

MATURITY, MOISTURE, AND LENGTH OF CUT RANGES RECOMMENDATIONS FOR USING PIONEER® BRAND INOCULANTS

(Effective October 2001 for North America)

Crop	Product	Maturity	-----Storage Type-----					Theoretical Length of Cut (TLC) ----inches----
			Bunker	Stave	Sealed	Bagged	Balage	
			-----% Moisture-----					
Corn Silage Non-processed	1132*		67-72	63-68	55-60	60-68	N/A	3/8-5/8"
	1174	Milk line 1/8-2/3	67-72	63-68	55-60	60-68	N/A	
	1177	down the kernel	67-72	63-68	55-60	60-68	N/A	
	11A44‡		55-67•	55-65•	50-55•	55-60•	N/A	
Corn Silage Processed (Roller setting 1-3mm depending on moisture)	1132*		63-72	60-68	55-60	60-68	N/A	Max of 1" with not >5/8-3/4" preferred
	1174	Milk line 1/8-3/4	63-72	60-68	55-60	60-68	N/A	
	1177	down the kernel	63-72	60-68	55-60	60-68	N/A	
	11A44‡		55-63•	55-60•	50-55•	55-60•	N/A	
Alfalfa Silage (Minimum of 80% alfalfa in the stand)	11H50*	Mid to late bud	65-70	60-65	55-60	55-65	60-65	1/4-1/2" (except balage)
	1174	or 26-36 inch	65-70	60-65	55-60	55-65	60-65	
	1177	stem height	65-70	60-65	55-60	55-65	60-65	
	1127+	or <30% ADF, <40% NDF	65-74Δ	65-70Δ	N/A	65-74Δ	N/A	
Grass and Grass/Legume Mix Silage	1127*		70-76Δ	63-70Δ	55-60	63-74Δ	N/A	1/4-1/2" (except balage)
	1174	When stems start	67-72	63-68	55-60	55-65	60-65	
	1177	elongating	67-72	63-68	55-60	55-65	60-65	
	11A44‡		55-67•	55-63•	50-55•	55-60•	55-60•	
Cereal Silage (Oats, Rye, Wheat, Barley)	1127*	Grain: boot to dough	67-76Δ	63-70Δ	55-60	63-74Δ	NA	1/4-1/2" (except balage)
	1174		67-72	63-68	55-60	63-68	60-65	
	1177	Grain: milk to soft dough	67-72	63-68	55-60	63-68	60-65	
	11A44‡		55-67•	55-63•	50-55•	55-63•	55-60•	
Sorghum Silage	1129*		65-72	65-70	55-60	60-68	50-60	3/8-1/2" (except balage)
	1174	Grain: milk to hard dough	65-72	65-70	55-60	60-68	50-60	
	1177		65-72	65-70	55-60	60-68	50-60	
	1127+		70-76Δ	65-72Δ	55-60	68-74Δ	N/A	
	11A44‡	Grain: boot to milk	55-65•	55-65•	50-55•	55-60•	45-55•	

Δ **Caution.** The upper moisture range for these crops are **not** generally recommended, unless harvest weather conditions make wilting to lower moistures impossible. Pioneer ® brand inoculants suggested for these conditions were researched in Europe to aid fermentation of higher moisture feeds, however, exceeding 70-72% harvest moisture can increase the risk of abnormal or clostridial fermentation and lead to difficult unloading in cold environments.

• **Caution.** The lowered moisture range for these crops are generally **not** recommended unless harvest weather conditions cause excessively rapid drying. Pioneer ® brand inoculants suggested for these conditions were researched to aid fermentation and bunklife in dryer than normal silages, however, ensiling at these lower moistures can increase the risk of abnormal fermentation, heating and poor silage bunklife.

Crop	Product	Maturity	-----Storage Type-----			
			Bunker	Stave	Sealed	Bagged
-----% Moisture-----						
High Moisture Corn Grain						
Whole Corn	1189*/1186	Grain: Blacklayered	N/A	N/A	22-30	N/A
Cracked Shelled	1189*/1186	Grain: Blacklayered	26-34	26-32	22-30	26-34
Ground Ear	1189*/1186	Grain: Blacklayered	34-40	32-38	28-34	34-40
Whole Corn	11A44‡	Grain: Blacklayered	N/A	N/A	20-30	N/A
Cracked Shelled	11A44‡	Grain: Blacklayered	20-32	20-32	20-30	20-32
Ground Ear	11A44‡	Grain: Blacklayered	26-34	26-32	26-34	26-34
High Moisture Sorghum (milo)						
Whole Sorghum	1129*	Grain: soft to hard dough (full color)	N/A	N/A	22-30	N/A
Rolled or Ground	1129*	Grain: soft to hard dough (full color)	26-34	26-32	22-30	26-34

Crop	Product	Maturity	Bale Type	Moisture Range
Alfalfa Hay (Minimum of 80% alfalfa in the stand)	1155*	Mid to late bud or 26-36 inch stem height or <30% ADF, <40% NDF	Large, Round or Mid- Square Bales	13-20%
			Large, Square Bales	13-18%
			Small, Square Bales	15-25%

Product recommendations for each crop are based on 1) expected harvest moisture, 2) aerobic stability (bunklife) needs, and/or 3) animal performance goals. Consult with your Pioneer sales professional regarding your particular needs.

Suggested harvest moisture and chop length are general guidelines. Discuss specific moisture and chop length recommendations with your storage structure manufacturer.

Symbol Key:

* **Crop-specific product** developed exclusively for a particular crop type.

+ **Management-specific product** better suited for higher-moisture harvest conditions.

‡ **Management-specific product** better suited to lower-moisture harvest conditions.

N/A - non-applicable.