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The Irish Draught Horse

*The Argument for
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The Irish Draught Horse: The Argument for Conservation

by Elizabeth Freeman, DVM

Between population decline as a result of cross-breeding, and a rapidly narrowing genomic base due to inbreeding to certain lines, the Irish Draught horse, once snatched from the jaws of extinction by a group of Irish farmers, is again nearing a crisis point with fewer than 3,000 registered animals.

The WWL-DAD (World Watch List for Domestic Animal Diversity) of the FAO (Food and Agriculture Organization of the United Nations) classifies the Irish Draught breed as “endangered maintained”. Endangered maintained populations are groups of animals (i.e. breeds) experiencing a declining population trend such that survival of the breed would require a “concerted effort to arrest the negative trend in population size”. The Royal Dublin Society of Ireland is sponsoring

an ongoing genetic research project as part of their Irish Draught Horse Breed Development Program. The interim data from this study, currently being undertaken by population geneticists and statisticians Brian Wickam, Victor Olori, and Francis Kearney of the Irish Cattle Breeding Federation (ICBF), suggests a declining trend in the registration of purebred Irish Draught horses, and an increasing level of inbreeding since 1979.

Registered Irish Draught (R.I.D.) Sire Lines—Rare for a Reason?

It is interesting to note that the overall level of inbreeding in the Irish herd has jumped significantly in the years since 1991, when performance testing of stallions was instituted. The ICBF data is viewed by many as confirmation of something long suspected—there is decreasing genetic diversity in the Irish Draught herd and it is likely that a significant factor in this trend is stallion selection. Stallion selection is affected by many factors, among them the political, cultural and economic atmosphere of the times, along with geographic location.

Certain RID sires were under-utilized for a variety of reasons. Some stallions had limited progeny due to their location. The traditional use of live cover meant that farmers had to ride, drive or lead their mares to the stallion for breeding. Even though some stallions traveled to service mares in different locations throughout the week, few mare owners utilized stallions outside their home county. Moorpark Boy lived on top of a mountain in Co. Wicklow where he was all but inaccessible to purebred Irish Draught mares. Most of his progeny were out of the local heavy draft forestry mares used to sling timber on the mountainside and were, therefore, not eligible for the RID studbook. Some bloodlines were so widely known for their strong work ethics that all the colts were gelded to supply the demand for working geldings, leaving no intact sons to carry on a line. Two such families were the Woodranger and Sweetheart lines, which are thought to have been casualties of their own popularity. Luckily the Woodranger sire line has been revived, but Sweetheart exists only through dam lines.

The Cult of the Popular Sire

A phenomenon common to all domestic breeding programs is called “the cult of the popular sire”. This phenomenon has affected the Irish Draught breed by driving the selection of a few performing bloodlines with the goal of producing profitable sport horses, namely those offspring of King of Diamonds and Pride of Shaullara. The popular stallion effect is quite evident in the RID studbook. King of Diamonds alone had 34 sons and grandsons on the stallion register when he died. As further evidence, O’Toole (2001) demonstrated that King of Diamonds accounted for over 7%

of the genes of purebred Irish Draughts born between 1997 and 2000 inclusive, and that almost 50% of the genes present in that population could be attributed to just 17 ancestors, presumably the result of overuse of certain sire lines. Indeed, the November 2005 Interim Report from the second phase of the RDS study supports this, with preliminary analysis of mean kinship values revealing that 98% of the current Irish mare population and 96% of the actively standing stallions are related to King of Diamonds and Pride of Shaullara, both of whom descend from Galty Boy.

The Influence of Mandatory Performance Testing

Finally, a huge influence has been wrought on genetic diversity by the institution of mandatory performance testing. Historically, stallion owners have been farmers, which means very few have had the financial resources to campaign and performance test their animals. This financial disincentive, combined with an effective bloodline bias, has reduced available sire lines even further.

Ironically, U.S. breeders are in a unique position with regard to diversity of sire lines. There is a higher proportion of stallions from outcross sire lines in the U.S. than anywhere else in the world, second only to Great Britain. Therefore, our purebred herd is an extremely important genetic reservoir for the global Irish Draught herd. The importance of having an international genetic reservoir was brought home during the Foot and Mouth crisis in the UK. Many rare breeds of livestock were nearly wiped out during the aftermath. Should a similar disaster occur in the horse population of Ireland, North American breeders and those of Great Britain, Australia and South Africa would be in the position to provide breeding stock to rebuild Irish herds.

Why Conserve?

One of the more obvious reasons to conserve the RID is to maintain a vigorous foundation for the production of world class Irish Draught crossbred sport horses. Olympic gold medal winning



(Opposite page and below) RID stallion Snowford Bellman. (Above) RID stallion Touch of The Blues competing at intermediate level eventing in England.

three day eventer Custom Made (25% RID blood), and Olympic eventer Mr. Springfield (50% RID), World Cup show jumpers Cruising (50% RID), Ado Annie, Carling King and Coolcorron Cool Diamond (all over 50% RID), are only a few examples of sport horses whose breeding is based on Irish Draught blood. Without the RID foundation to provide bone, sensibility and innate jumping ability, these sport horses, and therefore a large portion of the Irish export market and economy, would not exist.

The fact that the Irish Draught is an
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Photo courtesy of Elizabeth Freeman, DVM

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outstanding riding and driving animal in its own right is a definite bonus, particularly considering the limited land and time resources that come with modern schedules and industrialized economic development. For busy horse owners with little leisure time, the Irish Draught is an ideal mount; tolerant of being pulled out on the weekends for a ride, whereas another breed of horse might require daily work—and a significant time commitment—to remain safe and rideable. The market for this type of horse will only grow as more and more people seek riding as a form of recreation.

Another reason to conserve the RID is that the breed is the only native horse of Ireland (the Connemara and Kerry Bog being the native ponies) and therefore has important cultural and historical relevance. The history and socioeconomic value of the Irish Draught horse closely parallels the fortunes of Irish families in the late 1800s and early 1900s, and is also closely tied to the Irish farming communities and the cultural evolution during the Great Wars and mechanization of the mid-1900s.

Perhaps the most important reason to conserve the Irish Draught breed is due to the fact that domestic animal species are increasingly subjected to interbreeding and intensive management in order to increase their productivity. In the case of horses, this intensive breeding is engineered to meet the demand for an internationally defined “type” that looks, behaves, and moves a certain way that is desirable at the elite levels of horse sports. With horse breeds increasingly homogenized to achieve this objective, the delineation between different breeds becomes lost, and as a result, the genomic diversity of individual breeds is lost as well. This threat to genetic diversity has a very real impact on the future of all domestic species. According to the FAO website:

“Of the 50,000 known mammalian and bird species, about 30 have been used extensively for agriculture and only 15 species account for over 90% of global livestock production. Over the past 15 years, 300 out of 6000 breeds identified by the FAO have become extinct. There are currently 1350 breeds facing extinction with an average of 2 breeds being lost every week.”

Genetic Diversity: It's not just for Endangered Species Anymore

So, why is genetic diversity important? A diverse genetic makeup is what allows a



Photo courtesy of Elizabeth Freeman, DVM

Snowford Bellman RID (by Slievenamon out of Snowford Harebell by Skippy), is a fully approved Irish Draught stallion. Imported from England, Bellman has important genes to share, as his pedigree is an outcross to the more common King of Diamonds and Pride of Shaunlara bloodlines.

population of animals to survive changes in climate, adapt to environmental stresses and come back from debilitating herd diseases that might otherwise cause their extinction. While some animals will succumb, others will have slight differences in their genome that enable them to adapt and survive change. Additionally, animals that are indigenous to certain regions, as the Irish Draught horse is to Ireland, are genetically adapted to their environment and more resilient to environmental stress. They generally remain more productive while consuming lower quality feed and are more economic to maintain. Therefore, they are extremely important sources of genes for improving the health and performance of the “industrialized” or “improved” and intensively bred animals. The Irish Draught and other breeds like it, including the Gelderlander and Cleveland Bay, provides a needed reservoir of genes that can be used to improve strength and vigor when the intensively bred sport horses begin to show signs of physical and behavioral instability.

Is it Too Late?

The problem of Irish Draught population decline can only be arrested by one thing: RID mares must be bred to RID stallions. Every RID mare used in a crossbreeding program is a mare lost to the worldwide herd. As far as genetic diversity—the Cleveland Bay breed is coming back from an effective sire

line of 2 with fewer than 500 breeding animals worldwide. The RID can make a comeback too, particularly if breeders will make thoughtful breeding decisions and be open to technological advances in reproductive medicine. A frozen semen/ova/embryo bank could be developed to facilitate sharing of genetic resources worldwide.

Research identifying high priority breeding mares with low mean kinships to the RID stallion population could be used to encourage owners of these mares to breed them to available outcross stallions, utilizing frozen semen to achieve the best genetic match with the lowest mean kinship value. These important steps will assist in decreasing the relative inbreeding in the herd and perpetuate the diversity of genes present in the outcross lines. These genes not only keep the Irish Draught breed vigorous and healthy, but ultimately maintain a unique genetic reservoir to enhance the genetic diversity and thus the survival of *E. caballus* as a species.

Dr. Freeman is a veterinarian whose special interests are equine reproduction and rare breed conservation. She has served for several years on the Board of Directors of the Irish Draught Horse Society of North America, and she is a founding director of the Irish Draught Horse Conservancy. She breeds Irish Draught Horses at her Flying Harp Farm in Tipton, Iowa. Contact her at: flyingharp@aol.com. For more information about the Irish Draught Horse Society North America (IDHSNA), visit www.irishdraught.com or call 1-866-idhsna-1.