

EMF Balance

Electro-Magnetic Fields in Dairy Barns (EMFs')

By Peter Webb

The dairy industry has been modernizing for the past 20 years or more, with new technology such as fans, stable cleaners, manure pumps, fluorescent lighting, milk cooling equipment, compressors, transponders and alarm systems etc.

Little attention has been paid to the effects EMFs are having on the health and performance of the cows in this environment. Peter Webb of Kemptville Ontario has been studying this phenomenon and working on solutions.

The following are some observations:

In the past electricians have been grounding the electrical neutrals to the well casing resulting in changes to the molecular structure of water. The water molecules become larger so they are not readily absorbed at the cellular level, which gives water a metallic taste. Consequently cows lap at the water and do not consume the amount required for maximum production.

The steel stabling in barns attract the earth's magnetic grid lines which carry the effects of electricity, this has a negative response in the absorption of vitamins and minerals in the cows body, specifically iron, selenium, vitamin E, Iodine, magnesium, potassium and copper, which weakens the cows immune system increasing infections and udder health, it also reduces the effectiveness of antibiotics.

Because cows are very sensitive to EMFs' some other problems that have been identified are an interference with hormonal production, restricting the production of oxytocin for milk let down and causing milking machines to be left on longer than necessary, since hormones are an important part of reproduction the cost of breeding is higher, In tie stall barns behavioral problems are more noticeable. A cow lying sideways and stepping on the teats of the next cow, there is a marked increase in tail swishing and kicking when the milking machines are in operation.

The EMFs in the modern milking parlor make it difficult to get some cows to cooperate in the milking process; the same problem exists with the robotic milking parlors. When these stresses are removed an improvement in milk production occurs as well as higher recordings of butter fat and protein content.

EMFs should not be confused with stray, tingle or transient voltage, these are physical electrical current traveling along water veins and water tables to substations. EMFs are the electrical fields surrounding all electrical equipment.

Modern dairy barns have large manure storage tanks with high amounts of reinforcing steel that act as an attractant for electrical current, one solution for this is a grid to pick up transient current and lead it away from the dairy facility.

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