





### Pioneer® brand 11H50 is an alfalfa silage inoculant designed to:

- Speed up fermentation and significantly reduce the degradation of protein to the less valuable form of ammonia-nitrogen.
- Excess ammonia-nitrogen costs the animal energy to excrete and can have negative effects on animal reproduction (causing high milk or blood urea nitrogen levels). For stands with a minimum of 80% alfalfa.
- Improve DM recovery comes down to saving more plant sugars, which are the most digestible carbohydrate in forages.
- DM loss has to be replaced in the diet with much more costly sugar or starch sources (not with the original forage).

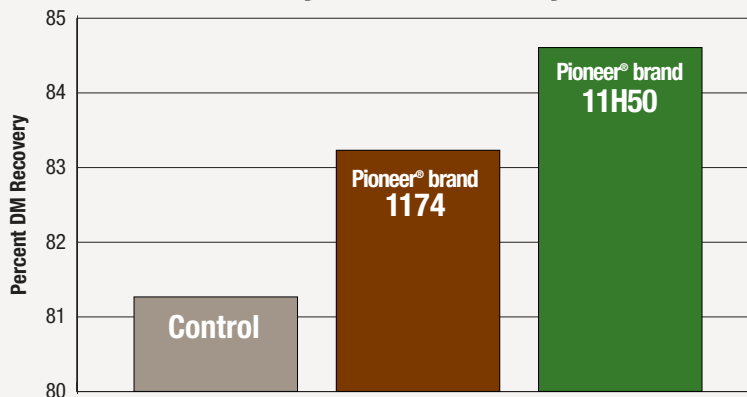
Available as a water-soluble product in packaging suitable for use in tank mixes or with the Pioneer Appli-Pro® systems or as a free-flowing granular formulation for easy and convenient application.

**11H50** contains a unique blend of patented and/or proprietary strains of *Lactobacillus plantarum* formulated to significantly reduce protein degradation. Protein quality can not only be lost through extended windrow wilt time at harvest, but through inefficiencies of fermentation.

Available in Package Sizes:	
	50T
	250T
	500T
	50T
X	<b>Improves fermentation and reduces dry matter loss</b>
X	<b>Improves nutrient conservation</b>
	<b>Significantly reduces heating on bunker/pile face</b>
	<b>Helps reduce heating in entire TMR</b>
	<b>Improves fiber digestibility</b>

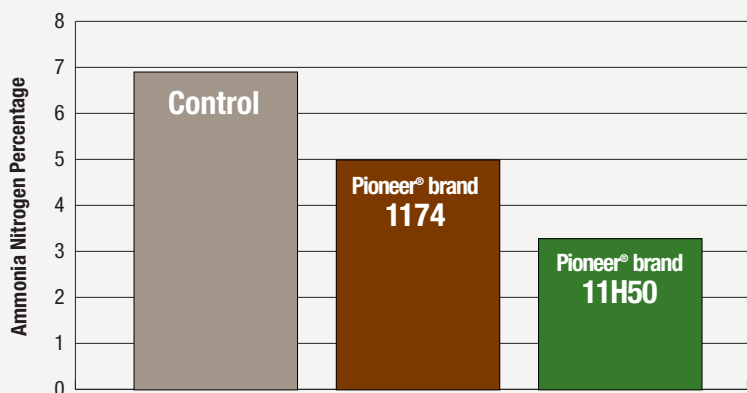
**IMPORTANT:** Information and ratings are based on relative comparisons with other Pioneer® brand inoculants within each specific crop, not competitive products. Information and ratings are assigned by Pioneer Forage Additive Research, based on average performance across area of use under normal conditions, over a wide range of both environment and management conditions, and may not predict future results. Product responses are variable and subject to any number of environmental and management conditions. Please use this information as only part of your product positioning decision. Refer to [www.pioneer.com/inoculants](http://www.pioneer.com/inoculants) or contact a Pioneer sales professional for the latest and most complete listing of traits and scores for each Pioneer® brand product. Fermentation – rate and extent of pH decline and the composition of fermentation acids occurring in silage. Bunklife – relative heat development compared to ambient temperature. Bunklife considers both how quickly silage begins to heat and the amount of heat generated while remaining above ambient temperature. Fiber Digestibility – the digestibility of neutral detergent fiber (NDF) by the ruminant animal expressed as a percentage of the total NDF.

### Dry Matter Recovery



### Ammonia Nitrogen as a Percentage of Total Nitrogen

Three Trial Summary - Pioneer Livestock Nutrition Center



**Economic significance:** According to the CPM-Dairy Ration Evaluation and Formulation Model (CPM Ver 1.0), reducing ammonia-nitrogen lowers energy expenditure by reducing the excretion of excessive non-protein nitrogen (termed urea cost in the model). Assuming 10 lbs. of alfalfa silage dry matter intake/cow/day, 11H50 treated silage compared to control silage had an energy-sparing effect from reduced urea cost equal to .042 Mcal Net Energy of Lactation. This .042 Mcal NE-L equates to the energy in 35.7 bushels of corn or the energy to produce 8 lbs. more milk in every ton of alfalfa silage treated with 11H50.

**Source:** Pioneer Livestock Nutrition Center, Iowa. Summary of three trials with uninoculated (Control) silage and silage inoculated with Pioneer® brand 1174 Silage Inoculant (1174) and Pioneer® brand 11H50 Silage Inoculant (11H50).