

2018, Annual Georgia Sod Producers Inventory Survey

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In November, the Georgia Urban Ag. Council conducted their twenty-fourth consecutive survey of sod producers. The purpose of the survey was to determine the status of inventory levels and projected price changes for spring 2018. Thirteen producers participated in the survey, representing farm sizes which were less than 300 acres (5 participants), 300 to 600 acres (4 participants), 601 to 900 acres (1 participants), and more than 900 acres (3 participants).

The survey obtained estimates of the inventory for bermudagrass, zoysiagrass, centipedegrass, St. Augustinegrass, and tall fescue based on estimated sales for the first five months of 2018 as excellent (more than 10% of demand), adequate (equal to demand), and poor (more than 10% shortage). Pricing information included farm price and price for truckload orders to the Atlanta area or within 100 miles of the farm, all costs were reported as price per square foot of sod.

Inventory Levels

Bermudagrass is being grown by a majority of the surveyed producers. Ninety-two percent of the producers rated their inventory as adequate to excellent this year, continuing a three-year increase in inventory (Figure 1). Seventy-five percent the growers with greater than 600 acres expect an adequate to excellent bermudagrass supply, while 100% of producers with 600 acres or less project having sufficient inventories. For early 2018, bermudagrass supply should meet market demand.

According to this year's survey, the number of producers growing zoysiagrass (77%) was the same as last year. Zoysiagrass is a popular species with many commercially available cultivars. There are at least sixteen zoysiagrass cultivars being grown in Georgia. Of the

producers responding, 80% estimate an adequate to excellent inventory, which is equal to last year's estimate (Figure 2).

Of the 13 producers surveyed 8 (62%) were growers of centipedegrass. Seventy-five percent of the growers had adequate to excellent inventory compared to 60% in 2017, and 50% in 2016. Of the larger growers, 3 of 4 growers with greater than 600 acres expect an adequate centipedegrass supply.

St. Augustinegrass is being grown by 2 of the 13 producers surveyed. Both reported a sufficient supply.

Similar to previous years, tall fescue was grown by 46% of producers. Eighty-three percent of tall fescue producers reported excellent to adequate inventory, which continues a fourteen-year trend of sufficient tall fescue supply. The amount of tall fescue sod grown in Georgia meets demand.

Sod Prices

For 2018, the on-the-farm and delivered prices are expected to remain relatively unchanged or decrease compared to 2017 and 2016. Price drops could range from 4% to 11% over last year's prices (Table 1). Of the five species, only St. Augustinegrass is forecast to have a noticeably higher price than in 2017. Figure 3 provides a five-year perspective of sod prices with little major fluctuation since 2016 for most species.

The average price per square foot for a truckload of bermudagrass delivered to the Atlanta area, or within 100 miles of the farm, is expected to remain constant (Table 1). The 2018 survey indicated prices varied from 20.0 cents to 37.0 cents, with an average price of 29.9 cents (Table 2). The average price in 2017 was 29.6 cents per square foot and ranged from 19.0 cents to 40.0 cents.

The 2018 average price for a delivered truckload of zoysiagrass rose slightly from 2017

levels. The average price of delivered zoysiagrass in 2018 was 49.0 cents and ranged from 36.0 to 60.0 cents. In 2017 zoysiagrass prices ranged from 36.0 to 59.0 cents and averaged 47.3 cents.

Centipedegrass prices are also expected to remain steady. Prices in 2018 ranged from 25.0 cents to 36.0 cents and averaged 30.0 cents, compared to 2017 when the average delivered price was 30.1 cents and ranged from 24.0 to 36.0 cents.

The 2018 average delivered price for tall fescue (31.1 cents) was 11% lower than last year (35.1 cents). This year, prices ranged from 24.0 cents to 44.0 cents.

The price of delivered St. Augustinegrass increased in 2018. The average price of delivered St. Augustinegrass in 2018 was 45.0 cents. In 2017, St. Augustinegrass prices ranged from 35.0 to 38.0 cents and averaged 36.5 cents. It appears that a 2017 drop in St. Augustinegrass inventory will influence 2018 prices.

Regarding grower price expectations, growers are not forecasting a price increase in 2018. Fifty-eight percent of bermudagrass producers expect steady prices while 33% foresee a price decrease during the first five months of 2018. This is a deviation from the previous three years where growers anticipated prices higher than what they reported for this survey. For zoysiagrass, 82% of producers anticipate stable prices during the first five months of 2018; 18% of producers forecast higher prices, one with greater than 900 acres in total production. For centipedegrass and tall fescue, nearly 75% of all producers expect prices to remain constant in 2018. St. Augustinegrass producers expect unchanging prices.

Certification

2018 had 9 producers representing 69% of the respondents with some certified grass on their farm (Table 3). Fifty-five percent of these growers charge a premium for certified grass. The remaining growers either do not place an added value on certified sod or do not participate in the certification program. In 2018, the typical extra cost ranged from 2.0 to 3.0 cents per square

foot and averaged 2.0 cents. This translates to between \$10.00 and \$15.00 on a 500 square foot pallet. The 2018 low remained the same and high end of the range decreased dramatically over last year (2.0 to 10.0 cents).

The price point where consumers (i.e. industry practitioners and homeowners) value varietal purity is unknown. Anecdotal estimates – informal survey of a several hundred participants – of homeowners and end-consumers suggests the value of a certified grass is likely greater than reported in this year's survey. When told of the benefits of certified sod, end-users indicated they are willing to pay more (e.g. \$20 to \$25 / 500 square foot pallet) to ensure varietal purity.

Freight and Unloading Fees

Freight rates per mile shipped to Atlanta, or within 100 miles of the farm, were steady in 2018 (Table 4). Costs ranged from \$3.00 to \$4.50 and averaged \$3.58. A separate freight rate is charged by 62% of the respondents.

Four respondents (31%) reported charging an unloading fee in 2018, up from 2017. The minimum unloading fee (\$75) was constant from 2017 with producers now charging between \$75 and \$125. Most producers (92%) will make additional drops on a load. The low-end charge was up to \$35 in 2018, compared to \$25 in 2017. The high-end charge decreased from \$250 in 2017 to \$75 in 2018. The average cost for additional drops in 2018 was \$57.78; an decreased from last year's cost of \$76.19.

Fuel Surcharge

One respondent reported adding a fuel surcharge to a load in 2018. The rate was 15 cents per mile. Figure 4 compares the average sod price for all species grown with the average annual retail price for gasoline and diesel fuel. Over the last two years sod prices have stabilized while fuel prices took an uptick in 2017.

In January 2017, OPEC members agreed to reduce oil production by 1.2 million barrels a day. This decision appears to have influenced fuel prices throughout 2017. If this trend continues, fuel surcharges could return to the cost of delivering sod.

Markets

The 13 producers that participated in this survey estimated that the highest amount of sod was sold to landscape contractors (Table 5). This industry segment continues to be the perennial leader. In 2018, golf course moved into the second position. Others groups that gained in rank for 2018 were homeowners and brokers.

Acreage in Production

Only one producer indicated they plan to add acres in 2018. This is a substantial decrease from the previous three years where 92% of surveyed producers reported to have added acres into production. These growers added over 1,000 acres of turfgrass since 2015. With 2018 appearing to be a slowdown in growing sod production operations, it will take another couple years of performing this survey to determine if growers are “right sizing” their farms.

For 2017, the estimated population of Georgia is nearly 10.5 million people (<http://worldpopulationreview.com/states/georgia-population/>) and the Governor’s Office of Planning and Budget estimates our population to reach 14.7 million people by 2030. That is a 40 percent increase in our population over the next twelve years. This presents opportunities and challenges for the green industry.

While some of these new residents will choose to live in multifamily buildings and not have an individual lawn. They will still have a desire for grassed areas in green spaces, golf courses, athletic fields, dog parks, etc. Many of these new residents will live in single-family homes with lawns. Spending on residential construction has been increasing since September 2016 (Tutterow, 2017). Similarly in Georgia, single family housing construction permits have

steadily increased over that same time (Tutterow, 2017). Perhaps the sod industry is “right sizing” for now but indicators are that greater sod volume will likely be necessary over the next decade.

Summary

2018 will be a second consecutive year of steady sod prices. Similarly, inventory for all warm-season species is expected to meet market demand during the first part of 2018. It appears fuel prices are rising; which could put pressure on costs of production and delivery throughout the year. Considering the premium price for certified grass has increased since 2015, it is interesting this year the average increase in cost for certified grass fell to 2014 levels.

In years past where inventory shortages were a concern and it was prudent for turf related projects to plan well in advance to be assured grass and to get the best price possible, 2018 appears to be less tenuous. 2017 was a good growing year and added acres in production over the past few years seemed to have stabilized the market, for now.

Table 1. Change in prices from spring 2017 to 2018.

| Turfgrasses | On-the-farm | | | Delivered* | | |
|--------------------|-------------------------------------|------|-------------|-------------------------------------|------|-------------|
| | 2017 | 2018 | % Change | 2017 | 2018 | % Change |
| | ----- Cents / ft ² ----- | | | ----- Cents / ft ² ----- | | |
| Bermudagrass | 24.5 | 23.6 | -3.7 | 29.6 | 29.9 | 1.0 |
| Zoysiagrass | 42.5 | 45.8 | 7.8 | 47.3 | 49.0 | 3.6 |
| Centipedegrass | 25.1 | 25.3 | 0.8 | 30.1 | 30.0 | -0.3 |
| Tall Fescue | 29.2 | 27.5 | -5.8 | 35.1 | 31.1 | -11.4 |
| St. Augustinegrass | 32.5 | 40.0 | 23.1 | 36.5 | 45.0 | 23.3 |

* Delivered price includes freight and pallets. The delivered price included the Atlanta area or within 100 miles of the farm.

Table 2. Comparison of on-the-farm prices with delivered prices, 2018.

| Turfgrasses | On-the-farm | | Delivered* | |
|--------------------|-------------------------------------|-------------|-----------------|-------------|
| | Price (avg.) | Range | Price (avg.) | Range |
| | ----- Cents / ft ² ----- | | | |
| Bermudagrass | 23.6 | 15.0 – 31.0 | 29.9 | 20.0 – 37.0 |
| Zoysiagrass | 45.8 | 30.0 – 55.0 | 49.0 | 36.0 – 60.0 |
| Centipedegrass | 25.3 | 17.0 – 31.0 | 30.0 | 25.0 – 36.0 |
| Tall Fescue | 27.5 | 22.0 – 39.0 | 31.1 | 24.0 – 44.0 |
| St. Augustinegrass | 40.0 | 40.0 | 45.0 | 45.0 |

* Delivered price includes freight and pallets. The delivered price included the Atlanta area or within 100 miles of the farm.

Table 3. Percentage of survey respondents that grow certified grass and the additional charge for certified grass.

| Year | Growers with Certified Grass | | Growers that charge a premium for Certified Grass | | | |
|------|------------------------------|----|---|----|-------------------|------------|
| | % | n* | % | n* | Average | Range |
| | | | | | ----- cents ----- | |
| 2018 | 69 | 9 | 55 | 6 | 2.0 | 2.0 – 3.0 |
| 2017 | 71 | 15 | 85 | 11 | 4.0 | 2.0 – 10.0 |
| 2016 | 88 | 15 | 87 | 13 | 4.0 | 1.0 – 7.0 |
| 2015 | 76 | 19 | 55 | 11 | 3.0 | 1.0 – 6.0 |
| 2014 | 54 | 19 | 47 | 9 | 2.0 | 2.0 – 3.0 |

* Total number of respondents 13, 21, 17, 26, and 35 for 2018, 2017, 2016, 2015, and 2014 respectively.

Table 4. Historical freight rate for sod deliveries.

| Year | Range | Average | % Change |
|------|-----------------------|---------|----------|
| | ----- \$ / mile ----- | | |
| 2018 | 3.00 – 4.50 | 3.58 | 2.3 |
| 2017 | 1.25 – 5.00 | 3.50 | -5.4 |
| 2016 | 3.00 – 4.50 | 3.70 | -1.1 |
| 2015 | 1.00 – 5.86 | 3.74 | 16.9 |
| 2014 | 1.00 – 5.50 | 3.20 | 0.3 |

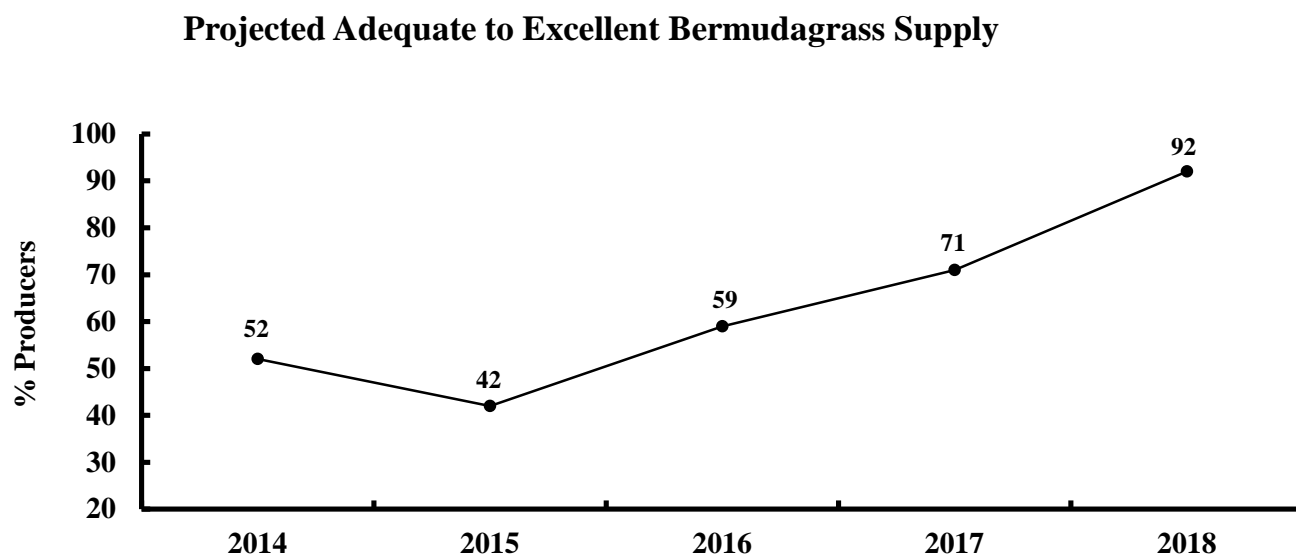
* Delivered price includes freight and pallets. The delivered price included the Atlanta area or within 100 miles of the farm.

Table 5. Ranking of industry segments for sale of turfgrass.

| Industry segments | 2018 | | 2017 | |
|--------------------------|-------------|----------------------------|-------------|----------------------------|
| | Rank | Average[*] | Rank | Average[*] |
| Landscape Contractors | 1 | 39.2 | 1 | 49.0 |
| Golf Courses | 2 | 25.0 | 4 | 15.3 |
| Sports / Athletic Fields | 3 | 19.5 | 2 | 23.0 |
| Homeowners | 3 | 19.5 | 5 | 13.1 |
| Brokers | 5 | 18.8 | 7 | 10.9 |
| Existing Developers | 6 | 15.1 | 6 | 13.0 |
| Garden Centers | 7 | 12.9 | 3 | 17.0 |
| Landscape Designers | 8 | 0.0 | 8 | 5.0 |

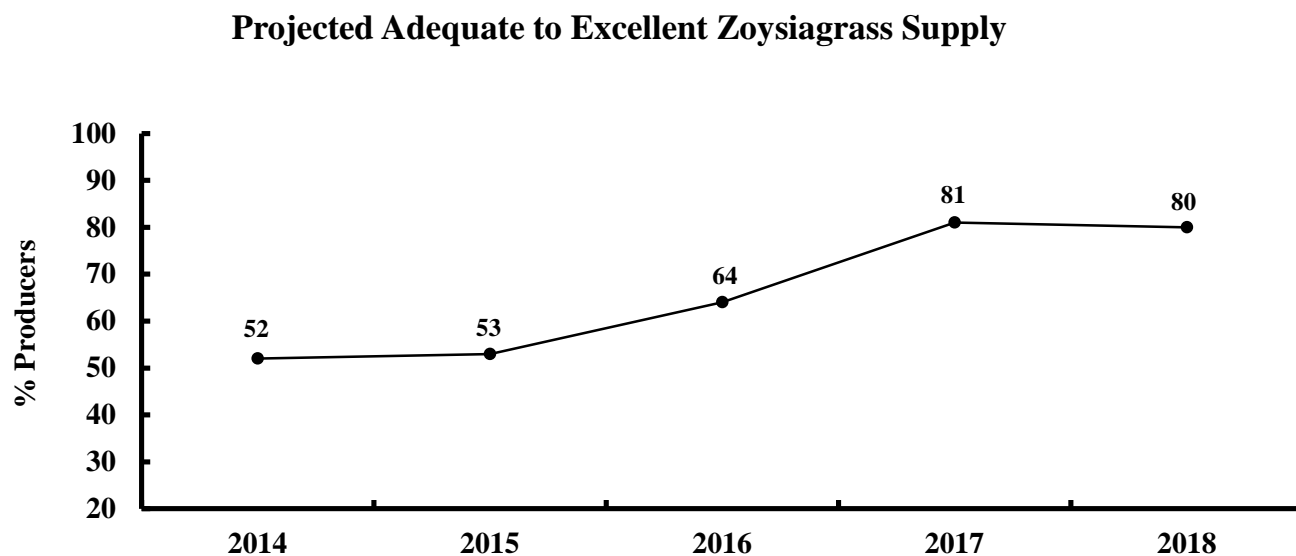
* Average percentage of total sales.

Figure 1. Percentage of bermudagrass producers projecting adequate to excellent supply for the past five years.



* Projected supply for the first 5 months of the calendar year.

Figure 2. Percentage of zoysiagrass producers projecting adequate to excellent supply for the past five years.



* Projected supply for the first 5 months of the calendar year.

Figure 3. Historical perspective of sod prices in Georgia, 2014 to 2018.

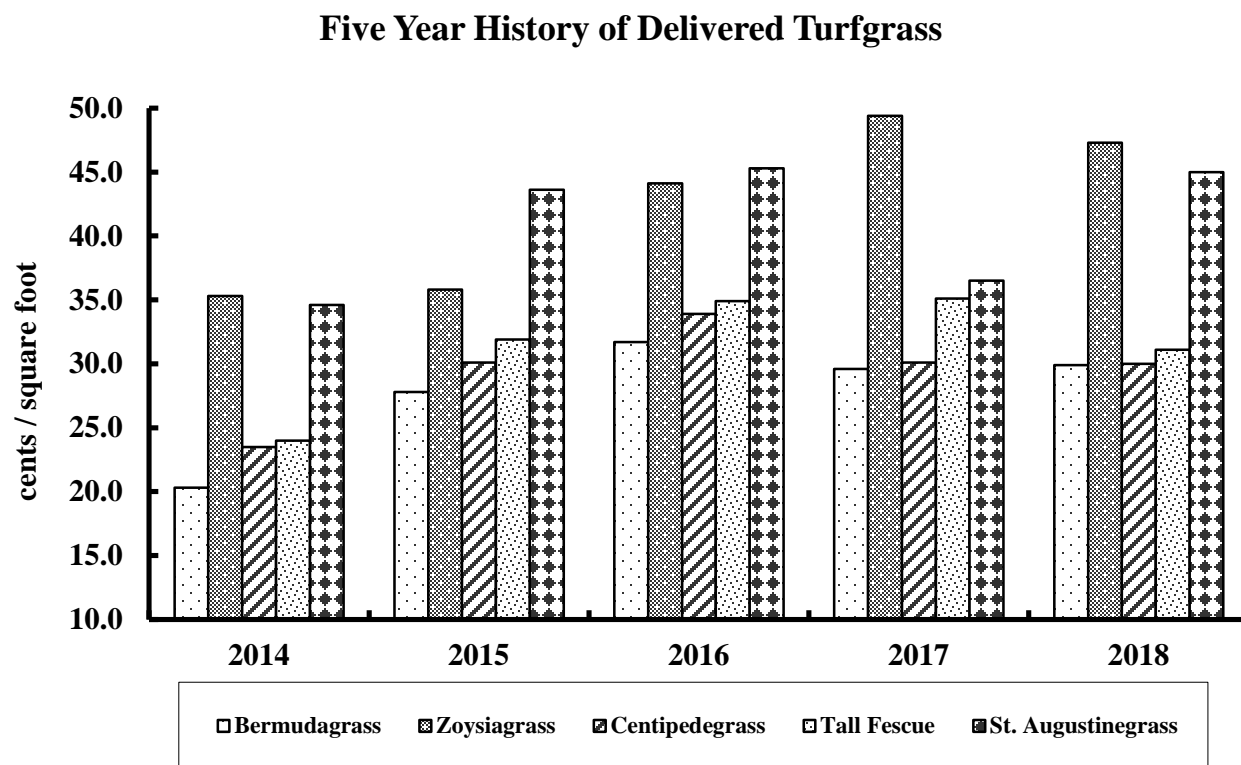
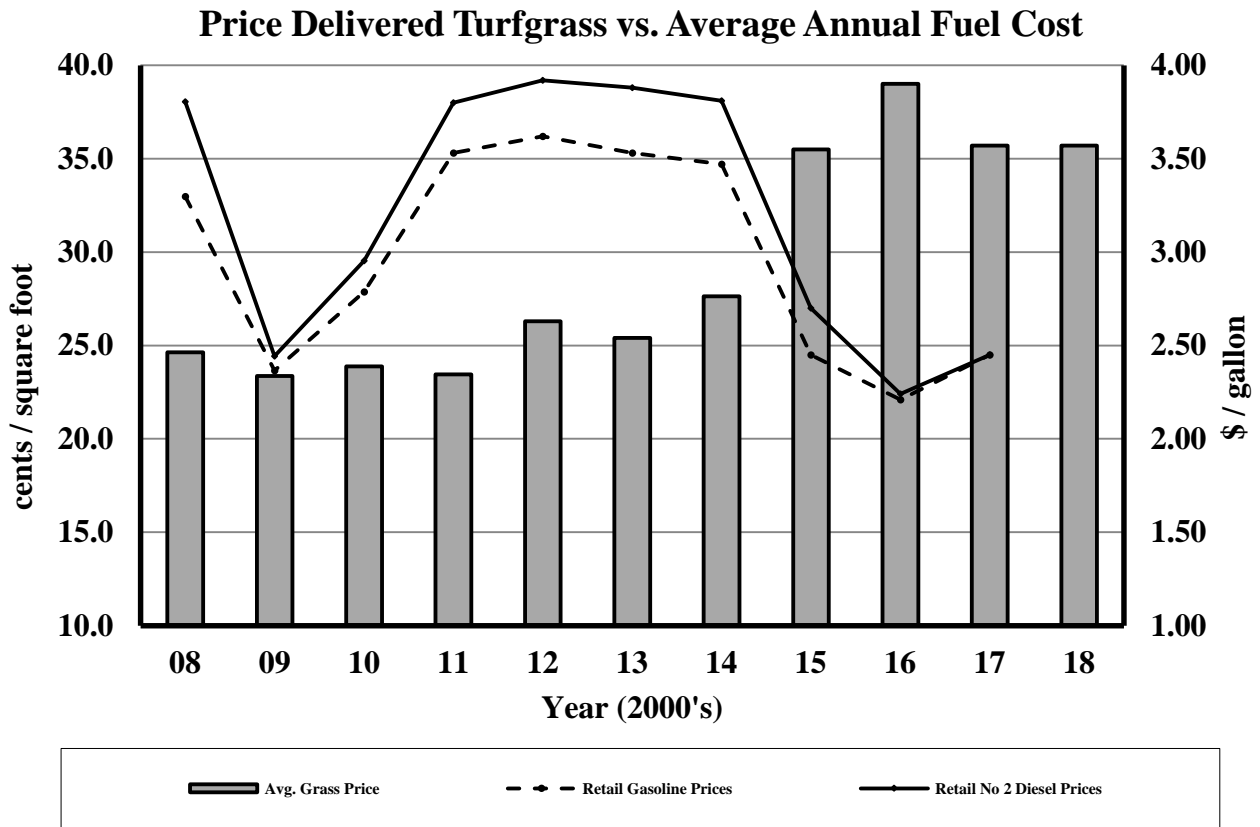


Figure 4. Ten year comparison of average sod price with fuel cost.



* Average grass price was calculated for the five turfgrass species commonly grown in Georgia.
 ** Average annual retail fuel cost for the Lower Atlantic region was found at www.eia.doe.gov.
 For 2017, the average retail fuel cost was calculated through December 4.

Bullet Points from the 2018 Sod Producers Inventory Survey

1. Supply of warm-season turfgrasses looks to be sufficient for early 2018.
2. 2018 continues a 3-year increase in bermudagrass inventory.
3. Zoysiagrass inventory is the same as last year with suitable volume.
4. The delivered price for bermudagrass, zoysiagrass, and centipedegrass is expected to be similar to last year.
5. The deliver price for tall fescue is projected to fall while St. Augustinegrass should rise.
6. Most growers are forecasting steady prices into 2018.
7. The average price for certified grass fell to 2.0 cents per square foot.
8. Paying more for certified grasses provides the end-consumer assurance they are receiving varietal purity.
9. Freight rates per mile shipped to Atlanta, or within 100 miles of the farm, held constant.
10. Producers are not considering adding acreage into production in 2018.