National Association of Animal Breeders

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NAAB ANNOUNCES RECIPIENT OF 2023 PIONEER AWARD
DR. RAMAKRISHNAN (VISH) VISHWANATH

Madison, WI [September 14, 2023] – The National Association of Animal Breeders is pleased to announce Dr. Ramakrishnan (Vish) Vishwanath as the 2023 recipient of the NAAB Pioneer Award. Dr. Ramakrishnan Vishwanath, or as he was known to his family and friends "Vish", established, and conducted highly influential research in several key areas that helped shape the AI industry worldwide. From developing and managing innovative R&D programs, to implementing new technologies that created value for the AI industry, Vish was always searching for new opportunities for the expansion of the use of best practices for conventional and sex sorted, fresh and frozen semen.

Through his work at Livestock Improvement Corporation, a cooperative that serves most dairy farmers in New Zealand, Vish played a key role supporting the dairy industry at a pivotal time during the 1990's and 2000's, when New Zealand established itself as a major global milk producer and exporter. Most New Zealand dairy farms operate seasonal production systems that require an intensive, limited breeding season and Vish's contributions were essential to the rapid expansion of artificial insemination programs tailored to seasonal production systems. His research on liquid semen extenders allowed the use of insemination doses of 1.25 to 2 million sperm, allowing 10 times as many fresh semen doses as frozen semen doses to be produced. Thus, semen production during the limited breeding season could be maximized and demand could be met by using only bulls with the highest genetic merit. The logistical challenges associated with implementation of large-scale fresh semen programs were addressed by Vish through his role as executive leader at LIC. Some of the initiatives he was involved with included development of communication systems to estimate, track and document semen demand and utilization; tailoring semen dose to the expected time of utilization after production; development of optimal fresh semen storage and dispatch practices; and education of producers on best reproductive management practices when using fresh semen. These initiatives ensured that the percentage of cows submitted to artificial insemination increased from just over 60% in 1985 peaking at approximately 85% in 1998, at the same time New Zealand experienced a dramatic increase in overall cow population.

Vish also exercised his industry executive leadership at AgResearch, one of New Zealand's largest Crown Research Institutes, where he managed a dynamic team of approximately 60 staff comprising scientists, technicians, post-doctoral fellows, and PhD students. At AgResearch, Vish established a semen and embryo media manufacturing business with licenses issued to animal breeding companies and established an assisted-reproductive technologies joint venture company among AgResearch, Geron Corporation (USA) and Animal Reproduction Company (Australia).

Upon joining Sexing Technologies in 2011, Vish led R&D efforts to better understand the physiology of sex-sorted sperm, and to develop strategies to preserve cell function during the sorting process. These efforts were instrumental in the optimization of sex-sorted semen that resulted in improved conception rates and the global launch of SexedULTRA™ semen in 2013 and SexedULTRA4M™ in 2017. The increase in conception rates enhanced the acceptance and utilization of sex-sorted semen, which together with genomic selection, opened a vast array of opportunities for animal breeding and selection, and unleashed a new era of cattle genetic improvement. Some estimates indicate that sex-sorted semen is now utilized in over 50% of Holstein heifers in the US and the percentage of cows inseminated with sex-sorted semen is rapidly increasing. In Jersey cattle, some estimates indicate that over 85% of all females in the US are now inseminated with sex-sorted semen.

Vish's research was always at the forefront of science. His contributions extend over several decades, with many accomplishments that exemplify his knowledge in reproductive biology across multiple species. His research has been published in many leading peer review journals, and he is the author of 85 scientific manuscripts, reviews, conference proceedings, and abstracts. He has a h-index of 18 and 33 of his publications accumulate a total of 1,270 citations. Eleven of his publications have over 30 citations, while the top four have over 100 citations. Vish is the principal or co-inventor of 13 patents, which include the development of extenders for fresh semen, systems of semen bulk freezing, sensor apparatus to detect the reproductive status of livestock animals, and methods of sex-sorting that improve sperm quality and fertility, which are indications of his innovation in the field of semen research in bovine.

Vish was always searching for new opportunities for the expansion of the use of best practices for conventional and sex-sorted, fresh, and frozen semen. Vish also provided invaluable leadership and support to many scientific teams throughout his career. He was a very well-respected and unassuming individual, that led by example, gaining the respect, trust and love of his colleagues and peers.

Sadly, Vish passed in January 2021. His life motto was "Why have less, when you can have more". Vish lived a full life with many passions and is missed by family, friends, and this industry.

2023 NAAB Pioneer Award being accepted by Lal Patel, Vish's uncle, on behalf of Vish's family from NAAB Board Chair, Paul Hunt at the NAAB 77th Annual Meeting in Chicago, Illinois on August 22, 2023.