Forage News

MISSISSIPPI STATE UNIVERSITY EXTENSION
Center for Forage Management and Environmental Stewardship

From Seed to Meat: What to Expect on Seed Markets this Fall?

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Natural calamities, such as droughts, floods, and frost create challenges in the production of forage feed. These challenging growing conditions in seed production areas have cut seed inventories by up to 30% depending on the species. The global seed demand is pushing prices upwards and like most agricultural products increased input costs have increased production costs. A holistic evaluation indicated that the forage seed market value is expected to increase by $28.8 billion from 2016 to 2031 (Fig. 1). Based on species, the forage seed market is segmented into legumes and grasses. The grass segment garnered a substantial revenue share of the forage seed market in 2021. The increase in fertilizer prices could move up the legume seed market in 2022 as means to cut down on nitrogen needs in cool-season pastures. Legumes have nitrogen-fixing nodules on their roots, which helps in fixing the atmospheric nitrogen. Forage legumes improve the health of animals, by providing essential nutrients such as proteins. Legumes enhance soil fertility, thereby reducing the cost of crop production and livestock feed. The forage seed industry is segmented into product type, livestock, species, and region.

Most of the seed production of cool-season annual forage crops is produced in the Willamette Valley, Oregon. This area experienced a cool and wet spring putting seed production behind for approximately two weeks. The delayed harvest and above-average weed pressure could impact seed processing, seed quality analysis, and distribution to customers on time. Despite these circumstances, seed production could be considered average to above average with little impact on current prices. On the other hand, seed prices could increase compared to last year due to greater input costs, land rent increases, other competing crops, strong open market pricing, and freight challenges to transportation shortage and high fuel prices. At this point, it is anyone's guess where pricing will go or what will be the seed demand.

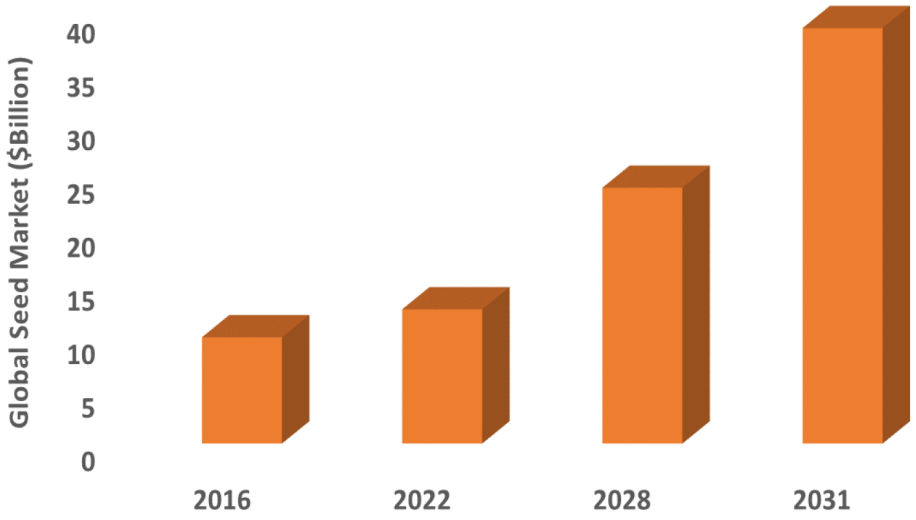

Figure 1. An expected increase in global seed market value from 2016 to 2031.

Strong cattle markets, a strong U.S. dollar, dry weather, and dwindling forage acres have pushed grass and forage seed prices to some of the highest levels in years. There are other costs to consider, including differences in fertilizer, establishment, and other variable costs. For the latest budgets for cool-season annual grasses visit: https://www.agecon.msstate.edu/whatwedo/budgets/docs/21/MSUFOR22.pdf. There are a few points that should be taken into consideration before deciding on where to buy seed.

Seed Quality and Determining Cost of Seed per Pound – Request a copy of the seed certification label to determine purity and germination. This is very important to determine what is the cost of pure live seed per pound. Pure live seed (PLS) is a calculation where the percent germination is multiplied by the percent purity of the seed to determine a coefficient. The higher the PLS coefficient the better and will reduce the number of bulk seed that needs to be planted. This price per pound is easily calculated by dividing the price of the seed by the number of pounds in a bag. For example,

Table 1. Cost of seed per pound, per acre, and per ton of forage produced in Mississippi.

Cool-season Annual Grass	Estimated Price ($/50 lb/bag)[1]	Unit Price ($/lb)	Seeding Rate (lb/ac)[2]	Seed Cost ($Acre)[3]	Yield Potential (ton DM/acre)[4]	Seed Cost of Ton of Forage ($/DM ton)
A. Ryegrass	$34	$0.68	25	$17.00	2.8	$6.04
Cereal Rye	$17	$0.34	90	$30.60	1.5	$20.40
Oat	$15	$0.30	90	$27.00	2.0	$13.21
Triticale	$24	$0.48	90	$43.20	1.6	$27.22
Wheat	$11	$0.22	90	$19.80	1.5	$12.96

[1]Seed cost will vary depending on location and availability. Estimated prices are from 2018 across different establishments within 50 miles radius of Mississippi State University and include average prices across different varieties within forage species.
[2]It assumes 90% germination and 99% purity.
[3]There are other costs to consider such as land preparation, fertilizer, and other variable costs. This calculation assumes similar costs for each species.
[4]Yields in tons of dry matter per acre are based on average yields from MSU forage variety trials across multiple locations and years (White et al., 2011-2019).

let's assume that you have a 50-lb bag of ryegrass A with 90% germination and 95% purity, and it cost $36/bag. The seed cost per pound is $0.72 per pound. On the other hand, you have a 50-lb bag of ryegrass B with 70% and 90% purity, and it cost $30/bag. The seed cost is $0.60 per pound. Ryegrass A has a PLS coefficient of 0.855 (0.90*0.95 = 0.855) and ryegrass B has a PLS coefficient of 0.63. If you are planting ryegrass at a rate of 20 pounds per acre, you will need to plant 23 pounds of ryegrass A and 32 pounds of annual ryegrass B. The cost of ryegrass A is $16.56 per acre while ryegrass B will be $18.00.

Determining the Cost based on Yield Potential – It is important to understand how the yield potential of these different forage options impacts the final unit cost. Although each of these forage species may have its place in grazing operations, understanding the potential of their yield production helps make the best management decisions possible. Table 1 provides an economic analysis, which indicates that even at a higher cost per pound of seed, annual ryegrass can provide a cheaper cost per ton of dry matter produced. In some cases, looking at mixes of annual ryegrass, small grain (cereal rye, oat, or triticale), and a late maturing clover with good reseeding potential could be the best option to extend the grazing season and improve animal performance and return. When doing a cost analysis, it is important to keep in mind that seed costs vary among species and varieties based on location and seed availability.

Supply shortages have become almost the norm for most of us. The agricultural sector is facing supply issues for seed, fertilizer, equipment, and parts. The forage seed industry will be in uncharted territory for the foreseeable future. Although there is not an unforeseen shortage in forage seed, it is highly recommended to plan and order early your 2022 cool-season annual forage seed. Be prepared to pay higher prices and realize that selection may not be as robust as usual. Waiting until late August or early September to order seed may find limited choices and quantities. Humans are creatures of habit, and forage and livestock producers are no different. Work with your suppliers as early as possible to have your seed needs known and planned for and confirm your costs when orders are placed.

Upcoming Events

For upcoming forage related events visit: ***http://forages.pss.msstate.edu/events.html***

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