

Technical Commentary

Primo MAXX[®] and its Impact on Golf Course Budgets

Introduction – Primo MAXX[®] is by far the most widely used plant growth regulator (PGR) by golf course superintendents and other professional turf managers since its introduction in 1993. It can be used on all the major turf species and it is the most researched PGR, with hundreds of articles published in scientific journals, trade publications, and university research reports. Primo MAXX slows the production of gibberellic acid (GA1), and turf vertical growth and clippings are reduced by about 50% for up to 4 weeks. Turf density increases with repeat applications because production of stolons, rhizomes, and tillers is enhanced. In addition, the turf will become a darker green because chlorophyll is more concentrated. Turf quality and stress tolerance will increase with multiple applications. Many superintendents have also found that by using Primo MAXX as part of their agronomic program the cost savings which are discussed below more than pay for the product.

Fuel Savings – The fuel cost to maintain an 18-hole golf course can range from \$25,000 to \$35,000+ annually. It is estimated that 50% of the fuel cost is for mowing fairways, approaches, and tees. Bentgrass fairways are mowed an average of 4 times per week for 25 weeks of active turf growth. Bermudagrass fairways are mowed an average of 3-4 times per week for 30 weeks of active growth, depending on location. Since Primo MAXX slows turf growth, a reduction in mowing is realized. Many superintendents have found that mowing of roughs can also be reduced. Sometimes slight phytotoxicity can occur from Primo MAXX application to roughs due to older leaves and lower maintenance practices. A tip is to try applying half the fairway Primo MAXX rate to the roughs. See page 2 for potential fuel savings.

Labor Savings – Mowing fairways, tees, and approaches 3-4 times per week requires considerable man hours. Clippings are often collected on the first mowing of the week, and additional labor is often needed to help with clipping collection and disposal. Golf courses also need labor to hand mow, trim, and edge, especially in hard-to-mow areas. By using Primo MAXX to slow turf growth, labor that is dedicated to all mowing and trimming operations can be reallocated for other tasks. See page 2 for potential labor savings.

Equipment Savings – Primo MAXX helps mowing equipment perform better because when turf growth is slowed, there is less wear on reels, bed knives, etc. Reduced mowing can extend equipment life and the equipment will have been operated fewer hours, which should increase the value when it is sold or traded for new equipment.

Primo MAXX and Fertility – Fertilizer is a key component of turf management. Primo MAXX and fertilizer, especially nitrogen, are a good partnership. Nitrogen stimulates turf growth because it is a key component of amino acids and chlorophyll, which drive turf growth and development. Primo MAXX will slow vertical growth, but the turf still gets the benefit of the fertilizer nutrients, which are redirected to production of stolons, rhizomes, tillers, and roots. Primo MAXX may or may not reduce fertilizer requirements, but it will help the turf better utilize it for improved turf quality and stress tolerance.

Primo MAXX and Fungicides – Primo MAXX can be tank-mixed with all fungicides currently on the market. Most fungicides are applied on a 7, 14, or 21-day schedule and the Primo MAXX rate can be adjusted as needed. Several research projects have shown the benefit of using Primo MAXX with fungicides. Primo MAXX alone will increase turf stress tolerance, which helps fungicide activity.

Primo MAXX and Irrigation – Water quantity and quality are issues every golf course faces. Primo MAXX research at several universities has shown the potential of helping reduce water requirements. Primo MAXX offers many usage benefits: 1. Smaller, more compact leaves have less surface area for water loss by transpiration and evaporation. 2. Increased rooting has access to deeper soil moisture. 3. And as gibberellic acid levels decrease, abscisic acid (ABA) levels increase. ABA aids in stomatal closure and water conservation. Savings are realized in water cost and electricity needed to run the irrigation system.

Increased Revenue – There is a lot of competition between golf courses to attract players. Golfers want to play on the best-conditioned courses they can and Primo MAXX can be a tool to help increase play. A key reason for the success of Primo MAXX is that it improves turf quality and playability while at the same time reducing maintenance costs. FOR HELP IN MANAGING EXPENSES AND IMPROVING TURF, PRIMO MAXX MAY BE THE TOOL FOR YOU! Contact your distributor representative or Syngenta territory manager to learn more about Primo MAXX and how it can help your operation.

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The economic benefits below are an estimate; cost will vary at different golf courses. The key benefits of Primo MAXX are reduced maintenance costs, reallocation of labor, and improved turf quality. Use the information as a guideline to determine how Primo MAXX can help you.

Primo MAXX Application Cost (21-day Schedule)

Labor = 7 applications x 8 hours/application x \$10/hour = \$560
 Fuel cost for 7 applications = \$100
 Primo Link Pak cost is about \$290/gallon = \$2.27/oz
 Primo annual cost = 7 applications x 11 oz/acre x 25 acres x \$2.27/oz = \$4,370
 Primo annual cost for hard-to-mow areas and trimming estimated = \$2000

Potential Fuel Savings

Annual total fuel cost = \$30,000
 50% of total fuel cost for mowing 4 times/week = \$15,000
Annual fuel savings from eliminating 1 mowing/week = \$15,000 x 0.25 = \$3,750
Annual fuel savings from eliminating 2 mowings/week = \$15,000 x 0.50 = \$7,500

Potential Labor Savings

2 operators x 6 hours/mow x 4 mowings/week x \$10/hour x 25 weeks = \$12,000
 2 for clipping removal x 6 hours x 1 mowing/week x \$8.00/hour x 25 weeks = \$2,400
 4 employees for hand mowing x 40 hours/week x \$8.00/hour x 25 weeks = \$32,000
Annual labor savings from eliminating 1 mowing/week = \$12,000 x 0.25 = \$3,000
Annual labor savings from eliminating 2 mowings/week = \$12,000 x 0.50 = \$6,000
Annual labor savings by reducing hand mowing 25% = \$32,000 x 0.25 = \$8,000

Total Savings by Using Primo MAXX

Reduce by 1 mowing/week = \$3,750 fuel + \$3,000 labor = \$6,750 - \$4,370 Primo cost = \$2,380 savings
Reduce by 2 mowings/week = \$7,500 fuel + \$6,000 labor = \$13,500 - \$4,370 Primo cost = \$9,130 savings
Reduce hand mowing by 25% = \$8,000 labor - \$2,000 Primo = \$6,000 savings

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