abstract

Part I: A Chemical Engineers Intro to the Dairy Industry

US graduates of chemical engineering may have a lot of questions about whether they want a career in the US dairy industry. This presentation will outline the size of the industry from the dairy farm, processing, markets to its financials. A greater focus will be presented on dairy processing where most chemical engineers are employed, either as process engineers, QA/QC, technical sales and production management.

Part II: Case study: The Manufacture of Colostrum, its Applications

APS Biogroup LLC. is located in Phoenix, AZ, and produces 65% of the total world supply of colostrum powders. The cow-to-consumer process will be presented, and the roles that chemical engineers play in this business. Cow colostrum powder primarily balances the human immune system where its products are sold as a health food ingredient, dietary supplement, infant formula and OTC and drug products.

biosketch

Andrew Keech
Founder and Managing Director
APS Biogroup

Born and raised on a New Zealand dairy farm, Dr. Keech learned about the immune factors in bovine colostrum and their ability to impart health to newborn calves. Early on he made a commitment to study the giving power of this natural immune defense system. He received a Bachelor of Science with a double major in Mathematics and Chemistry in 1990 and a Bachelor’s degree with honors in Chemical and Process Engineering in 1992. He then earned a studentship to study at Oxford in England and received a Doctor of Philosophy degree in Chemical and Process Engineering in 1995 from the University of Canterbury. He is a certified plant engineer. He is the Founder and Managing Director of APS Biogroup, an Arizona limited liability company producing 65% of the world’s colostrum powder. From his colostrum research and implementation he received an honorary doctorate in Applied Nutrition because of his work on treating HIV/AIDS patients in third world countries. He is married to Katja, a Slovenian veterinarian, and they have a four year old boy named Alex and one year old girl named Tara.