Degradação ruminal in situ e in vitro

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In situ and in vitro ruminal starch degradation of grains from different rye, triticale and barley genotypes

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Introdução

- Técnicas para avaliar digestibilidade

- In situ
- In Vitro

Objetivo

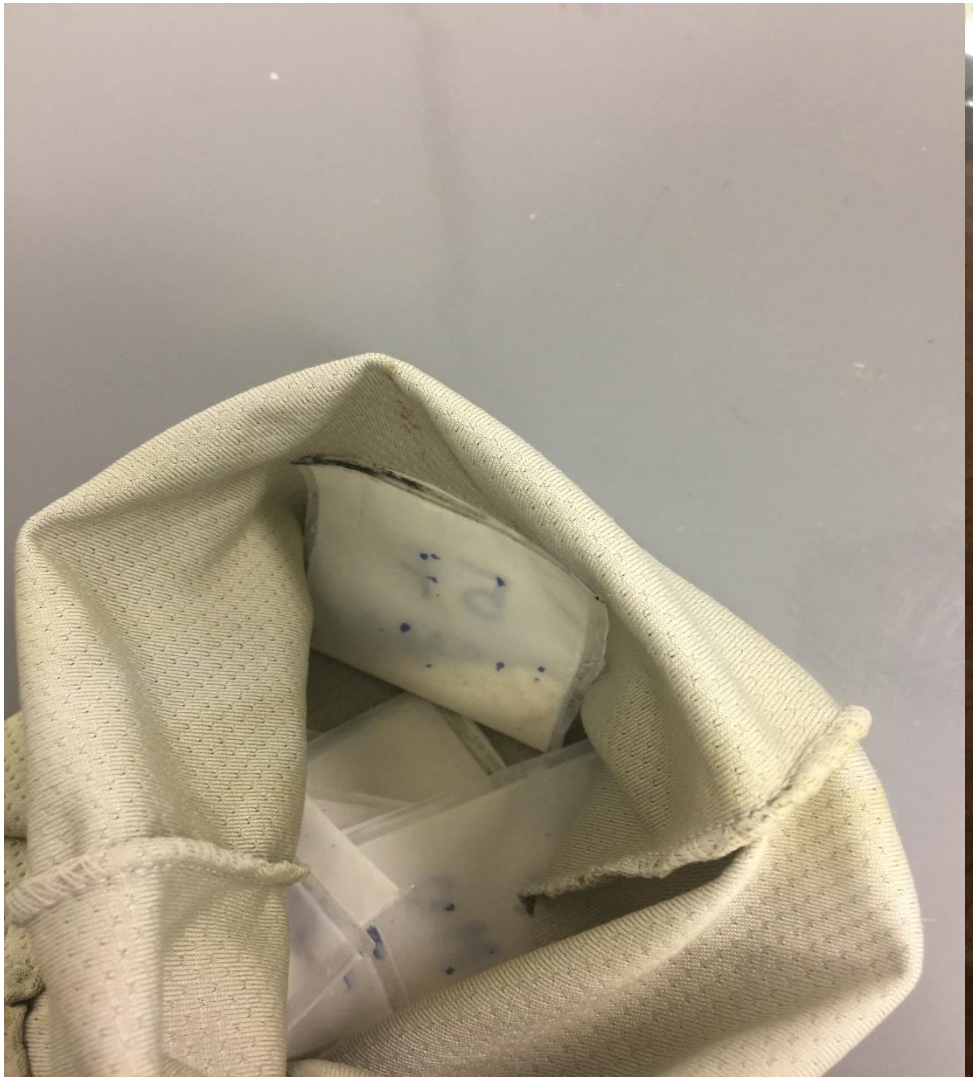
- Comparar in situ e in vitro as características de degradasão ruminal dos amidos de grãos

Materiales e metodos

- IN SITU

1.-Preparar amostras sacos ...de 5cm x 5cm com 1 g de contenido.

2.-Colocar dentro dos animais e analisar em tempos de 2,4, 6....48 horas



Materiales e metodos

- In Vitro

1.-Colocar 200 mg de amostras em seringas e medir produção de gas em ml.


marcomi

ANALISE E RESULTADOS

características

	CENTEIO				TRITICALE				CEBADA			
AMS	Amido	CP	NDF	ADF	Amido	CP	NDF	ADF	Amido	CP	NDF	ADF
Mean	59.1	11.3	14.5	2.9	62.1	13.0	13.5	2.9	54.5	11.4	18.7	5.6

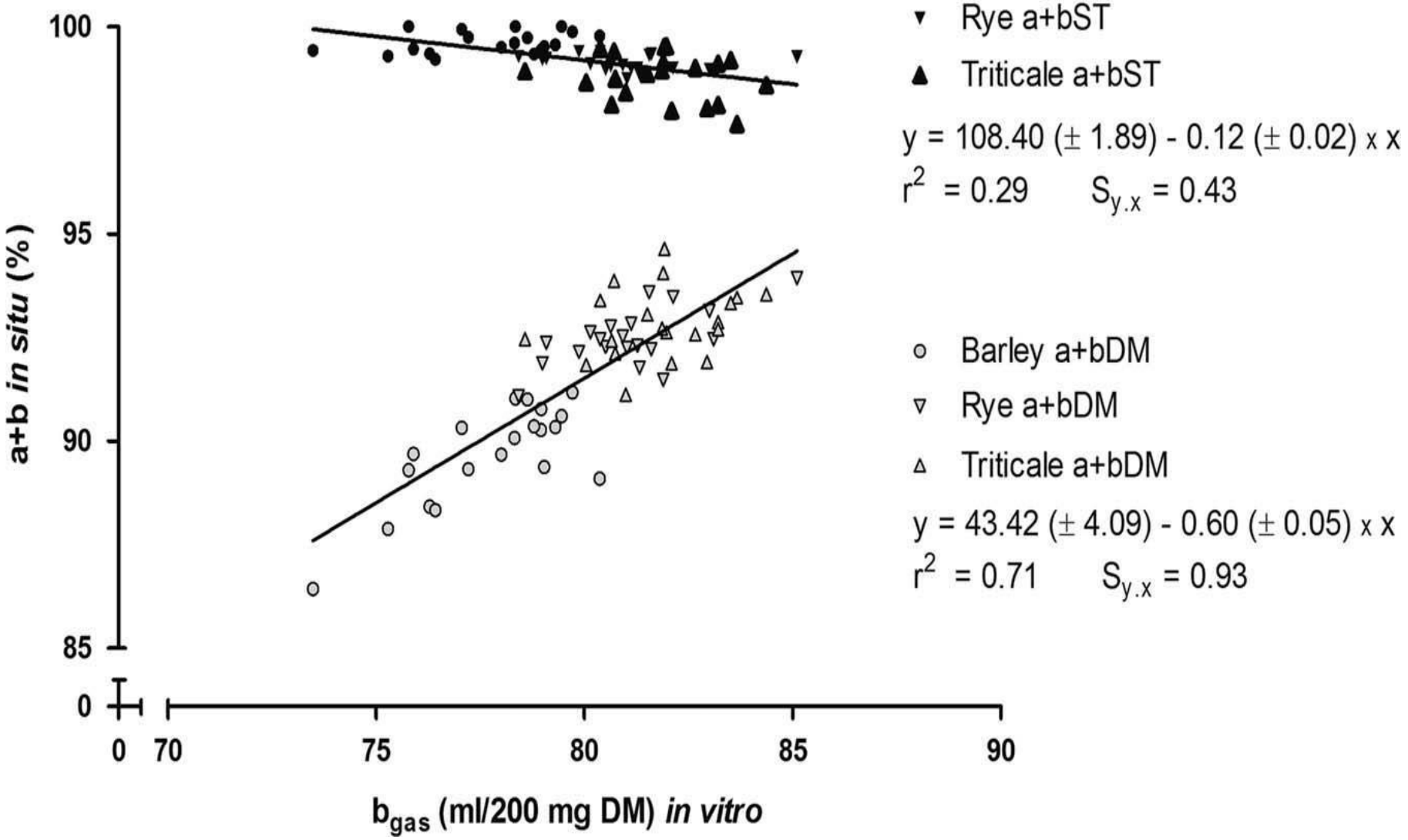
CENTEIO		TRITICALE		CEBADA	
	Mean	Mean		Mean	
ST					
a (%)[1]	31[b]	35[a]		24[c]	
a + b (%)[1]	99[b]	99[c]		99[a]	
c (%/h)[1]	116[a]	85[b]		36[c]	
ED_8 (%)[2]	95[a]	94[b]		86[c]	

CENTEIO		TRITICALE		CEBADA	
	Mean		Mean		Mean
DM					
a (%)[1]	30[b]		34[a]		23[c]
a + b (%)[1]	92[a]		93[a]		90[b]
c (%/h)[1]	82[a]		56[b]		31[c]
ED_8 (%)[2]	87[a]		85[b]		75[c]

CENTEIO		TRITICALE		CEBADA	
	Media		Media		Media
Gp24 (ml/200 g DM)	79.1[a]		79.2[a]		74.6[b]
b_{gas} (ml/200 g DM)[1]	81.1[a]		81.0[a]		77.8[b]
c_{gas} (%/h)[1]	12.5[a]		11.5[b]		11.1[b]
dOM (%)[2]	95.3[a]		95.8[a]		91.3[b]
ME (MJ/kg DM)[3]	13.9[a]		14.0[a]		13.5[b]

	aST (%)	a + bST (%)	cST (%/h)	aDM (%)	a + bDM (%)	cDM (%/h)	Gp24 (ml/200 mg DM)	b_{gas} (ml/200 mg DM)	c_{gas} (%/h)
ST (% DM)									
CENTEIO	0.84***	−0.55***	0.54***	0.73***	0.70***	0.49***	0.75***	0.72***	0.29*
Rye									
Triticale	0.47*								
Barley	0.82***		0.58**			0.59**	0.63**		0.61**

	aST (%)	bST (%)	a + bST (%)	cST (%/h)	aDM (%)	bDM (%)	a + bDM (%)	cDM (%/h)
Gp24 (ml/200 mg MS)								
CENTEIO	0.69***	−0.70***	−0.52***	0.68***	0.68***	−0.55***	0.74***	0.65***
b_{gas} (ml/200 mg)								
CENTEIO	0.63***	−0.65***	−0.54***	0.56***	0.73***	−0.58***	0.84***	0.51***
e							0.64**	
c_{gas} (%/h)								
CENTEIO	0.39***	−0.39***		0.60***	0.28*	−0.26*		0.63***
			−0.45*	0.46*			−0.49*	0.53*

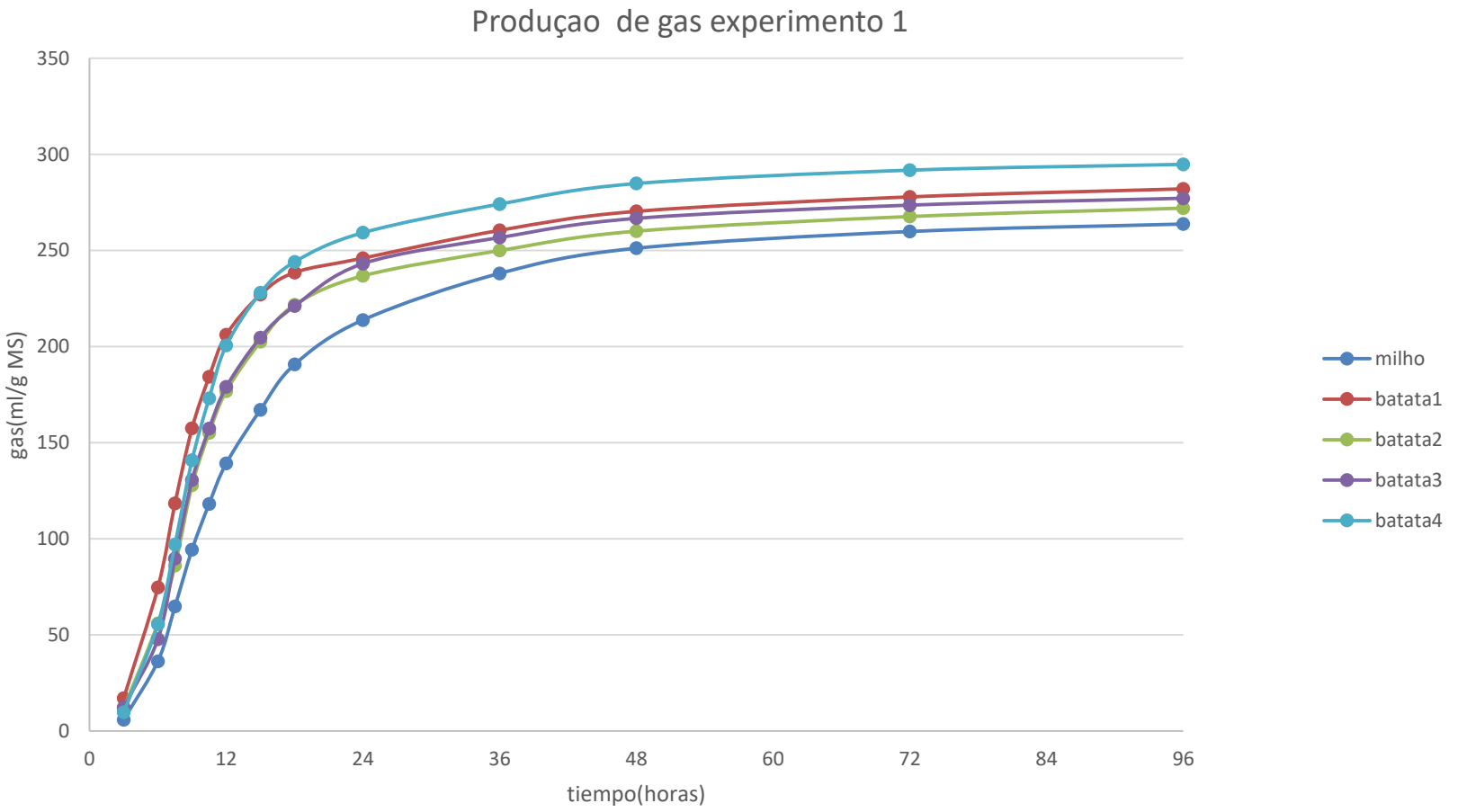

Barley a+bST
Rye a+bST
Triticale a+bST
y = 108.40 (± 1.89) - 0.12 (± 0.02) x x
r2 = 0.29 Sy.x = 0.43
Barley a+bDM
Rye a+bDM
Triticale a+bDM
y = 43.42 (± 4.09) - 0.60 (± 0.05) x x
r2 = 0.71 Sy.x = 0.93
a+b in situ (%)
100
95
90
85
0
0
70
75
80
85
90
bgas (ml/200 mg DM) in vitro

Conclusiones

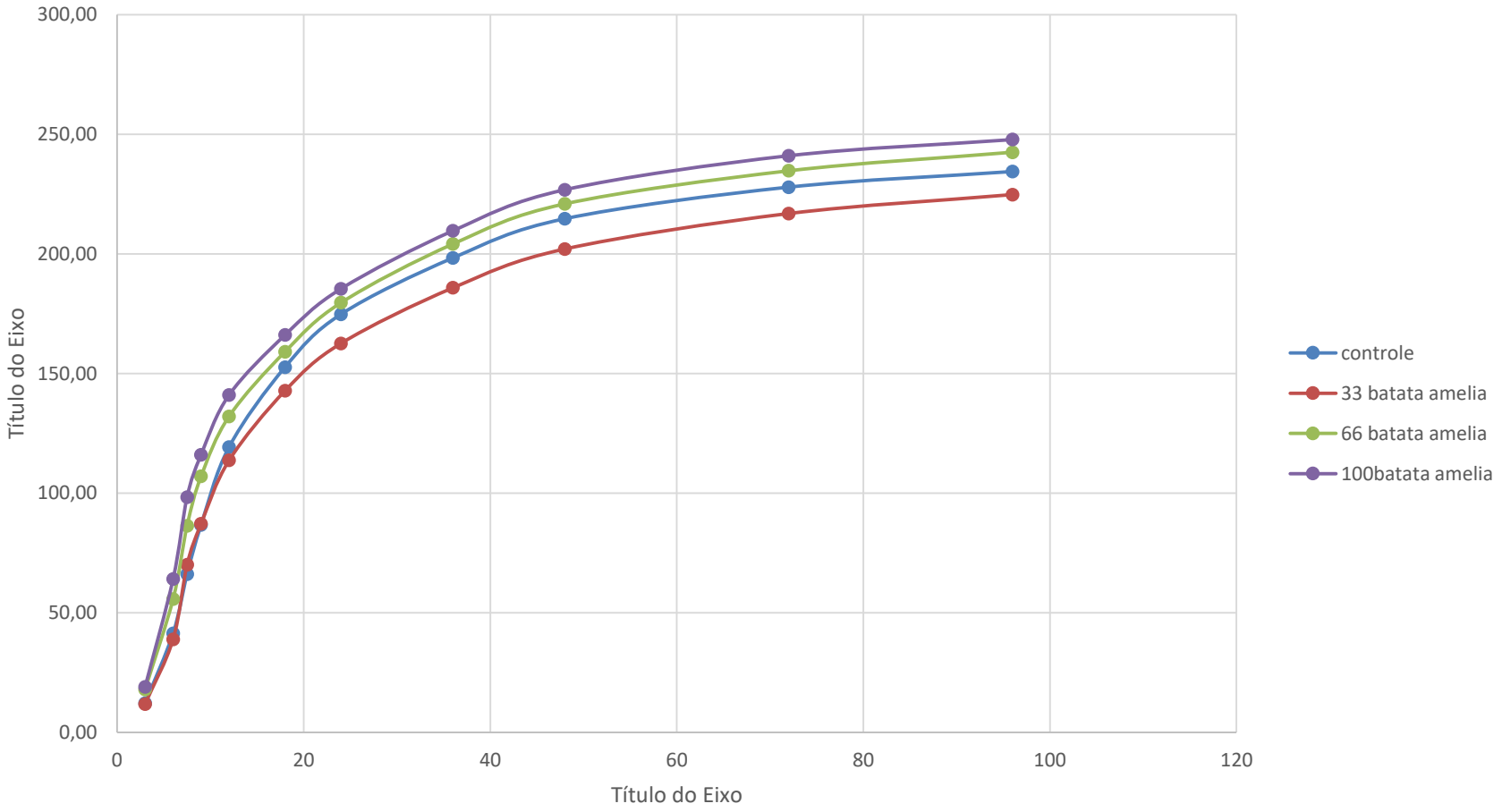
-A taxa de degrabilidade e maior para centeio.

-Os analices do estudio não são definitivos são complementares.

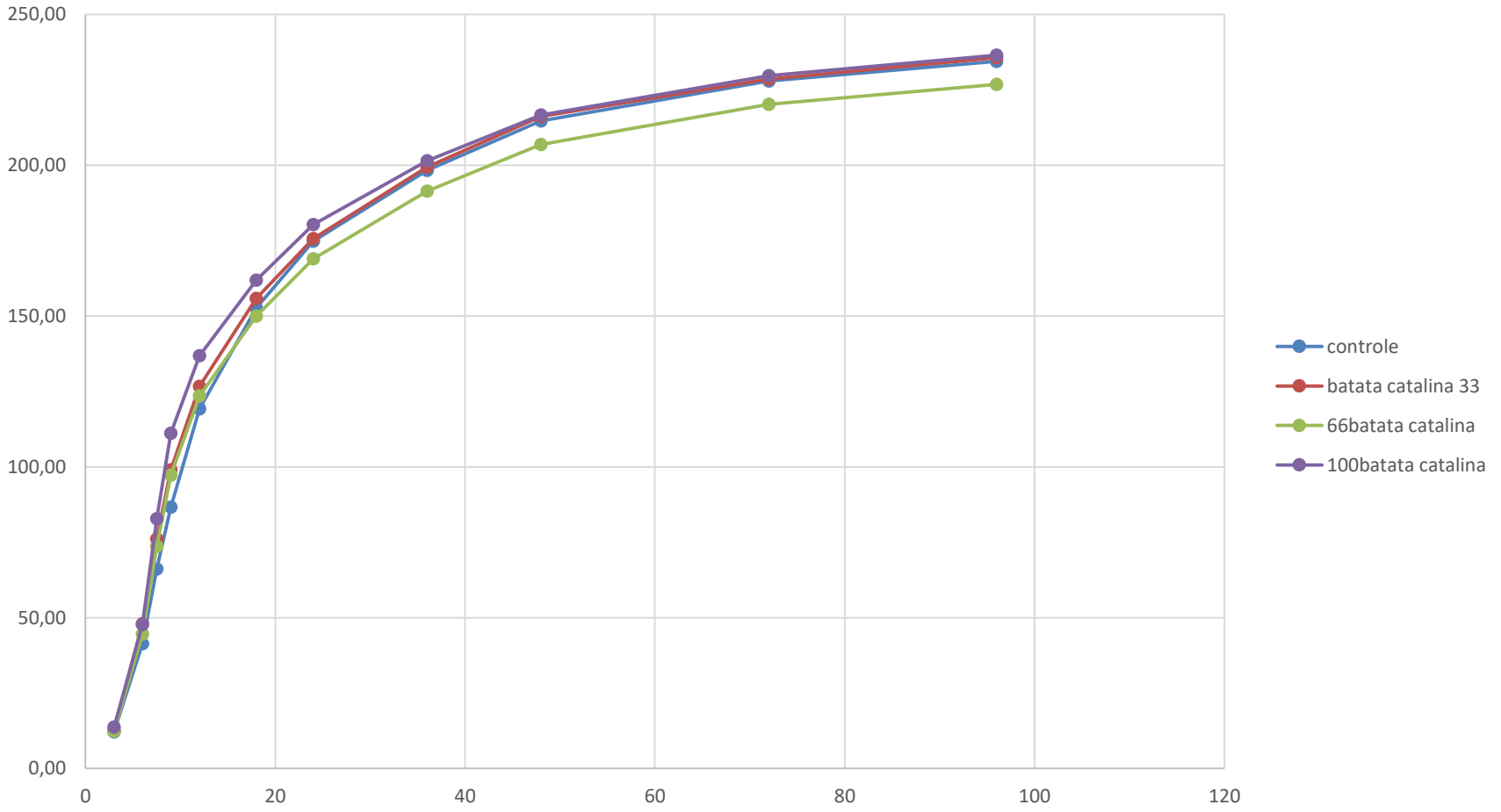
	muestra	a real (ml/g MSI)	a modelizado (ml/g MSI)	kd	kd(%/hora)	lag
milho	1	263.8	268.0	0.06	6.4	16.641
batata amelia	2	282.1	280.2	0.10	9.8	10.170
batata catarina	3	272.0	273.0	0.08	8.2	12.996
batata rubisol	4	277.2	279.5	0.08	8.1	13.451
batata cabelua	5	294.8	297.7	0.09	8.5	13.657


Produçao de gas experimento 1
gas(ml/g MS)
350
300
250
200
150
100
50
0
0
12
24
36
48
60
72
84
96
tiempo(horas)
milho
batata1
batata2
batata3
batata4

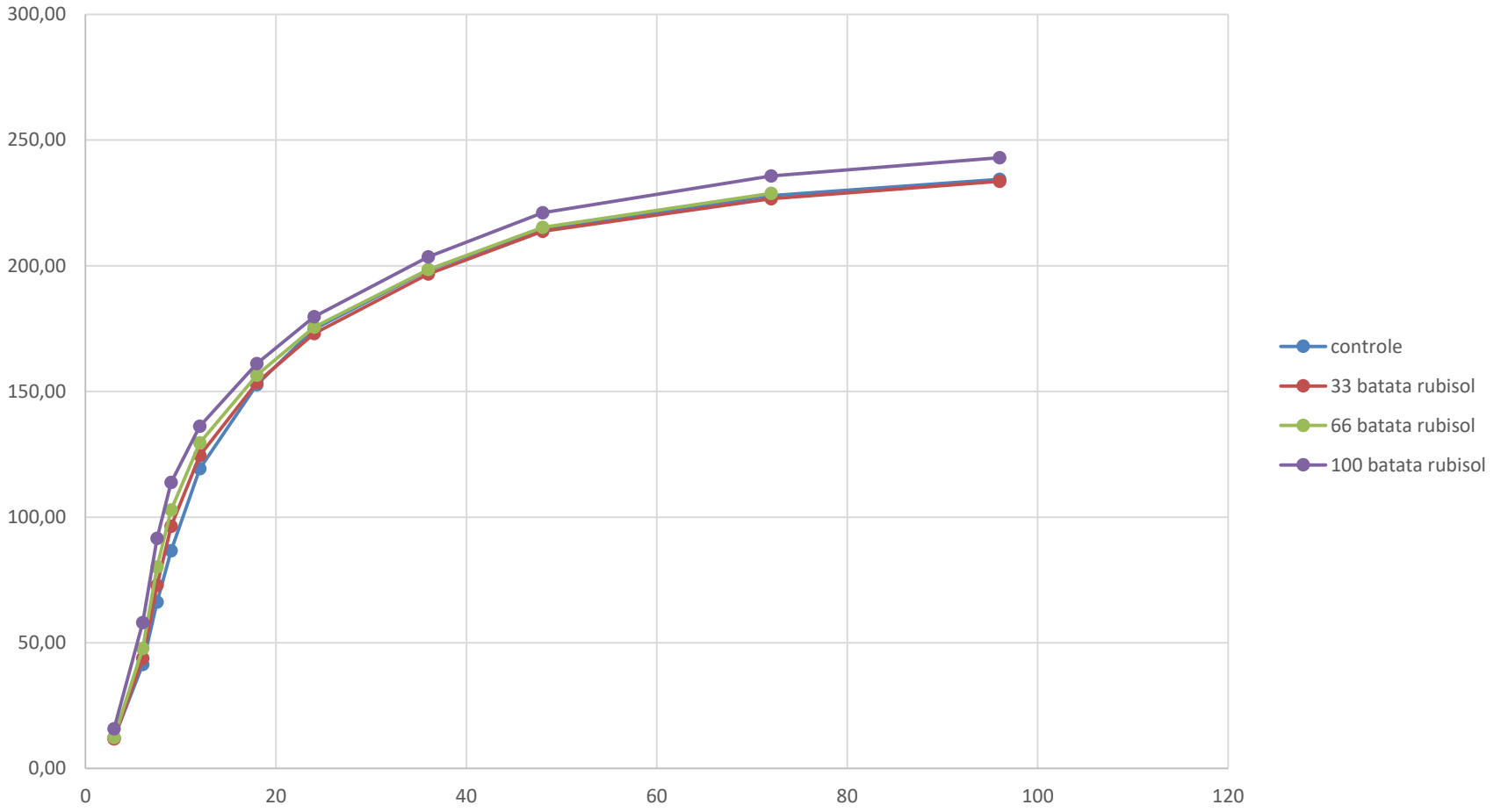
Batata Amelia



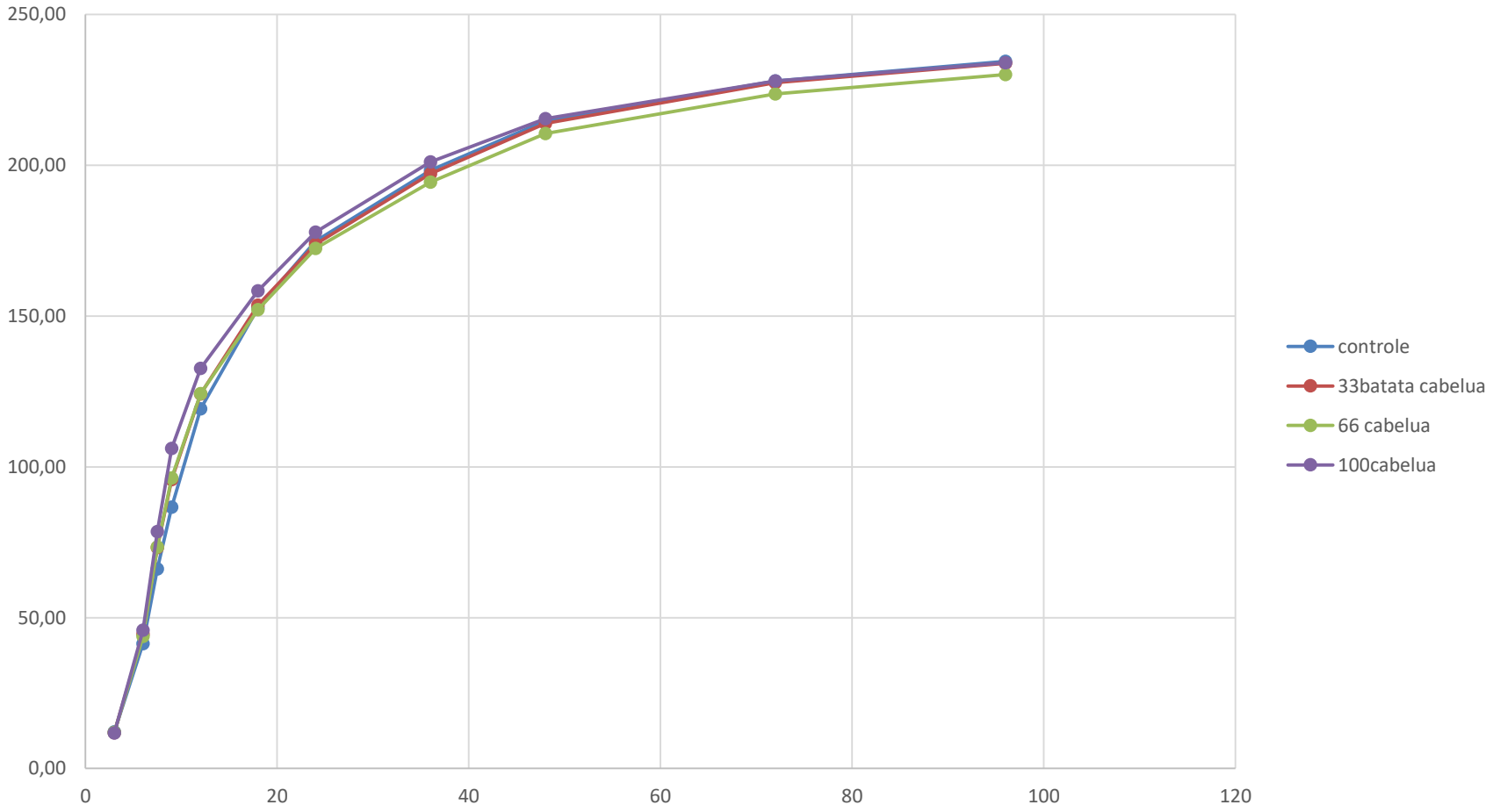
Batata Catarina



Batata Rubisol



Batata Cabelua



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