ $400,000 each
Total Equip. Investment
$2,735,000

Total annual savings using the Stinger
ALSS vs. traditional loading methods

$559,000.00

STINGER INC.

Biomass Feedstock logistics – By the numbers

12,821 truckloads @ 39 bales per load

2000 working hours per truck / trailer and loader operator – 8 hour days, 5 days /week, 50 weeks /year

Base Costs

- Wages including benefits = $28.50/hour
- Fuel = $2.50/gallon $16.00 per hour per unit average (traditional) $17.00 per hour per unit (ALSS w/ Larger HP loaders)
- Depreciation + 10% (based un 10 year life of equipment)
- Repair = 10% of machinery cost annually
- Taxes and Insurance = $7500.00 per unit annually $2500.00 per loader annually

Traditional Loading – Input cost per ton

- Labor 17 workers @ $28.50/hr 2000 hrs. each. $969,000
- Fuel 17 units @ $16.00/hr 2000 hrs. each unit. $544,000
- Depreciation on $2,675,000 (10% annual) $267,500
- Repair on $2,675,000 (10% annual) $267,500
- Taxes and Insurance for 13 units @ $7500 $97,500
- Taxes and Insurance for 4 loaders @ $2500 $10,000

Total = 2,155,500.00 / 300,000 ton = **$7.19 per ton** (labor+fuel+taxes+insurance+depreciation+repairs,not including return on investment)

ALSS – Input cost per ton

- Labor 11 workers @ $28.50/hr 2000 hours each. $627,000 $342,000 Savings
- Fuel 11 units @ $17.00/hr 2000 hrs. each unit. $374,000 $170,000 Savings
- Depreciation on $2,735,000 (10% annual) $273,500 $6,000 Savings
- Repair on $2,735,000 (10% annual) $273,500 $6,000 Savings
- Taxes and Insurance for 9 units @ $7500 $67,500 $30,000 Savings
- Taxes and Insurance for 2 loaders @ $2500 $5,000 $5,000 Savings

Total = $1,620,500 / 300,000 ton = **$5.40 per ton** (labor+fuel+taxes+insurance+depreciation+repairs,not including return on investment)

$559,000 Annual Savings

And no Workman's Comp claims with optimum conditions

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Is this optimum conditions?