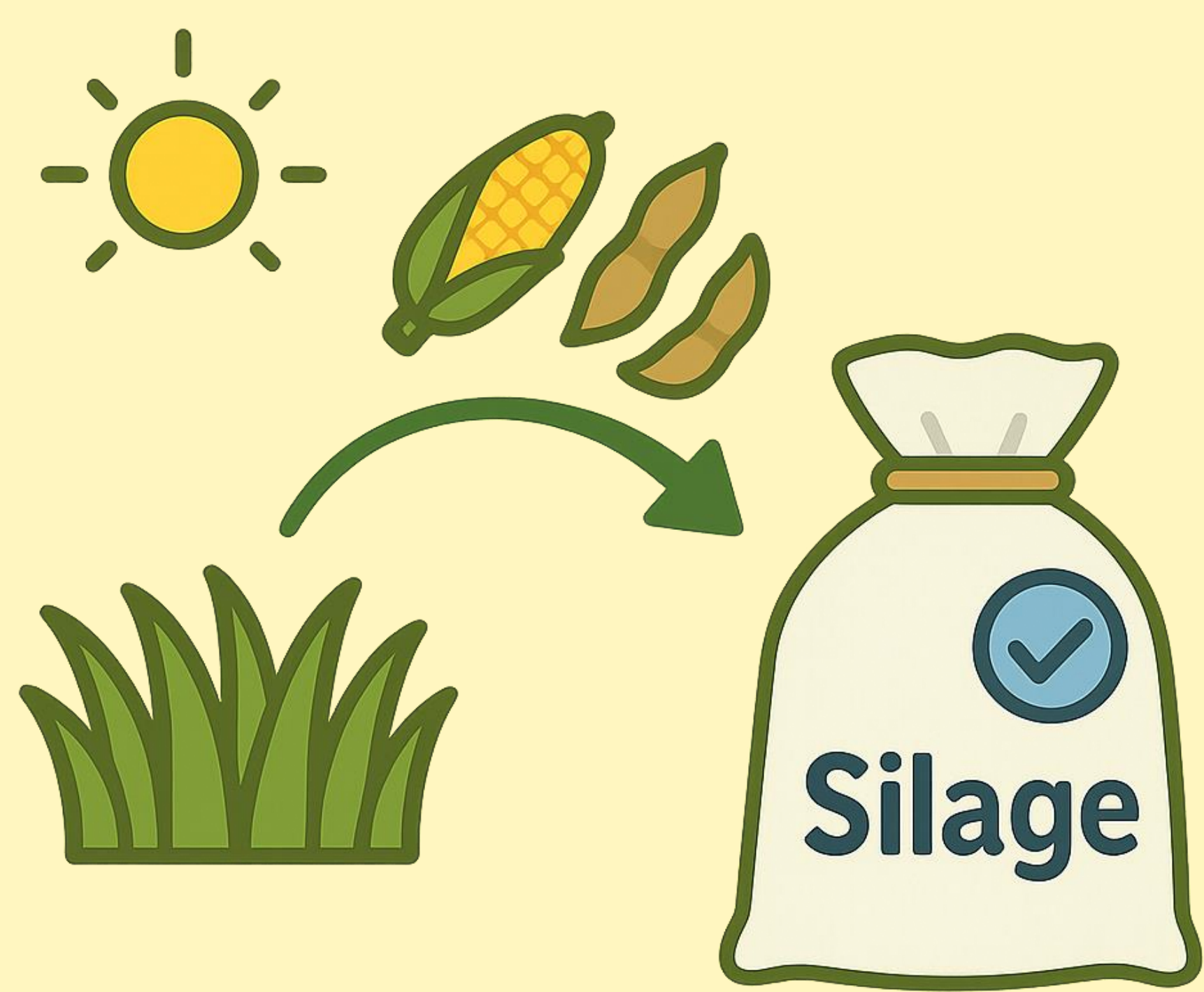




High quality **silage** is achievable with **reduced wilting** and strategic **supplementation**.



1 Dilemma of wilting...



- ✓ Wilting is important to reach critical dry matter (DM) to conserve forage as silage.

But wilting leads to:

- exposure to weather risks;
- nutrient losses: DM, true proteins, sugars



2 Objective

To evaluate how reducing wilting and adding dry concentrates affect fermentation, nutritive value and aerobic stability of alfalfa silage.

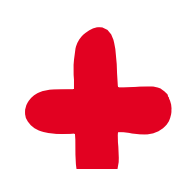
3 Methodology

3 wilting levels of alfalfa

NW : not wilted
20% DM

PW : partially wilted
6 h to 28% DM

FW : fully wilted
24 h to 35% DM



Dry concentrates

GC (ground corn)

or

GC + SH
(soybean hulls)

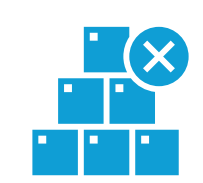
5 silages treatments (35% DM)

1. NW-GC
2. NW-GCSH
3. PW-GC
4. PW-GCSH
5. FW

Parameters

- ✓ Chemical composition
- ✓ Fermentation profile
- ✓ Aerobic stability

Statistics



5 blocks x 5 treatments



Mixed effects (SAS Studio)



Priori contrasts

- ✓ Random: block
- ✓ Fixed: wilting and concentrates

What we found

- ✓ 35% DM silage was reached with less wilting and addition of dry concentrates (ground corn & soybean hulls).
- ✓ Fermentation was improved with dry concentrates.
- ✓ Shorter wilting reduced proteolysis in silage.

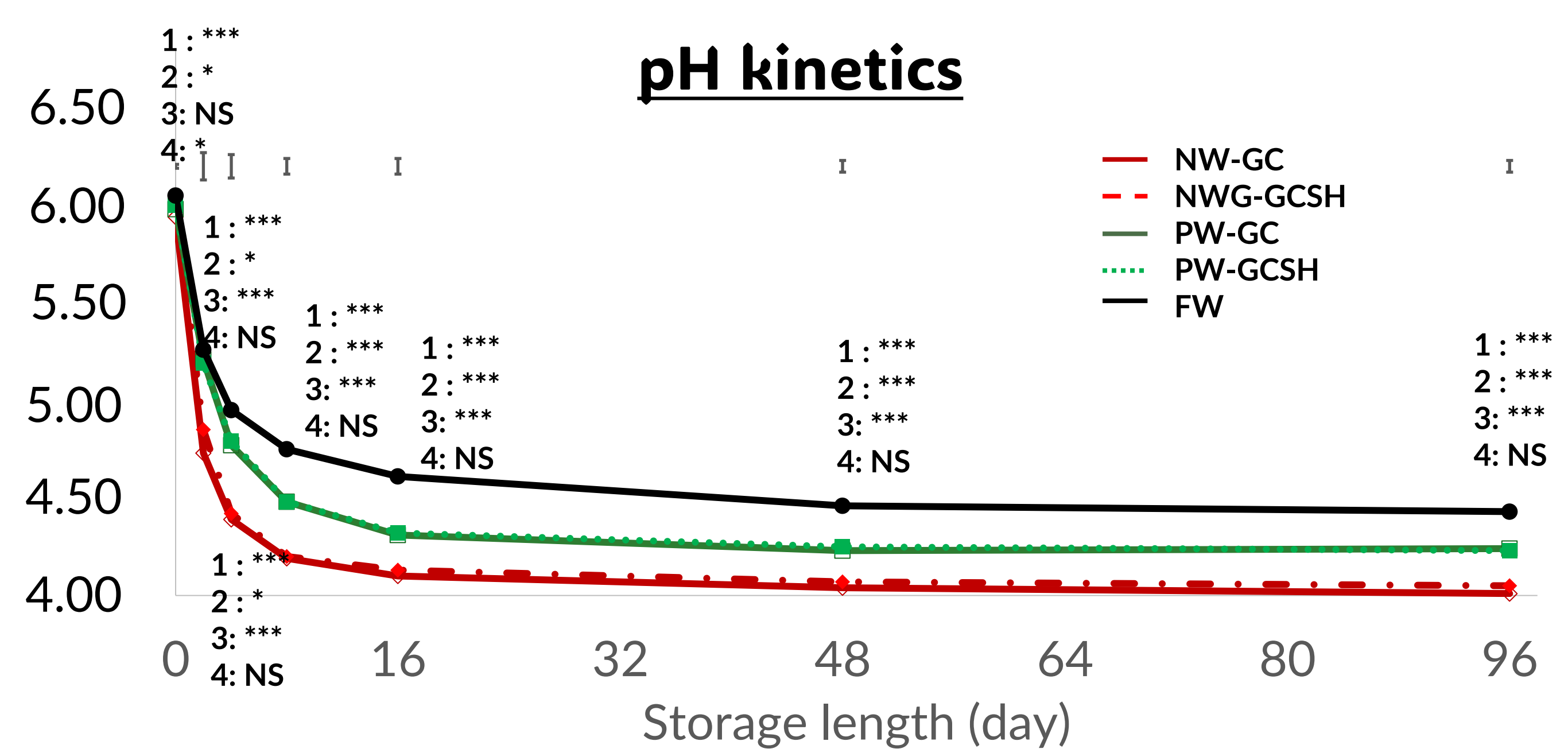
4 Results

Contrasts : 1 : FW vs. NW ; 2: FW vs. PW ; 3 : NW vs. PW ; 4 : GC vs. GCSH
P values : NS = $P > 0.05$; * = $0.05 > P \geq 0.01$; *** = $P < 0.01$

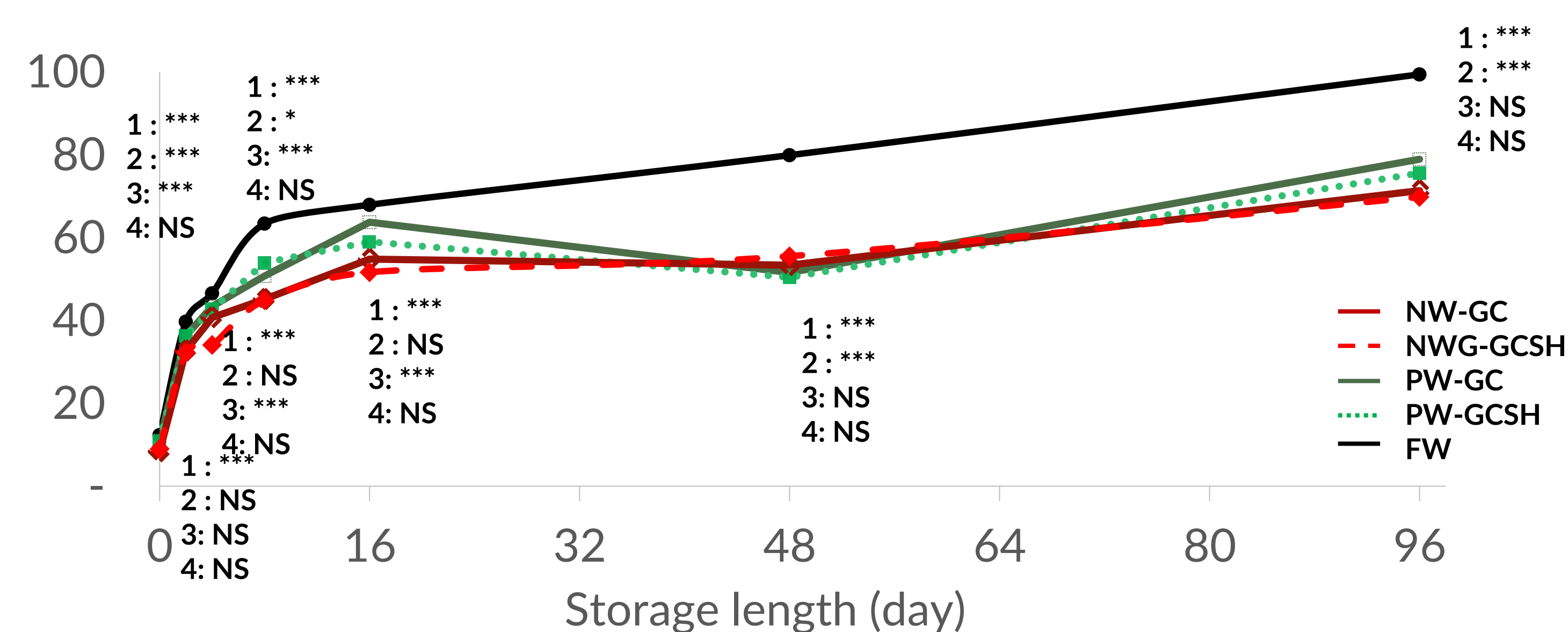
Chemical composition of silages

	NW		PW		FW	Contrasts			
	GC	GCSH	GC	GCSH		1	2	3	4
DM (%)	32	31	35	35	32	NS	***	***	NS
CP ¹	137	140	158	161	184	***	*	***	NS
aNDF ¹	289	371	383	421	449	***	***	***	***
Starch ¹	247	155	88	67	8	***	***	***	***

¹g/kg DM ;



Ammonia nitrogen (g N/kg N total)



Aerobic stability (h)



Contrasts:
1:***
2: NS
3:***
4:***
SEM = 14.4