

CHAPTER 1

INTRODUCTION

Dermot J. Hayes

Figures 1.1 and 1.2 help explain the motivation for this book. Figure 1.1 shows the August 2008 projections of production, consumption, and trade of U.S. distillers dried grains with solubles (DDGS) by the Food and Agricultural Policy Research Institute (FAPRI). Production ramps up very quickly, from 15 million tons in 2006/07 to more than 35 million tons in 2009/10, and eventually reaches about 43 million tons by 2013/14. To put this quantity in perspective, the amount of DDGS that will need to be marketed in 2013/14 will be approximately equal to the amount of soybean meal produced in 2006/07. This means the DDGS market will have to grow to absorb as much product over a five-year period as the soybean meal market has absorbed over several decades.

These FAPRI projections are probably conservative. They assume that U.S. ethanol production grows to 16.8 billion gallons by 2013/14, an amount that only slightly exceeds the 15 billion gallons mandated under the Energy Independence and Security Act of 2007. If crude oil prices remain in excess of \$100 per barrel and ethanol prices eventually rise to meet their energy value, and if corn prices decline from weather-related highs in 2008, it is possible that U.S. ethanol production could dramatically exceed this amount. In fact, a study by Togkoz et al. (2007) that uses the same model but different assumptions has projected U.S. ethanol production at about 30 billion gallons. This level would almost double the projected DDGS production shown in Figure 1.1.

Figure 1.2 shows how FAPRI expects this rapid growth to come about. Figure 1.2 projects DDGS prices as a percentage of corn prices and shows that the enormous supply of DDGS will drive the value of this product well below the value of corn even though, as later chapters in this

Dermot Hayes holds the Pioneer Hi-Bred International Chair in Agribusiness and is a professor in both the economics and finance departments at Iowa State University. He is co-director of the Food and Agricultural Policy Research Institute at Iowa State.

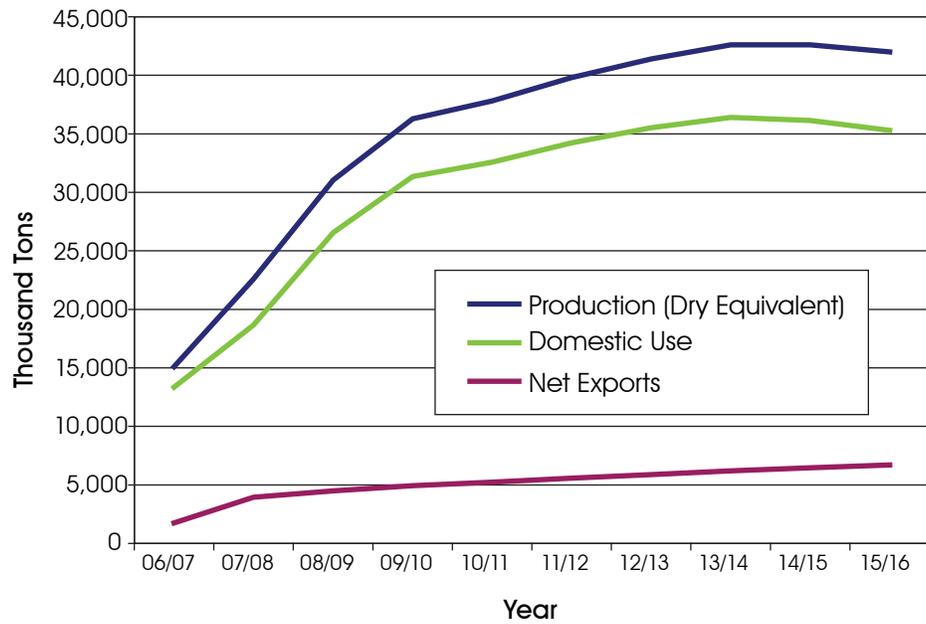


Figure 1.1. U.S. DDGS production, consumption, and exports as projected by FAPRI in August 2008

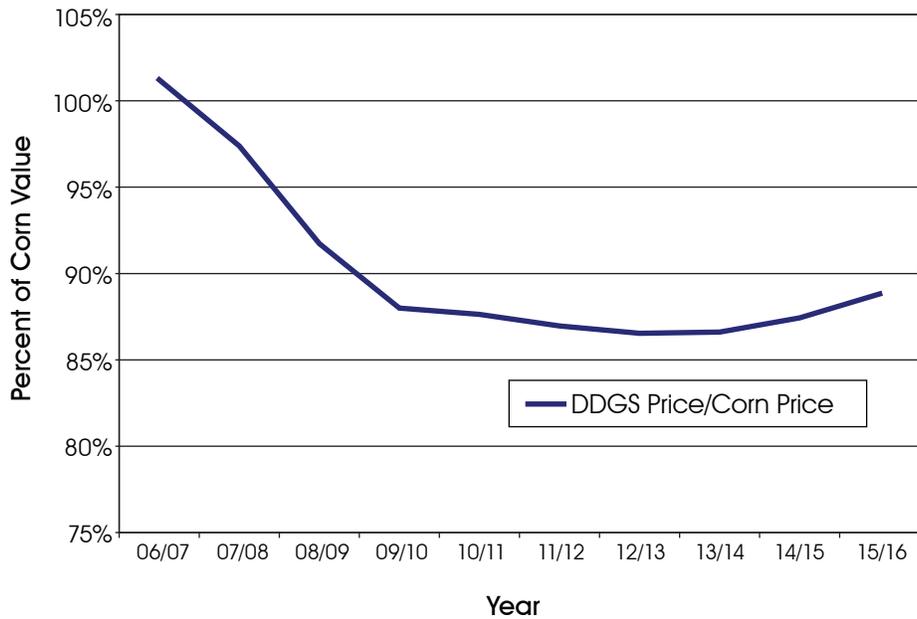


Figure 1.2. DDGS price/corn price

book will show, the feed value of DDGS is well above that of corn for several species. The intuition here is that free markets will absorb almost any change if the price incentive is high enough.

The expected discount of DDGS prices below their energy value will work to the detriment of the U.S. ethanol industry and ultimately U.S. crop growers and U.S. energy consumers. This is true because a depressed DDGS market will reduce the incentive to build new ethanol plants, and less ethanol will mean lower corn prices and domestic energy production than would otherwise have been the case. On the surface, it is true that a depressed DDGS market will benefit livestock producers because it will reduce their feed costs. However, this is only true if these livestock feeders know how to utilize the DDGS to their full extent and if the suppliers of DDGS understand how best to modify the DDGS output to best suit the individual needs of each species.

The purpose of this book is to bring together into a single publication the available knowledge of internationally renowned experts to help market participants understand how best to utilize this product in either world export markets or the domestic U.S. market. The book discusses how to optimize the DDGS products to best suit the needs of beef cattle, dairy cattle, swine, and poultry, and how each species can best take advantage of current and improved DDGS products. The book also lays out export opportunities for DDGS and describes several of the logistic hurdles that need to be resolved to ensure that the product is transported to the place that can best use it. Finally, the book includes a description of new technologies being used to improve DDGS as a feed ingredient for livestock and poultry.

Reference

- Tokgoz, S., A. Elobeid, J. Fabiosa, D.J. Hayes, B.A. Babcock, T-H Yu, F. Dong, C.E. Hart, and J.C. Beghin. 2007. "Emerging Biofuels: Outlook of Effects on U.S. Grain, Oilseed, and Livestock Markets." CARD Staff Report 07-SR 101, Center for Agricultural and Rural Development, Iowa State University. <http://www.card.iastate.edu/publications/DBS/PDFFiles/07sr101.pdf>