Double Team Sorghum Cropping Solution

2022 Overview

Double Team Sorghum - Overview

Double Team™ Sorghum Cropping Solution is comprised of two components:

- DT™ Trait for Sorghum from S&W Seed Co.
- FirstAct™ Herbicide from ADAMA

Benefits to Growers of Double Team:

- Most flexible herbicide tolerant sorghum system available
- Unprecedented over-the-top grass control
- Non-GMO
- Improved yield and profitability opportunities
- Short replant intervals to many key crops including sorghum

DT™ Trait Overview

- DT™ trait development started in 2015; collaboration with USCP
- The tolerance trait was developed using tissue culture selection and conventional breeding procedures and is <u>non-GMO</u>
- The herbicide tolerance is the result of a single point mutation in the Acetylcoenzyme A carboxylase gene (ACCase)
- DT trait is tolerant to FirstAct™ herbicide
- 2019 Field tests; 2020 Grower trials; 2021 Pilot launch



SP 24C20 DT

Very Early Maturity: 48-52 days to mid-bloom

- Tolerant to FirstAct™ Herbicide
- Over the top grass weed control
- Cream grain in semi-open head
- High yield potential for maturity
- Excellent stalk quality and drought tolerance
- Excellent fit for Northern Plains and other short season environments
- Recommend planting in narrow rows 15 inch or less to maximize yields



SP 30A30 DT

Early Maturity: 55-59 days to mid-bloom

- Tolerant to FirstAct™ Herbicide
- Over the top grass weed control
- Bronze grain in semi-compact head
- High yield for maturity
- Excellent emergence
- Excellent fit for Northern Plains and other short season environments





SP 45A45 DT

Medium-Early Maturity: 57-61 days to mid-bloom

- Tolerant to FirstAct™ Herbicide
- Over the top grass weed control
- Bronze grain in semi-compact head
- High yield for maturity
- Excellent emergence
- Excellent standability
- Excellent fit for most Central and Great Plains sorghum growing areas





SP 31C06 DT

Early Maturity: 54 to 58 days to mid-bloom

- Tolerant to FirstAct™ Herbicide
- Over the top grass weed control
- Cream grain in semi-compact head
- High yield potential for maturity
- Good drought tolerance
- Good for high-pH soil environments
- Very uniform plant





SP 58M85 DT

Medium Maturity: 62 to 64 days to mid-bloom

- Tolerant to FirstAct™ Herbicide
- Over the top grass weed control
- Bronze grain in semi-compact head
- High yield for maturity
- Moderately tolerant to SCA
- Staygreen for excellent standability
- Excellent emergence from cool soils



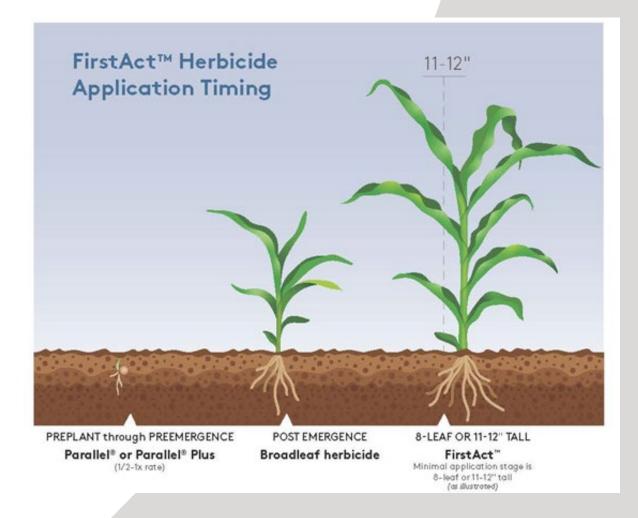




FirstAct™ Herbicide

Application Timing is Key

- Start with a clean field using a preemergence herbicide (required)
- Make an over-the-top broadleaf herbicide application (if needed) at least 1 week prior to FirstAct application
- Apply FirstAct when plant is a minimum of 11 inches tall or at the 8-leaf stage (required)



FirstAct Technical Information

FirstAct Application - Best Practices

- Label rate 5-12 oz/acre; recommended 8-10 oz/acre
- 2 application maximum; maximum of 21 oz/acre per season
- Minimum recommended carrier volume: 15 gallons/acre
- Use crop oil concentrate at 1-2% v/v
- Ground and aerial applications are allowed
- No tank mixing other herbicides with FirstAct in 2022
- Stewardship program & agreement is required
- 45-Day PHI
- Caution signal word

Stewardship and Other Requirements

- Double Team sorghum <u>must be sprayed with FirstAct herbicide</u> at least once per season at the labeled rate
 - This prevents the development of herbicide-resistant grass weeds
- Growers are required to use a preemergence herbicide, such as Parallel® or Parallel Plus, and plant into a clean field
- Manage escapes and maintain clean field edges to prevent the loss of Double Team technology efficacy – 100% control is the goal!
- Do not tankmix FirstAct with postemergence herbicides
 - An over-the-top broadleaf herbicide application (if needed) can be made at least one week prior to the FirstAct application

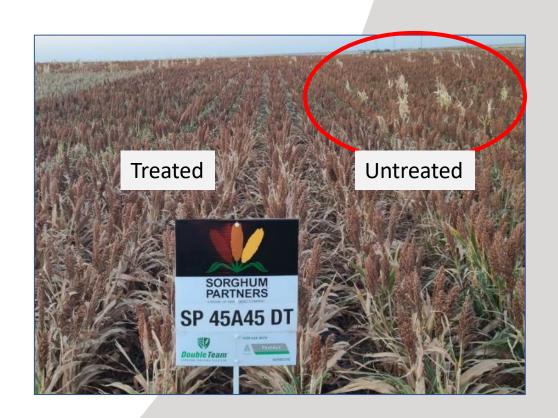
Stewardship and Other Requirements

- FirstAct controls a wide variety of key grass weeds
 - Sandbur
 - Volunteer Corn, wheat & sorghum
 - Crabgrass
 - Foxtail
 - Barnyardgrass
 - Texas Panicum
 - Many others (see label)
- Clean your planter!
 - Non-DT trait sorghum in Double Team fields will result in plant death
 - Cleaning before and after planting Double Team improves stewardship efforts

Clean Fields = Higher Yields



Sandbur control (10 DAT) Walsh, CO



Volunteer Corn Control Oberlin, KS

Clean Fields = Higher Yields



Grass Weed Control Alva, OK

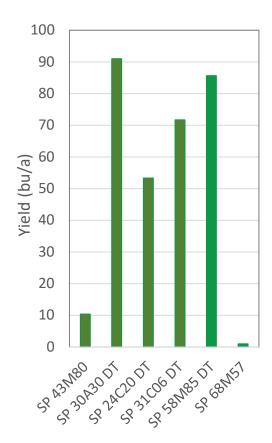


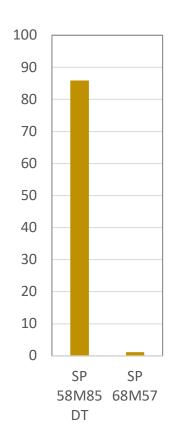
Grass Weed Control Homestead, OK

Clean Fields = Higher Yields

Under heavy weed pressure, yield advantage for Double Team was dramatic!

Gruver TX, 2020



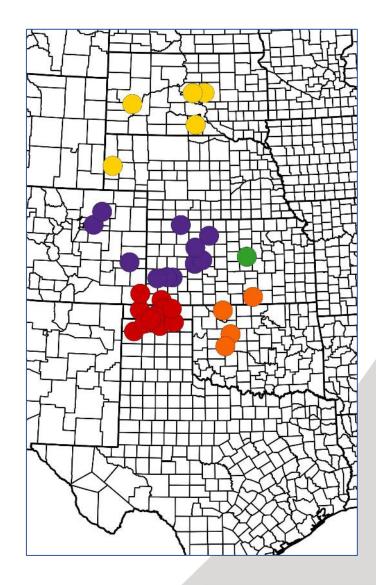


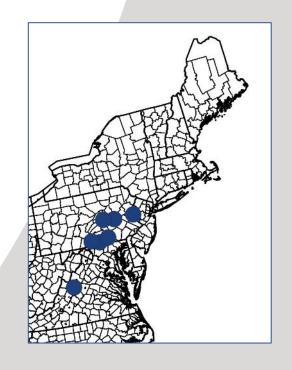


Field treated with:	FirstAct herbicide
METOLACHLOR + ATRAZINE	

2021 Grower Program was a hit!

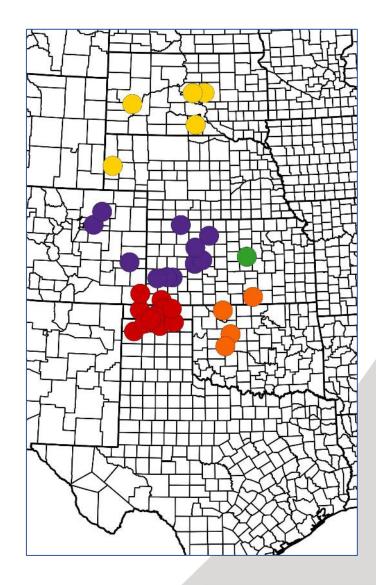
- Double Team growers were those that had grass weed problems in sorghum
 - 40+ growers
 - 9 states
 - 3 different DT trait hybrids
- Growers were happy with the weed control and yields.

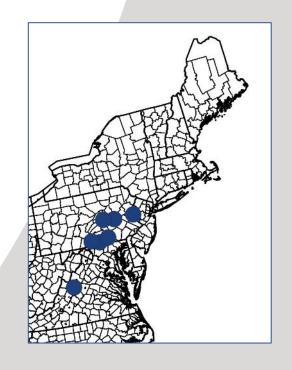




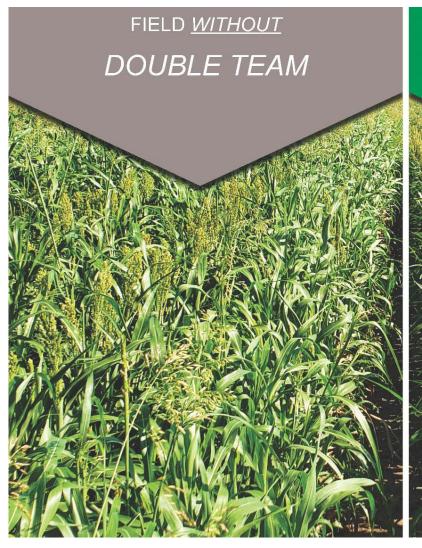
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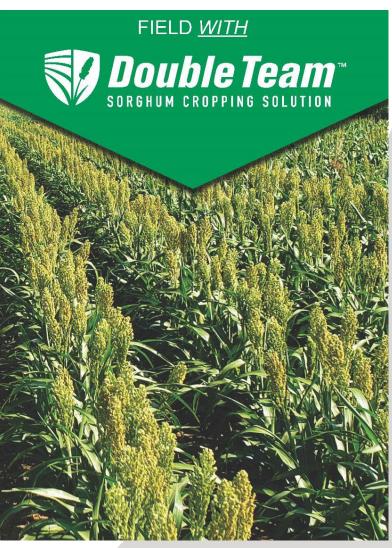
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See the Difference

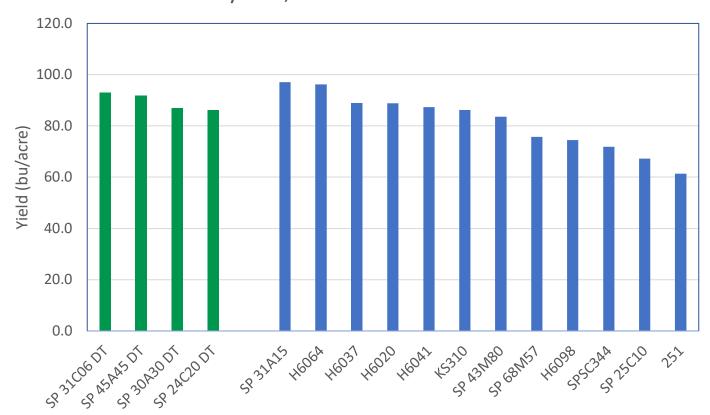




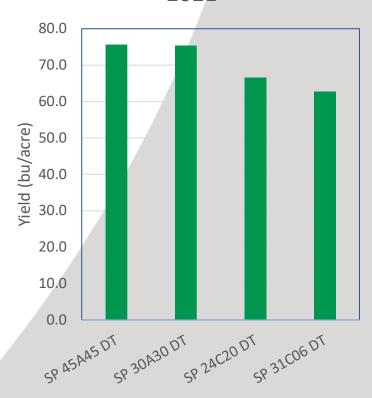
See the Difference



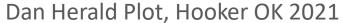
Jeb Talley Plot, Oberlin KS 2021

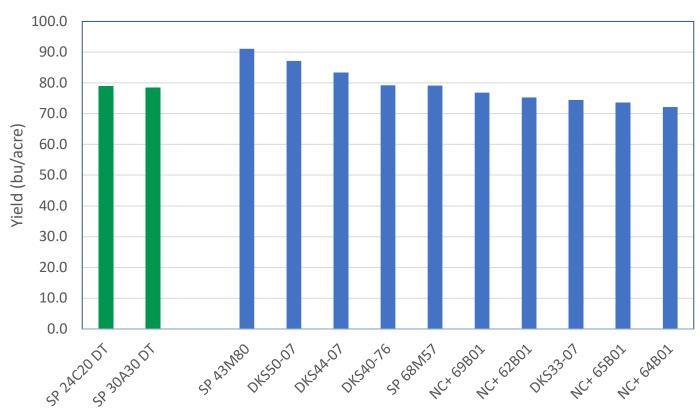


Kent Martin Plot, Alva OK 2021



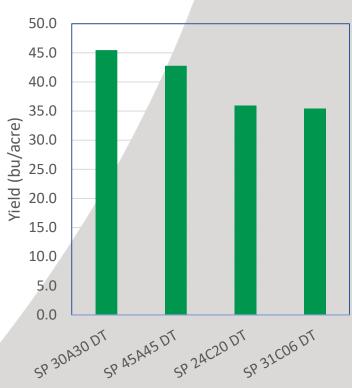
Conventional plot with same grower ~ 3 miles away averaged 77 bu/acre
Yields ranged from 87 to 63 bu/acre as a reference to area yields.





SP 45A45 DT would have been an excellent choice in this trial

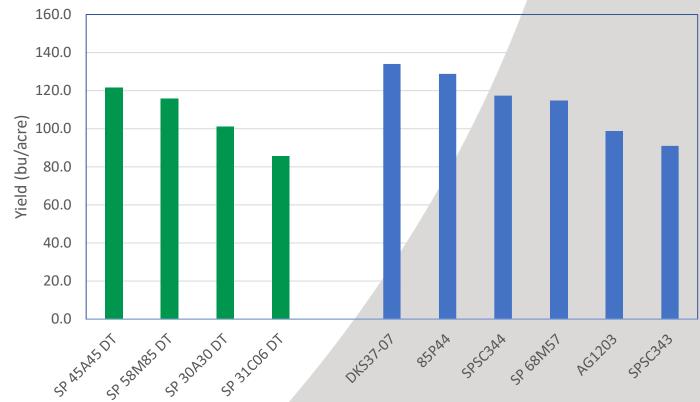
Plainsman Res. Ctr. Walsh CO 2021



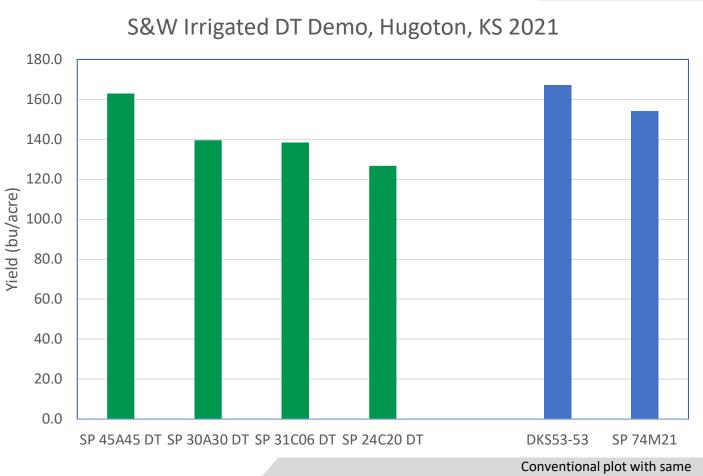


SP 45A45 DT Yielded >120.0 bu/acre in this trial

S&W Irrigated Mini Strips, Garden City, KS 2021

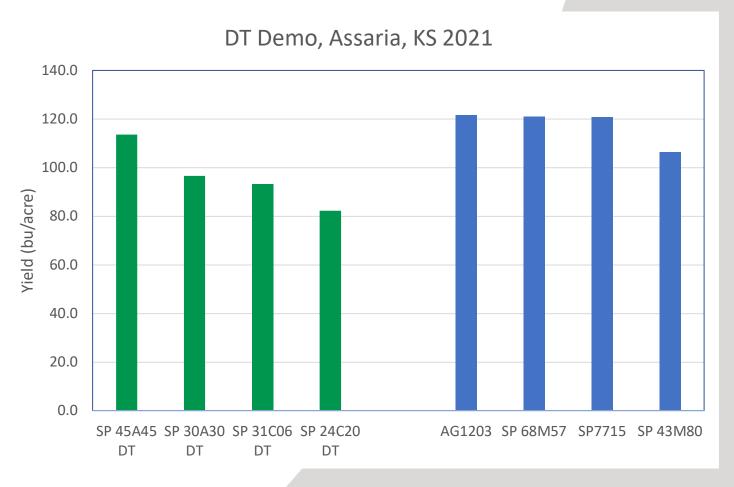




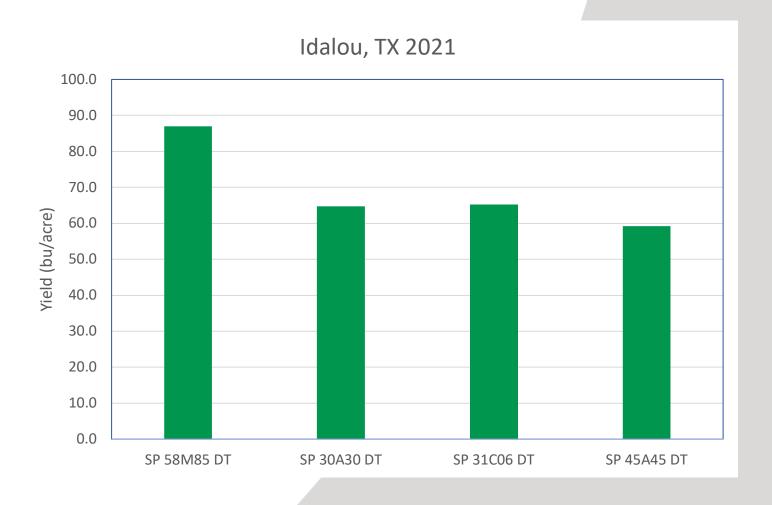


grower ~ 1 mile away.

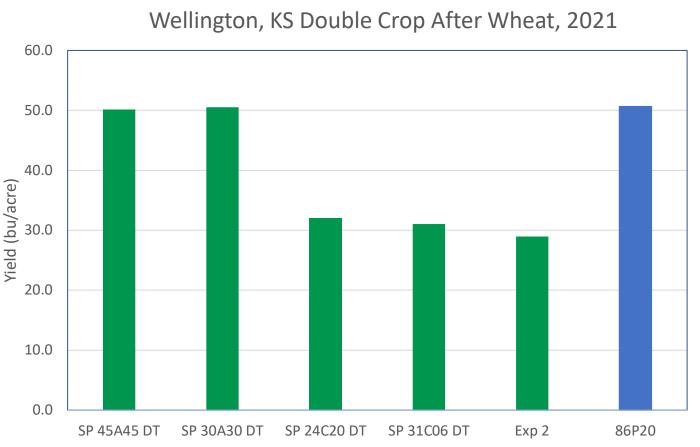












Double Team Resource Website

- www.DoubleTeamSorghum.com is the official source of information for Double Team Sorghum Cropping Solution
- Double Team website contains:
 - FirstAct Label
 - FirstAct Tech Sheet and Sell Sheet
 - FirstAct Grower's Guide
 - Double Team Sorghum Tech Sheets
 - Growing High Yield Grain Sorghum Guide
 - Other Technical Information for Dealers and Growers
 - Link to AgCelerate, our licensing partner

