

The logo for Balance GT, featuring the word "Balance" in a bold, sans-serif font, followed by "GT" in a larger, stylized font where the "G" and "T" are connected. A small leaf icon is positioned above the top right of the "T".

**Balance<sup>™</sup>GT**

SOYBEAN PERFORMANCE SYSTEM

# Q&A

**Q: What is the Balance<sup>™</sup> GT Soybean Performance System?**

**A:** The Balance<sup>™</sup> GT Soybean Performance System is a collaboration between MS Technologies<sup>™</sup> and Bayer. The system will initially be a double herbicide-tolerant trait stack featuring a new form of glyphosate tolerance for soybeans, coupled with tolerance to new Balance<sup>®</sup> Bean\*, an isoxaflutole-based herbicide. Isoxaflutole is the active ingredient in Balance<sup>®</sup> Flexx for corn and is also a component of Corvus<sup>®</sup> corn herbicide. Balance<sup>™</sup> GT will package this double herbicide-tolerant trait stack in high-yielding, elite genetics for maximum yield potential. Later, Balance<sup>™</sup> GT will be expanded to a triple trait stack with added tolerance to Liberty<sup>®</sup> herbicide.

THE NEXT ERA OF PERFORMANCE AND CONTROL



**Q: How will Balance™ GT soybean varieties perform?**

**A:** Balance™ GT soybean varieties have been developed using high-yielding, elite germplasm and have demonstrated performance equal to or better than many varieties that growers currently plant.

**Q: What will be the mode of action?**

**A:** The Balance® Bean herbicide will include an active ingredient (IFT) that inhibits the 4-hydroxyphenylpyruvate dioxygenase (HPPD) enzyme in plants. This enzyme is key to the production of pigments and the development of chloroplasts in plant tissues. By inhibiting pigment and chloroplast biosynthesis, emerging plant tissue is bleached (white to pale yellow). The system will give growers the power and effectiveness of glyphosate coupled with the capability to utilize Balance® Bean, previously unavailable in soybeans.

**Q: What benefits will the Balance™ GT Soybean Performance System offer growers?**

**A:** The Balance™ GT Soybean Performance system will give growers the benefit of two modes of herbicide action to combat a broad spectrum of grasses and broadleaves, including a number of herbicide-resistant weeds. Additionally, a weed management program based on Balance® Bean will provide long-lasting residual control with reactivation technology. When combined with supplemental post-emergence applications of glyphosate, the system will control weeds through canopy closure. Glyphosate and Balance® Bean are excellent choices for burndown in no-till applications. Both chemistries are proven, non-volatile and will provide outstanding ease of use.

**Q: How will the Balance™ GT system compare to other weed management systems?**

**A:** The Balance™ GT system will be unique in terms of flexibility and efficacy. Both of its supported herbicides, glyphosate and Balance® Bean, can be used in burndown or pre-emergence applications. Glyphosate can also be used in post-emergence applications. Additionally, Balance® Bean's unique reactivation technology will provide dependable long-lasting residual control. Balance® Bean's use rate will be extremely low — a fraction of the use rates for Dicamba and 2,4-D. Through its use in corn, isoxaflutole (the active ingredient in Balance® Bean) has proven to be non-volatile.

**Q: What will be the application window of Balance® Bean?**

**A:** Balance® Bean will be able to be applied burndown or pre-plant (as much as 21 days prior to planting) up to emergence.

**Q: What is reactivation?**

**A:** Reactivation is unique to IFT and has proven its value with herbicides for the corn market. Reactivation is the power to control weeds after they have emerged with an activating rainfall event. Many herbicides cannot control late-emerging weeds; therefore, the weeds survive to compete with the crop. Field studies show that through reactivation the active ingredient can be taken up by weed roots with just a half-inch or more of rain, bleaching and killing late-emerging weeds that are up to two inches tall. Reactivation will allow Balance® Bean to control weeds in soybeans throughout the early season with less impact from random and sporadic spring rainfall.

## PERFORMANCE AND CONTROL

### **Q: How will Balance® Bean affect my weeds?**

**A:** According to field trials, it is anticipated that Balance® Bean will control weeds before they emerge from the soil. Weeds that do emerge will usually acquire a bleached white appearance, while some weeds might show only part of the tissue as white and the rest can be chlorotic (yellow). In a short period of time, the bleached tissue will die, first at the edges, and ultimately the weed will be killed completely.

### **Q: How will the Balance™ GT system affect my current herbicide program?**

**A:** The Balance™ GT system will build upon many growers' current preferred glyphosate-based program. Now for the first time, growers will benefit from having the option to apply Balance® Bean in conjunction with glyphosate in burndown and pre-emergence applications for broad-spectrum weed control with residual activity. Glyphosate can also be used in post-emergence applications.

### **Q: Are glyphosate and isoxaflutole tolerance available in other crops?**

**A:** Balance™ GT will be offered only in soybeans; however, this combination of chemistries is not new to corn growers. Use of both glyphosate and isoxaflutole for in-crop applications in corn production has been common for several years.

### **Q: Will Balance® Bean need any adjuvants or surfactants?**

**A:** Adjuvants, as a whole, can enhance the burndown of emerged weeds in reduced and no-till systems prior to crop emergence. It is anticipated that growers will have several options for tankmixing with Balance® Bean such as amide, PPO inhibitor, or ALS type residual herbicides, depending on the specific operation's needs.

### **Q: When will the Balance™ GT system be available?**

**A:** The Balance™ GT system is anticipated for commercial release in 2017, pending regulatory approvals.\*\*

### **Q: Where will Balance™ GT soybeans be available for purchase?**

**A:** MS Technologies intends to broadly license Balance™ GT soybeans through a number of seed companies and in a wide range of maturities.

### **Q: How much will the Balance™ GT system cost?**

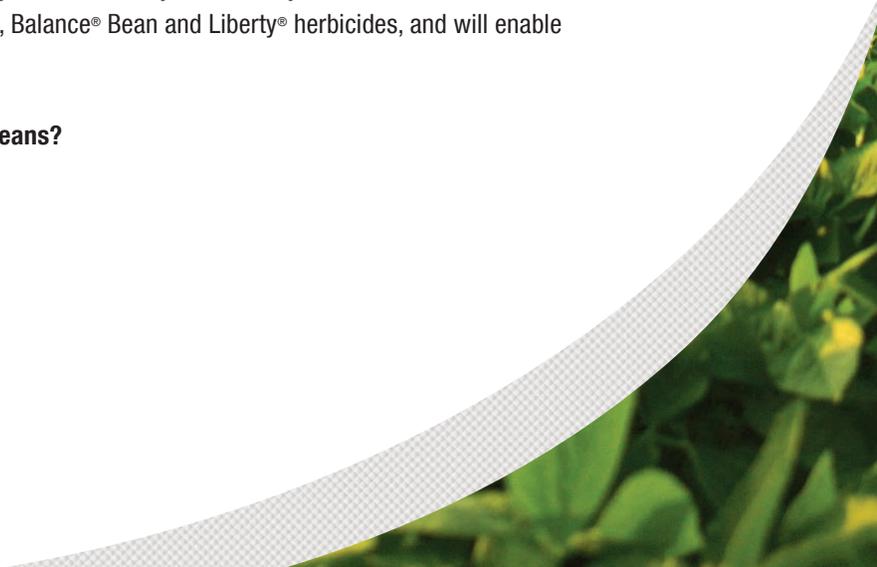
**A:** The system cost for Balance™ GT has not yet been established. Once determined, however, growers can expect the investment to provide exceptional value and be competitive with other systems on the market.

### **Q: Are there plans for additional trait stacks with the Balance™ GT system?**

**A:** MS Technologies™ and Bayer intend to build upon the strong foundation provided by Balance™ GT with future additional herbicide trait stacks, increasing the system's flexibility and efficacy. The first of these additional stacks will provide tolerance in soybeans to glyphosate, Balance® Bean and Liberty® herbicides, and will enable growers to use three modes of action on one soybean.

### **Q: How can growers learn more about Balance™ GT soybeans?**

**A:** For more information, visit [BalanceGTsoybeans.com](http://BalanceGTsoybeans.com).



DEVELOPED BY:



[BalanceGTsoybeans.com](http://BalanceGTsoybeans.com)



FEATURING



IMPORTANT: This bulletin is not intended to provide adequate information for use of these products. Read the label before using these products. Observe all label directions and precautions while using these products.

\*Balance® Bean is not registered for sale or use in the United States. \*\*Balance™ GT has not received all needed regulatory approvals. Balance® Flexx and Corvus® are not registered for use on commercial soybeans.

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