
Abstract: Pathogen contamination of the public drinking water supply in the New York City watersheds is a serious concern. New York City's Watershed Agriculture Program is working with dairy farms in the watersheds to implement management practices that will reduce the risk of pathogens contaminating the water supply. Solar calf housing (SCH) was suggested as a best management practice (BMP) to control Cryptosporidium parvum, a common protozoan parasite that causes disease in humans. This BMP targets young calves because they are the primary source of C. parvum in dairy herds. The objective of this project was to assess and compare the survivability of C. parvum in SCH and in conventional calf housing (CCH), usually located in the main barn. C. parvum oocysts were secured in sentinel chambers and placed in SCH and CCH bedding on four farms. The chambers were in thermal, chemical, and moisture equilibrium with their microenvironments. An oocyst-filled control chamber, sealed from its surroundings, was placed near each chamber. Chambers and controls were sampled after 4, 6, and 8 wk. Oocyst viability in the chambers decreased to less than 10% in warm months and between 15 and 30% in the winter months. The viability of the control oocysts was similar to the chambers during warm months and generally higher during winter months. There was no significant (P > 0.05) difference in the viability decrease between SCH and CCH. Although oocyst viability was similar in both types of calf housing, SCH allow contaminated calf manure to be isolated from the main barn manure and potentially managed differently and in a way to decrease the number of viable oocysts entering the environment during field spreading.