

Wellness Filter® Dairy Study

Background

Haru Naito first developed and introduced the concept of water enhancement in Japan over 18 years ago. Combining the state-of-the-art in water purification with a strategically aligned array of rare Japanese minerals and far infrared emitting ceramics, he produced a system that would first purify water and then enhance it for maximum absorption, optimum cellular performance, and reduction of free radical attack. This system, today known outside of Japan as the Wellness Filter®, has gained widespread acceptance in Japan as a water filter for domestic, commercial, industrial and agricultural use. The Japanese Ministry of Health has extensively tested and evaluated the effects of the Wellness Filter®'s water on human health and has encouraged its use for the improvement of such conditions as diabetes, heart disease, skin diseases, arthritis and cancer. Japanese universities and agricultural producers have also tested the effect of Wellness Filter® water on animal performance such as milk production with dairy cows and egg production with chickens. These studies showed statistically significant improvement in animal performance and health, which validated the largely anecdotal human results reported by Japanese users and private physicians.

In 2000, Wellness Enterprises, as part of its market introduction of the Wellness Filter® technology into the US, formed an alliance with Environmental Defense Technologies, Inc (EDTI) of Salt Lake City, Utah for the expressed purpose of testing Mr. Naito's technology in various agricultural settings. EDTI and Wellness Enterprises later formed a joint venture company called Water's Edge, LLC, which was granted the exclusive license in North America for all agricultural applications of Mr. Naito's enhancement systems. A proprietary version of the Wellness Filter® was constructed by Mr. Naito and deployed for R&D testing by Water's Edge under its brand name AgriPurifier™. The AgriPurifier is different than the standard Wellness Filter because of its additional layers of media and its specific adaptation for animals. However, its positive health effects on animals mirror the experiences reported by the Japanese for humans. In 2001, Water's Edge, under the supervision of its President, Dr. Glenn Meixell, conducted a full scale test of the effect of AgriPurifier™ enhanced water has on dairy cows. This report is intended to summarize the study and its results.

Project Location and Description

During the summer of 2001, Water's Edge set up a demonstration project at a very large dairy¹ in Jerome, Idaho. The dairy is situated on 1300 acres and houses 3000 dairy cows of varying ages. The cows are normally milked three times per day by conventional

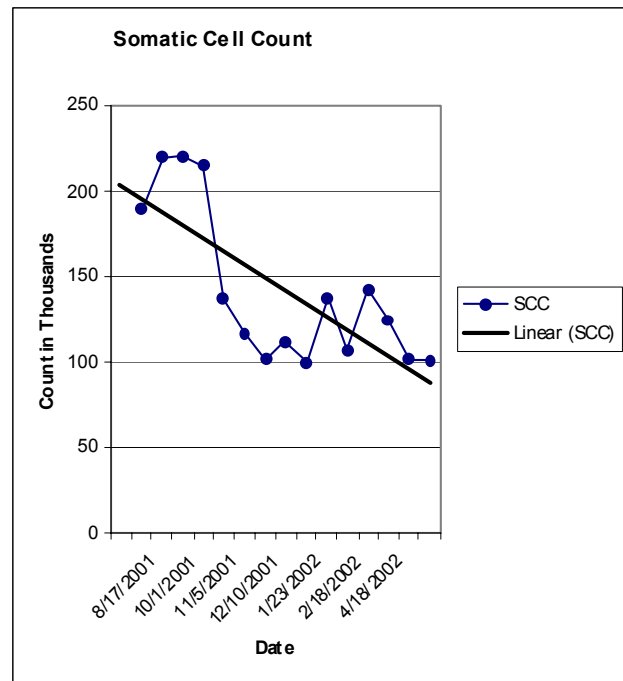
¹ The specific name of the dairy has been withheld at the request of the owner.

automated milking machines. Prior to the commencement of the study, the dairy used approximately 350,000 gallons of fresh water per day from a pristine deep well. The well water is used to supply the drinking requirements of the herd and the daily cleaning of the dairy equipment.

Water's Edge constructed a twin filtration system having a capacity of 350 gallons per minute utilizing Mr. Naito's proprietary media. The filtration/enhancement systems were designed for automatic backwashing and regeneration on a time clock. Because the well water was already clean, backwashing was performed to periodically purge the filters of accumulated sand and grit. Consequently the filters provided an exclusively enhancement function. The systems were installed and the herd given only enhanced water after the start of the test program. Milk production was measured on a daily, weekly and monthly basis and averaged over the 3000 cows. As an established herd, there was a complete accounting of historical milk production in pounds per day per cow, which was then compared to the milk production with the enhanced water. In addition, somatic cell counts (a measure of the health of the herd) were taken at the same time. Monitoring of milk production and somatic cell count (SCC) was carried out for a ten-month period.

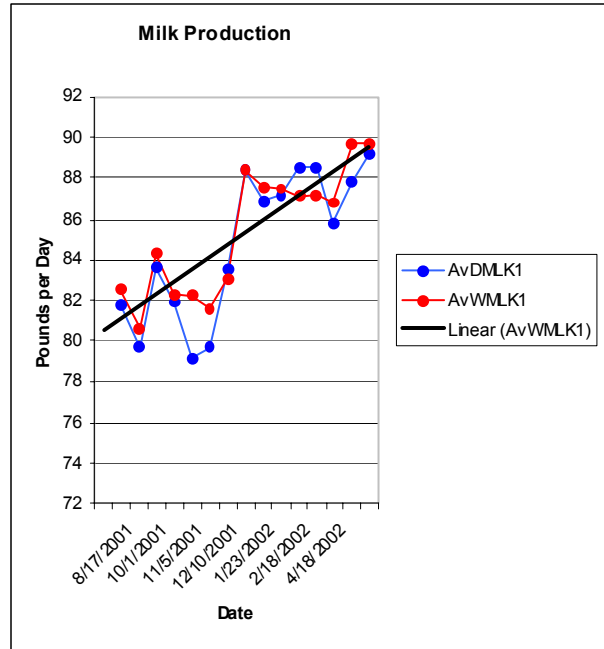
Program Results

Somatic Cell Count (SCC) -- Mr. Naito's research indicates that dairy cows will generally require between three and four months to acclimate to the enhanced water and to begin showing signs of improved health and production. As predicted, the test herd first began to show an improvement in somatic cell count (i.e., the lower the cell count - the healthier the cow) after several months of regular consumption of the enhanced water. After about three months of usage, the SCC fell to half of its original level where it stayed for the remainder of the study. The original SCC was approximately 200,000 and after the first three months averaged 117,600. This dramatic drop resulted in the owner



reducing the amount of antibiotic used with the herd and also qualified his milk for a bonus fee from the milk processors. Low somatic cell counts are usually associated with healthier cows and higher quality milk thus the bonus payment. A chart of the somatic cell count is shown to the right.

Milk Production -- Japanese studies performed by private dairies indicated that milk production would increase as the health of the herd improved. Japanese herds showed an increase in daily milk production of 5% to 8%. In the test study, the average daily (AvDMLK1) went from 81.8 pounds per cow per day to 89.2 pounds per cow per day for the period of August 9, 2001, to May 1, 2002. The Average Weekly Milk Production (AvWMLK1) went from 82.5 pounds per cow to 89.5 pounds per cow per week for the same period. Since no other variables were changed, the increase in production, which averaged **8.5%**, was attributed entirely to the change in the water. A chart of the milk production during the test program is shown to the right.



The substantial increase in milk production coupled with the improved health of the herd, the reduced antibiotic requirements and the bonus money paid by processors for the lower SCC yielded a substantial increase in profitability for the farmer. Results were so positive that the owner ordered a second system for his second dairy farm.

Summary and Conclusions:

The study showed that the treatment of the drinking water by the Wellness Filter technology yielded significant physiological changes across a statistically significant sample population of dairy cows. In specific, milk production was increased by more than 8.5% while herd health was improved and herd infection was reduced by approximately 50%. Economically, the owner of the dairy farm dramatically increased profitability and converted his second farm with 1500 cows over to the sample enhancement system.