

# Long term use of the Lauren liner and peak milk production

## Abstract

Lauren AgriSystems is committed to researching and understanding our products and how they impact the dairy industry. After five years of product development and sales, we decided to evaluate dairies that have been using the Lauren liner for a prolonged time period. This study compares peak milk production from a dairy using Lauren Liners for 4+ years to data from a population of dairies. Peak milk (PM) is often used as an indicator of how well a dairy is performing. The data presented in this article clearly indicates that a continued high level of PM production can be attained while using Lauren Liners.

## Introduction

Monitoring milk production on a dairy is a useful tool. In fact, PM production is used by many people to predict the total milk that will be produced during lactation. This combined with an understanding of persistency in a herd provides a clear picture of milk production throughout lactation. PM is defined as the highest point of production that a cow reaches in its lactation. This generally happens within the first 100 days in milk. The level of PM production attained is dependent on many variables – genetics, breed, nutrition, and even the time of year that calving occurs is known to affect PM. It is also commonly accepted that cows reaching higher PM will produce more milk throughout their entire lactation. PM can be derived from daily milk weights on dairies with metering systems or from monthly testing records.

## Objective

The objective of this study was to learn more about the performance of Lauren liners over time, from data gathered on operational dairy farms.

## Material and Methods

Lactation records from Hi Hills Farms (Nashville, OH) were reviewed due to their long term use of the Lauren Liners. The subject dairy has been using the liners exclusively for over four years. This dairy milks approximately 450 Holstein cows, two times a day in a double 10 herringbone, and they are on a monthly DHI testing schedule. Their records were compared to a collection of Holstein DHI records which were compiled from over 576,000 cows. Further comparison was made with a subset of the Holstein records segregated by herd size. Herd sizes ranging from 250-500 cows were represented in this data which totaled approximately 90,000 cows.

## Analysis

The analysis was completed using comparisons of the average PM values and the change in PM from lactation to lactation. The percentage increase from subsequent lactations was also analyzed. Calculating the percentage change between lactations can tell us if a certain group showed more or less improvement over others regardless of the starting value for each. The data shows that the subject dairy showed greater increase from first to second lactation (23.5%) and second to third and above lactations (5.7%) than the other two groups (Table 1). The subject dairy not only started with one of the highest PM values, but also increased at a greater rate than the other two groups in following lactations.

## Results

It is generally accepted that PM increases as lactation increases, and this can be seen in Figure 1. This graph shows the PM production levels for each of the groups different lactations.

In lactation 1, the subject dairy and the herd size group PM production were almost equal and each were 10.0 lbs over the breed group. In lactation 2, the subject dairy exceeded the breed group by 17.7 lbs and the herd size group by 5.3 lbs. Lactation 3 shows the subject dairy exceeding the breed group by 19.6 lbs and the herd size group by 8.0 lbs.

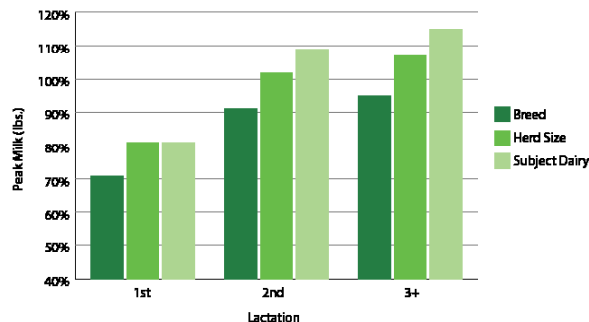
## Discussion

The data presented in this article clearly indicates that a continued high level of PM production can be attained while using Lauren Liners. In fact, we believe that nutrition, breed, genetics, and transition management are the biggest contributors to PM. Developing and maintaining a plan for these is a necessity to achieve your desired level of PM production. This dairy obviously places importance on the factors mentioned above which reflects good management decisions.

Comparing PM production between dairies can be effective, but needs to be done properly. Use caution when comparing monthly to daily records, as monthly records can be more than 10lbs less than daily records.

**Figure 1:**

Comparison of peak milk production: subject herd to DHI record.



**Table 1:**

Increase in PM (percent) from first to second and second to third lactation for three groups of cows.

Lactations	By Breed	By Herd Size	Subject Dairy
1st to 2nd	19.9	19.7	23.5
2nd to 3+	4.8	3.6	5.7

## References

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