Over the course of the last several years, hay and forage growers have had to adapt to a number of major “challenges.” They have faced an unprecedented run-up in the cost of fertilizer, fuel, and equipment costs and are now confronted with stifling opposition to technological leaps that could provide substantial economic and environmental benefit. To say this recent history has been “challenging” is putting it mildly.

Still, in this global economy, the name of the game is efficiency. Whoever is most efficient, “wins.” In fact, each of the 6.8 billion (and growing) of us “wins” as agriculture becomes more efficient. Historically, we see the benefits in efficiency. In the past 25 years, beef and dairy herds have decreased by 20%. But, we still produce just as many or more beef and dairy products. Unfortunately, the American forage industry faces an unprecedented number of challenges to increased efficiency.

The most visible challenge to the hay and forage grower’s efficiency is the potential loss of Roundup Ready™ (RR) alfalfa. The scientific community’s support for RR alfalfa has been rather clear (despite being drowned out by shriller and louder voices). But, beyond the availability of this one technology, there are other issues at stake and the indirect fallout from the RR alfalfa fiasco could be severe. Should RR alfalfa not make it back to the market, trait development and breeding work on our nation’s third most economically important crop (alfalfa) will slow to a near stop. A ripple effect will be felt throughout the entire forage breeding community and many innovations will be stifled. Crop scientists are currently using biotechnology to develop alfalfa varieties with lower lignin content, enhanced bypass protein fractions, better drought tolerance, less leaf shatter, delayed flowering, improved disease resistance, and increased Al tolerance. The development and release of these traits shares the fate of RR alfalfa. In addition, these breeding tools are being used in other forage crops to enable broadleaf herbicide resistance within legumes, increase digestibility in bermudagrass, and improve drought tolerance and summer productivity in tall fescue. The development and release of these traits also shares the fate of RR alfalfa. Since traditional breeding methods for forage crops are extremely slow and the profit margin in forage variety development is narrower than in any of the other agronomic crops, genetic engineering is the only realistic hope for major improvements in our forage crops.

An equally important challenge to the efficiency of hay and forage production is the troubling trends in forage research, teaching, and outreach effort. Recent work published in the Journal of Animal Science has shown that since 1984 the allocation of research effort to forage-based livestock systems in our nation’s land-grant universities was reduced by over 60%. During this same time, the allocation of university faculty effort to teaching forage management decreased by nearly 40%. This decline is even more acute in extension, where there has been a 30% decrease in the allocation of extension specialist effort on forage management issues since
1998 and another 30% decline is expected by 2018. Though it may seem self-serving to point out these trends, it is nonetheless an issue that should be troubling to all who derive their livelihood from hay and forage production enterprises.

Despite all these challenges, there are numerous opportunities for hay and forage growers to expand their enterprises. An opportunity that is most familiar to those in the eastern U.S. is the potential for expanding the pasture-based beef and dairy industry. In Missouri, the pasture-based dairy industry has added over 1,100 new jobs and over $124 million in total economic impact since 2004. In Georgia, the number of cows on pasture-based dairies has increased exponentially and has jumped from less than 1% of the total dairy herd in 2006 to an estimated 11% by the end of 2009. There are real market opportunities for “grass-fed” and “natural” milk and meat. Though the merits of these production systems relative to conventional production systems remain highly debated, there is no doubt that these products command a premium in the market.

There are many other factors that are having a positive influence on the hay and forage sector. New novel endophyte tall fescue varieties are trickling into the market, and this will lower the cost of replacing the toxic tall fescue that has reduced animal gains and production for decades. Stabilization in the hay export market appears to be occurring, and there may even be market expansion for high-quality hay shipped to the Persian Gulf. The growing biofuels market is also beginning to have an effect on the market for hay and forage crops, as the demand in the EU for grass pellets and briquettes continues to grow rapidly. The biomass for biofuel industry is also having indirect effects on the hay market, as the significant research and development effort that is underway to increase biomass bale density and baling efficiency will likely yield transportation and efficiency gains for hay producers.

Overall, the future for hay and forage enterprises is much brighter than in the previous few years. Fortunately, input costs have settled back along the trend line and there have been steps toward releasing RR alfalfa. Yet, there remains a looming question: Have we wasted a good crisis? There is a substantial need for our industry to continually seek and employ more efficient practices. The “best way” still has not been found. Unfortunately, there exist some major challenges to the development of new and innovative improvements in efficiency. Perhaps the new innovations that are on the cusp of release, the expansion of new market opportunities, and the recovery of the macro-economy will provide the capital needed to renew an investiture in the future of this industry and secure the livelihood of all those who depend upon it.