

Expectations of a Technical Service Manager

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Choctaw, OK

Differences Between Research & Development Manager versus Technical Service Manager

- Prior history I was a Field (R&D) Development Manager at Bayer Environmental Science, DuPont, and Corteva.
- In 2019, started with FMC as a Technical Service Manager.
- Different expectations/needs from contract researchers when a Technical Service Manager.

Differences Between Research & Development Manager versus Technical Service Manager

Aspect	Research and Development Manager	Technical Service Manager
Time Horizon	Long-Term, 3-8 years out	Short- to mid-Term, 0-2 years out
Focus	Generating data for regulatory submission and product advancement	Customer-facing, support sales and marketing, translate data into practical recommendations, field demonstrations to get hands on experience
Customer Interaction	Limited	High
Data Use	Product Design and Regulatory	Recommendations and Troubleshooting
Success Metric	Biological Efficacy and Innovation	Grower Satisfaction and Consistent Performance
Trial Objectives	Determine rates, application timing, formulation attributes, pests controlled, crop response, etc.	Advantages of product as compared to competitor products - efficacy, mixing, residual performance, etc.

Differences Between Research & Development Manager versus Technical Service Manager

Technical Service Manager:

- Provide many product training presentations to growers, crop consultants, and retailers/distributors.
- Needing/Wanting to show the advantages of the product as compared to competitor products, in regards to, efficacy, formulation qualities, spraying, tank mix partners, environmental variability, residual performance, etc.
- Pictures showing difference in rates or as compared to competitor products, very important.



Differences Between Research & Development Manager versus Technical Service Manager

Research & Development Manager:

- Needing data to analyze and run statistics on, trying to determine rates, need strong data set to make decisions on to move forward and write labels and make label submissions.
- Need clear understanding of crop safety and response.
- Presentations at scientific meetings and academic type meetings, highly technical.



Differences Between Research & Development Manager versus Technical Service Manager



Research & Development Manager – *“How should this product be used, what rate and timing?”*



Technical Service Manager – *“Is this product working as intended?”*

Differences Between Research & Development Manager versus Technical Service Manager

- *Sometimes companies have the Research and Development Managers and Technical Service Managers rolled up into one position.*
- *Both roles are essential for Product Success and Grower Confidence.*
- *Going to focus on more of the needs of the Technical Service Manager.*

Differences Between Research & Development Manager versus Technical Service Manager

My Past History:

- **Turf & Orn. Insecticide Technical Service Manager, Bayer Environmental Sciences (1996-2006)**
- **Livestock Insecticide Prod. Marketing Manager, Bayer Animal Health (2006-2008)**
- **Turf & Orn. Product Dev. Manager, DuPont Professional Products (2008-2012)**
- **Integrated Field Scientist, Dupont Crop Protection/Corteva (2012-2020)**
- **Technical Service Manager, FMC Corporation (2020 - present)**

Technical Service Manager

Research & Development Manager

Both Tech/R&D

Differences Between **Research & Development Manager** versus **Technical Service Manager**

Needed Data:

Protocol and Trial Number
Cooperator Name & Organization
Trial Location (City & Zip Code)
Treatment Name, Rate & Lot Numbers
Specific Adjuvant name
Crop Name & Variety
Crop Planting Date or Crop Age
Crop emergence Date (If applicable)
Crop/Plant Spacing
Pest Name (genus & species)
Plot Size
Number of Replicates
Study Design (RBC, Strip, etc.)
Application Dates
Application Start & End Times
Spray Placement (foliar, soil, etc.)
Crop and Pest stage at Application
Application Equipment description (CO2 backpack, Mist Blower, Commercial Boom, Sprinklers, Drip Tape, etc.)

Needed Data:

Application spray volume (GPA)
Application Operating Pressure
Application Water pH
Environmental Conditions at Application (Air temp., Wind Speed & Direction, Soil Moisture, RH, % Cloud Cover, etc.)
Assessment Dates
Crop & Pest Stage at Assessment
Phyto rating at required intervals
Phyto Type Description
Soil Information (%sand, %silt, %clay, OM, pH, CEC)
Weather Information (Air Temp. Min., Max., Avg., Precipitation, Wind Speed & Direction, etc.)
Maintenance Information
Trial Confidence (low or high)
Pest Pressure Overall (high/Low?)
Written M&M and Results

Differences Between Research & Development Manager versus Technical Service Manager

**Across Trials Summary Evaluation Header Integrity - Compliance vs. Original Protocol
*Specified Evaluation Header Use Metrics - FMC Trials***

- **Minimum of three locations needed for statistical analysis model.**
- **If a trial doesn't have all the information, then may have to be deleted.**
- **Risk pushing back development timeline even further.**

Result: Reduced sample/observation number vs. planned, diminished power of statistical tools used in analysis for support of inferences and further investment/development decisions.



How to be Different, Set Yourself Apart:

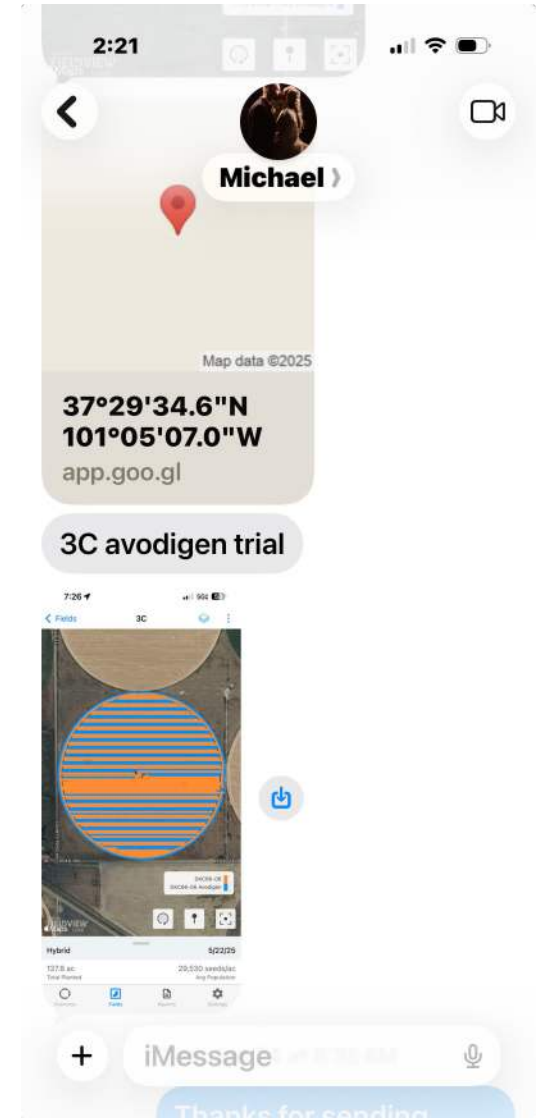
Technical Service Manager Perspective

- *Pictures can be powerful, if seeing some difference. Don't want 100's of pictures but key pictures vs untreated and/or competitor.*
- *Contact Technical Service Manager as they may want to see what you are seeing and take pictures as well.*
- *If possible, get growers/retailers face to face with the products.*



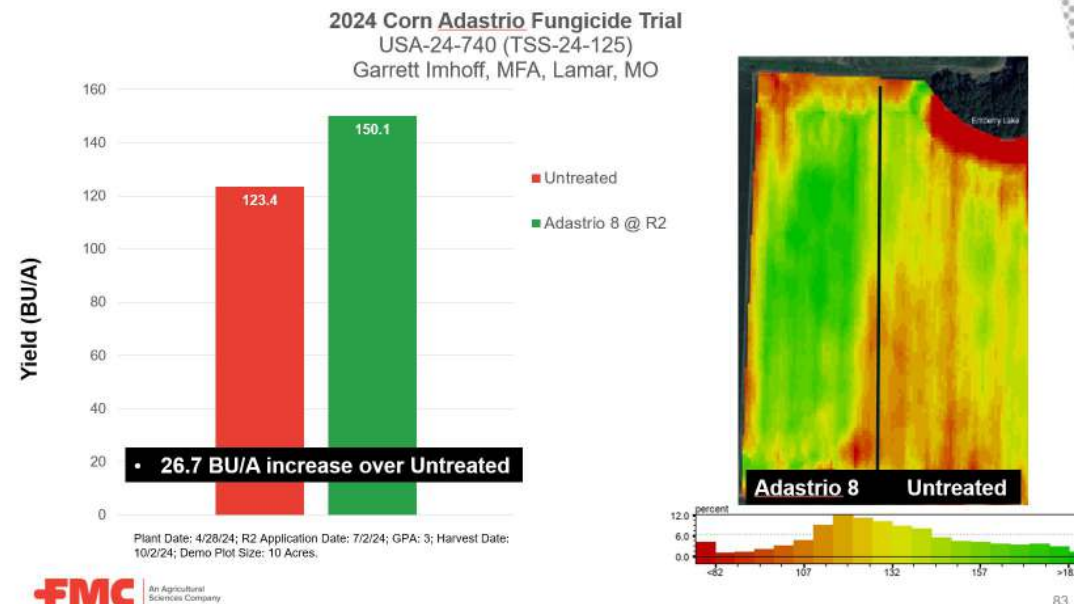
How to be Different, Set Yourself Apart: *Technical Service Manager Perspective*

- *Text/email when and where trial was put out, plot plan, and location of trial.*
- *If possible, make yourself available to view trial with them.*



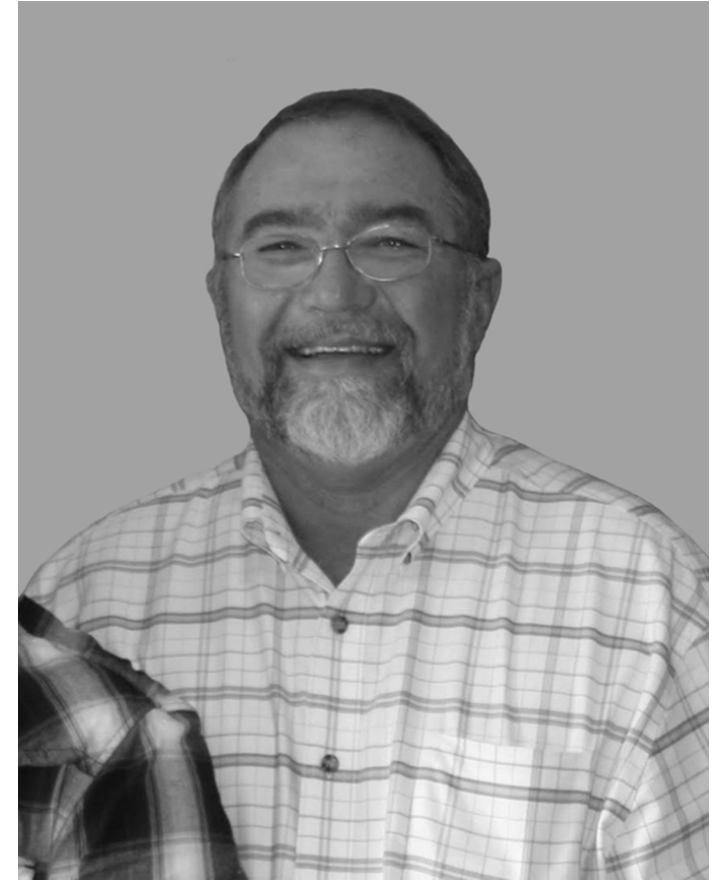
How to be Different, Set Yourself Apart: *Technical Service Manager Perspective*

- *Conducting large plot demo trials (~20 acres) are very helpful as product launches are conducted.*
- *Working with crop consultant that finds grower to conduct demo is ideal.*
- *Often times, if crop consultant can ensure the product is applied correctly, the Technical Service Manager/Sales Rep can come and make evaluations.*
- *May need crop consultant to help get yield from demo trial.*



How to be Different, Set Yourself Apart: *Technical Service Manager Perspective*

- *Crop Consultants or CRO's that are involved with professional organizations and have good relationships with other crop consultants are sought after to do demo trials.*
- *Often time spread the word about the trial, they carry a lot of credibility.*
- *Loarn Bucl, Kansas crop consultant, was a perfect example for doing demo trials.*
- *If Loarn said it worked, people believed it.*



How to be Different, Set Yourself Apart: *Technical Service Manager Perspective*

- *If have place and time, holding a Field Day can be very helpful.*



How to be Different, Set Yourself Apart:

Technical Service Manager Perspective

- *Appreciate a Summary Table of the data and very short explanation of what you see in the data.*
- *Helps to give a reference on what the data is showing.*

FMC-Steward cn Xyway fungicide USA 25-001, KRV-Topeka, T2, 2025		July18bel		July24bel		July31bel		lowAUDPC		pushpct		h2o		twt		yld	
Level of	N	Mean	Std Dev	Mean	Std Dev	Mean	Std Dev	Mean	Std Dev	Mean	Std Dev	Mean	Std Dev	Mean	Std Dev	Mean	Std Dev
1	check	32.8	9.4	37.5	0.0	67.2	9.4	577.5	49.9	71.3	6.3	18.4	0.4	54.5	0.4	235.6	17.7
2	Xyway LFR 15.2 fl oz/A 2x2	25.8	14.0	32.8	9.4	39.1	17.9	427.8	141.9	78.8	4.8	18.3	0.3	54.8	0.5	232.3	20.0
3	Xyway LFR 15.2 fl oz/A 2x2, Veltyma (7 oz) @ R3	21.1	11.8	23.5	9.4	39.1	17.9	352.8	154.7	23.8	14.4	21.2	0.3	53.3	0.7	247.1	18.8
4	Xyway LFR 15.2 fl oz/A 2x2, Adastrio (8 oz @R3)	28.2	10.8	28.2	10.8	50.0	27.5	442.5	194.9	46.3	4.8	20.0	0.4	54.3	0.5	236.2	27.1
5	Adastrio (8 fl oz/A)@R1	16.5	4.7	18.8	0.0	32.8	9.4	286.5	31.3	33.8	14.9	19.7	0.7	54.4	0.6	246.1	24.6
	CV	36.8		23.5		29.8		24.7		17.7		1.93		0.58		2.86	
	PR>F	0.170		0.010		0.028		0.019		<0.0001		<0.0001		0.0002		0.032	
	LSD (0.05)	NS		10.2		20.9		158.8		13.9		0.6		0.5		10.6	

How to be Different, Set Yourself Apart: *Technical Service Manager Perspective*

- *If you notice anything unusual or irregular about a formulation, please share that.*
- *If stored in cold area and then didn't mix well or if stored in the cab of a truck and it behaved differently, please pass along notes.*

Temetry® LFR® 9.5 fl oz/A in Begin® (left jar) and 10-34-0 (right jar)
24 hours after mixing.

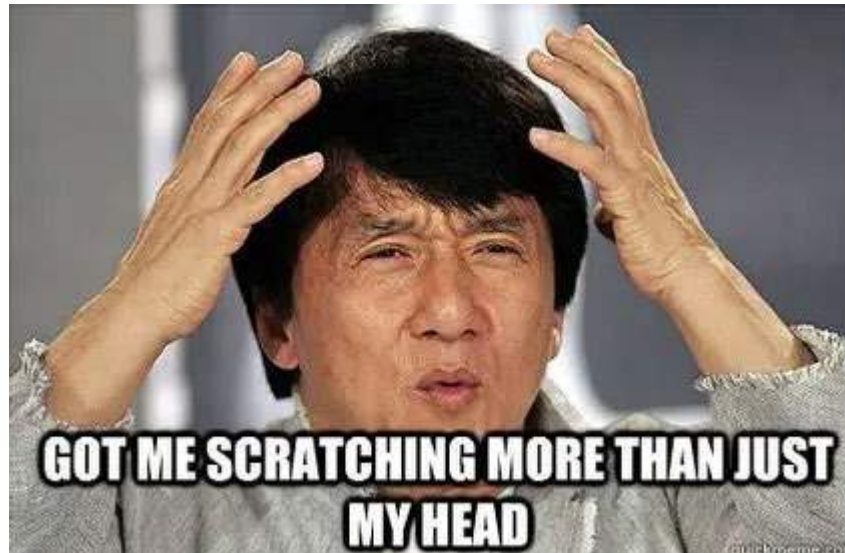


Improper mix order
No product shaking
No agitation

Proper mix order
Product shaken
Light agitation

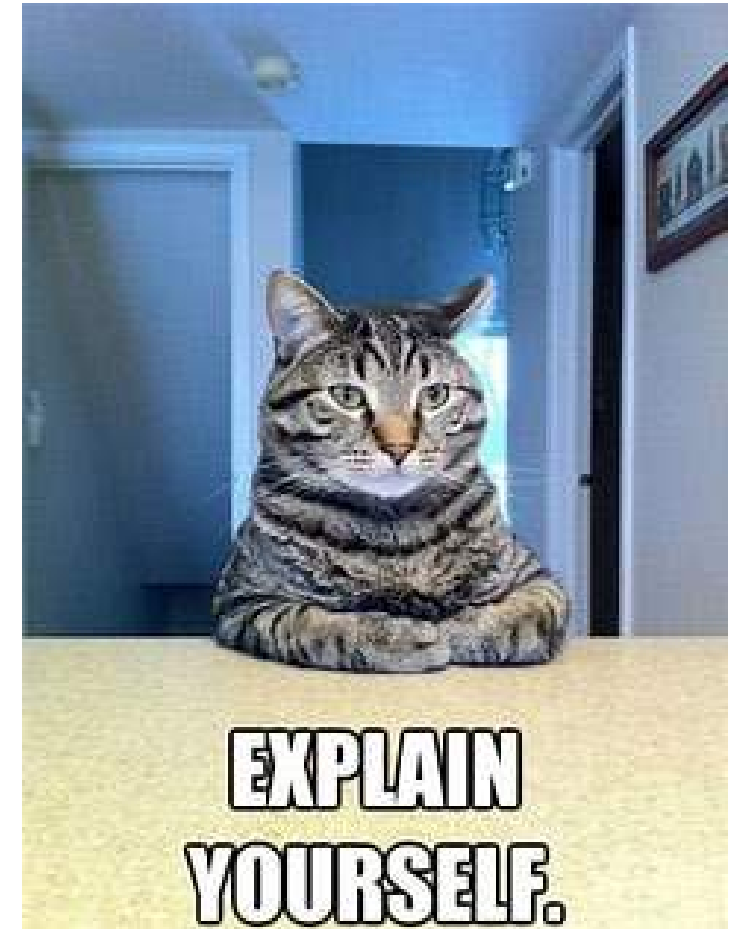
How to be Different, Set Yourself Apart: *Technical Service Manager Perspective*

- *If the Untreated Check is yielding more than the treatments, possibly explain why this might be happening.*



How to be Different, Set Yourself Apart: *Technical Service Manager Perspective*

- *If the Untreated Check has “Phyto or Crop Response”, please explain.*
- *This will stop a trial from being entered or used.*



How to be Different, Set Yourself Apart: *Technical Service Manager Perspective*

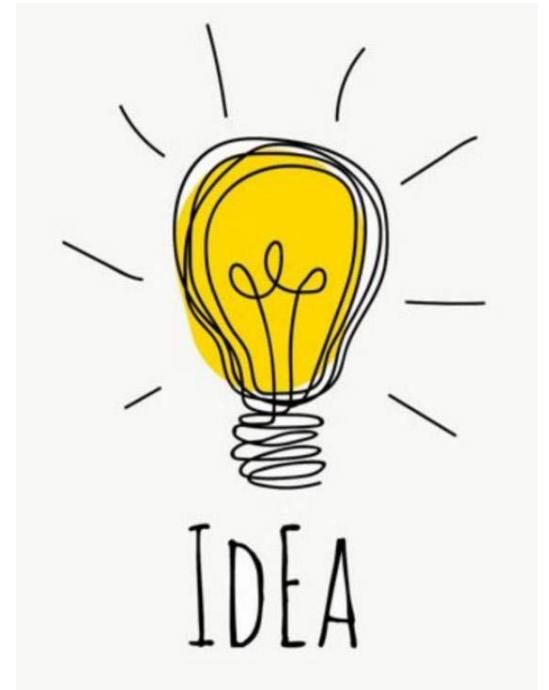
- *If you notice other benefits resulting from product, that is, makes leaf shiny, certain beneficial insects remain, controls a disease when an insecticide, mixes very easily, etc.*
- *Let Technical Service Manager know ASAP.*



How to be Different, Set Yourself Apart:

Technical Service Manager Perspective

- *If you have insight for another trial or pest or other thoughts, please share.*
- *Don't wait until end of trial or season.*



How to be Different, Set Yourself Apart: *Technical Service Manager Perspective*

- *The fewer the files the better.*
- *Like to have all data in one file, if possible.*
- *If several trials are being conducted, please don't send all in one file, as it will have to be separated out.*



How to be Different, Set Yourself Apart: *Technical Service Manager Perspective*

- *Like to have My Protocol Number in the title of the Trial or somewhere in the report.*

USA-26-723

How to be Different, Set Yourself Apart: *Technical Service Manager Perspective*

- *If you know early that there has been a problem with the trial, let us know.*
- *Possibly could modify the trial or put in another location.*



How to be Different, Set Yourself Apart: *Technical Service Manager Perspective*

- *Timely reports are helpful in making decisions and also securing funding for trials in the future.*
- *If I go to data summary meeting without any data or update, won't get favorable look for future funding.*



Differences Between Research & Development Manager versus Technical Service Manager

- If you take one thing from my presentation today, just remember Technical Service Managers are “Cool” and Research & Development Managers are a little “Nerdy”!

