2022 Soybean Meal Demand Assessment

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Prepared For:

UNITED SOYBEAN BOARD™

Prepared By:

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Executive Summary

Animal agriculture consumes most of the soybean meal (SBM) produced in the U.S. which is primarily used as a protein source (more specifically, amino acids) in diets. Therefore, soybeans are an integral component of the U.S. agriculture industry and the use of SBM in animal feed formulations is crucial to the international competitiveness of the agriculture industry. The continued prevalence of SBM use in animal feed is dependent upon a soybean composition that benefits livestock and poultry production. Although SBM is not typically the least expensive source of protein, its amino acid profile and amino acid availability makes it a highly competitive protein source for nearly every species when all attributes are considered.

In 2022, total livestock and poultry production in the U.S. decreased by 1.4% to 129.2 million total animal units, continuing a downward trend that started in 2019. Nine out of the ten animal groups tracked saw a decrease, with the exception being broilers. Lower beef cattle inventories contributed to over 70% of the total decrease in animal units. Due to the overall reduction in animal units, SBM consumption was slightly lower in 2022 from 2021 by approximately 600,000 tons.

However, SBM continues to be the dominant vegetable protein source in livestock and poultry feed in the U.S. although alternative protein sources including distillers dried grains with solubles (DDGs), canola meal and cottonseed meal remain regionally competitive. Synthetic amino acids continue to be used as supplements for lower quality protein substitutes. Supplies of animal-based proteins are increasing but consumer preferences for all-vegetable diets in poultry and egg rations are limiting the use of these as feedstuffs. Therefore, poultry products raised with all-vegetable diets continue to drive domestic SBM demand.

The choice to use SBM in animal agriculture is highly dependent on the nutritional requirements and life stages of each species. Accessibility to various feed ingredients capable of competing with SBM (from both a nutritional and price standpoint) also influences production practices. The use of SBM for consumption in animal feed has become an increasingly critical component of the U.S. agricultural economy and continues to make important contributions to the global food supply.

Purpose of Analysis

For the past several years, the United Soybean Board has commissioned Decision Innovation Solutions (DIS) to provide several components of research regarding the use of and impact of SBM in the U.S. This research includes but is not limited to the following:

1. Estimates of current volumes of SBM and other feedstuffs fed to multiple species by region for the most recent year.
2. An analysis and reporting of the feed landscape for major species of livestock and poultry:
    a. Animal unit trends
    b. Species production practices and trends (including weights, feed conversion, etc.)
    c. Competitive value proposition of soybeans and alternative feedstuffs (e.g., DDGs, synthetic amino acids, canola meal) by price, availability, and quality characteristics
    d. Evaluation of the competitive position of SBM by geography relative to competing feed ingredients

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Summary of Results

Soybean Meal Consumption

This research suggests that **36.3 million short tons** of SBM were consumed by animal agriculture during the 2022 calendar year. In addition, 3.4 million tons of soy hulls were fed to hogs, dairy, and beef cattle. Of the total 36.3 million short tons of SBM consumed:

1. Broilers consumed **18.2 million tons** (slightly over fifty percent)
2. Hogs consumed **6.4 million tons** (nearly eighteen percent)
3. Dairy consumed **4.2 million tons** (over eleven percent)
4. Layers consumed **3.5 million tons** (nearly ten percent)
5. Turkeys consumed **2.4 million tons** (nearly seven percent)
6. The rest of animal agriculture (beef cattle, companion animals, aquaculture, sheep, meat and dairy goats) rounded out the last five percent.

Economic Impact

Animal agriculture continues to be an important driver of economic activity in the U.S. Through purchases from and sales to many other industries, U.S. animal agriculture in turn has a significant impact on the rest of the national and global economies. In the U.S. during 2022, animal agriculture's support of the national economy included:

- **$568.2 billion** in economic output
- **2,873,086 jobs**
- **$121.5 billion** in earnings
- **$29.3 billion** in income taxes
- **$9.4 billion** in the form of property taxes

Compared to 2012, U.S. animal agriculture in 2022 contributed $109.8 billion more in economic output, provided $23.2 billion more in household earnings, and supported 498,527 more jobs.

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