



# "In vitro" dry matter digestibility, gas production and pH of silages of several maize cultivars

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## Introduction

- The use of silages is essential to guarantee quality feed ingredients during dry season;
- Corn is the most suitable forage for the silage process;
- Due to advances in genetic improvement, several hybrids are available on the market;
- Analyzing the differences between materials is necessary to obtain a quality silage and adequate animal production.

## Objective

To determine in vitro dry matter digestibility (IVDMD), gas production and pH in silages of 10 maize cultivars in Iturama, Brazil



## Experimental procedures

- Variables → In vitro gas production, In vitro DM digestibility, pH
- Treatments :  
XB6012 BT, BM709 pro 2, BM815 pro 2, DKB363 pro 3, AG8740 pro 3, SYN555 vip 3, SX8555 vip 3, SX7005 vip 3, DKB390 pro 3 and R9789 vip 3;
- Local → Animal Unit of Digestive and Metabolic Studies - São Paulo State University (Jaboticabal/ Brazil);
- The maize was ensiled in experimental mini silos in a completely randomized design with 3 repetitions;
- IVDMD was estimated using Ankom Daisy II and F-57 bags (n = 44);



### ➤ Gas production system:

- 200-mg sample,
- 10 mL rumen fluid,
- 20 mL McDougall's buffer,
- 24 h at 39°C,
- 60-mL glass bottles
- Gas production → Pressure meter + Transducer;
- Terminal pH was measured
- Proc Mixed → SAS.



## Results

Item	Treatments										SEM	P-value TR
	XB6012	BM709	BM815	DKB363	DKB390	AG8740	SYN555	SX8555	SX70005	R9789		
pH	6.62 b	6.65 a	6.62 b	6.60 c	6.65 a	6.61 bc	6.65 a	6.61 bc	6.61 bc	6.66 a	0.01	0.002
Gas, mL/g DM	205.7 abc	246.1 a	180.0 bc	179.6 bc	208.3 abc	243.2 a	167.7 c	240.1 a	224.4 ab	232.5 a	7.45	0.0005
IVDMD, %	73.9 ab	82.7 ab	72.7 ab	84.9 a	71.1 b	78.4 ab	78.2 ab	83.2 ab	78.3 ab	78.4 ab	2.58	0.02

## Conclusion

The material DKB363 pro 3 presented the most interesting characteristics for the use as silage for beef cattle in Iturama, Brazil.

## Acknowledgements

