Can bacterial inoculants improve the quality of rust-infested corn silage?

Queiroz et al, Oral presentataion, July 15, 2009, 15.30 hrs

Inoculation with Buchneri 500 (400,000 CFU/g L. buchneri NCIMB 40788 plus 100,000 CFU/g P. pentosaceus NCIMB 12455 plus enzymes):

"...reduced adverse effects of rust infestation on the fermentation, increased NDFD of NR and MR silages" (43.4% vs 38.1% and 45.7% vs. 39.8%, respectively)

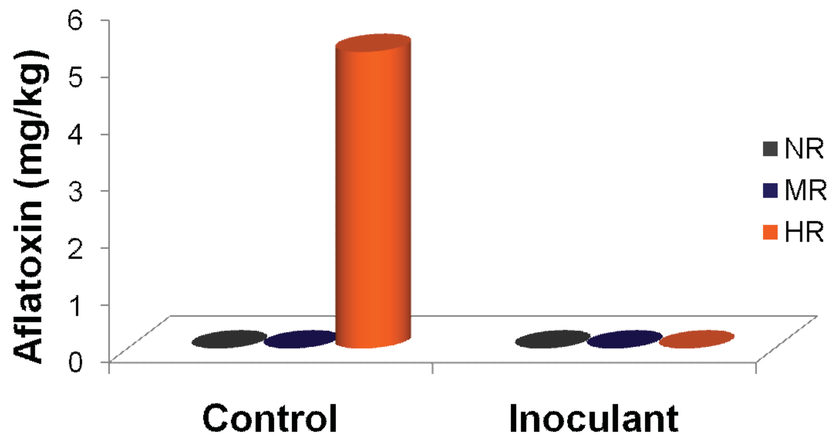
"...and decreased mold growth, aerobic spoilage and aflatoxin production in HR silages" (zero vs. 5.2 mg aflatoxin/kg* in control)

**** NB: actions level stipulated by US FDA is 20 ng/kg***

Treatment effects on chemical composition (%DM), mold counts (log cfu/g) and aerobic stability (h) of corn silages.

	Control			Inoculant			Contrast P values			
Items	NR	MR	HR	NR	MR	HR	SEM	IN	R	IN x R
DM, %	38.0	40.6	58.3	37.2	39.6	56.5	0.29	0.01	0.01	0.25
NDFD	38.1	39.8	36.2	43.4	45.7	33.0	1.27	0.02	0.01	0.01
Mold	5.24	4.96	3.40	0.00	0.00	0.00	2.41	0.10	0.07	0.07
Aerobic stability	26.0	27.5	44.0	27.5	23.8	77.3	5.96	0.05	0.01	0.01

IN= inoculant effect; R= rust effect; DM = Dry matter; CP = crude protein; NDF = neutral detergent fiber; ADF = acid detergent fiber; IVDMD = in vitro DM digestibility; NDFD = NDF digestibitility; L = linear, P < 0.05; Q = quadratic, P < 0.05.



Forage Inoculants