

# Effect of Hot Weather on Number of Visits to Water Troughs

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## Introduction

Water consumption is crucial to maximum milk production. Environmental factors such as elevated ambient temperature influence water consumption, and therefore milk production. The objective of this study was to determine the effect of hot weather on water consumption, measured as number of visits to the water troughs.

## Materials and Methods

This was an observational study based on daily monitoring of breeding heifers at the teaching herd at Oregon State University, fitted with the Pedometer Plus (Afimilk, Israel), that acts as RFID and measures steps and time spent resting. Two antennas were placed at each of two water troughs located at opposite ends of the housing pen. Distribution of times of the day at which heifers were identified at the water troughs were evaluated around the hottest days of 2009.

## Results

There was a clear diurnal pattern in the number of visits to the water troughs, starting around the time of feeding (9AM) and ending after sundown (8PM). The number of visits varied little during the days of hot weather compared to normal weather, but the timing of the visits changed from an even distribution throughout daylight hours to a higher proportion of visits during the latter part of the day (6-8PM) on hot days.

## Significance

Results from this study emphasize the need for adequate space for cattle to access drinking water. This may be especially important in lactating dairy cows which require large amounts of drinking water to produce milk to their maximum genetic potential.