Conservation genetics turns to IVF to save rare livestock breeds

IVF — a procedure in which an egg and sperm are combined in a laboratory dish and the resulting embryo is transferred to a uterus — has transformed human medicine. More than 5 million human babies have been born thanks to the technique since the late 1970s, according to the International Committee for the Monitoring of Assisted Reproductive Technology (ICMART). Though it's now a mainstream fertility procedure, stories of the promise and occasional perils associated with IVF still routinely receive media coverage.

But IVF also has a long history in veterinary medicine and animal research. For example, "test tube" rabbits were produced as far back as the 1950s. More recently, IVF has been used to help threatened and endangered populations of wild animals such as cheetahs.

At the SVF Foundation, an unusual bank with vaults containing not cash and gold but genetic material of vanishing livestock breeds, there are stores of more than 5,000 frozen embryos, along with tens of thousands more samples of animal semen, blood and other genetic material. This material is meant to insure an agriculture industry that is increasingly at risk for an Irish potato famine-type collapse as it becomes more consolidated. One measure of that consolidation is that fewer than 20 champion bulls are responsible for half the genes in today's Holsteins, which themselves make up more than 90 percent of America's dairy herd, according Holstein Association USA. SVF will be able to reawaken a breed, with its full genetic diversity, within one generation.

The GLP aggregated and excerpted this blog/article to reflect the diversity of news, opinion and analysis. Read full, original post: As Ancient Livestock Disappear, Frozen Embryos Restore Ancient Breeds