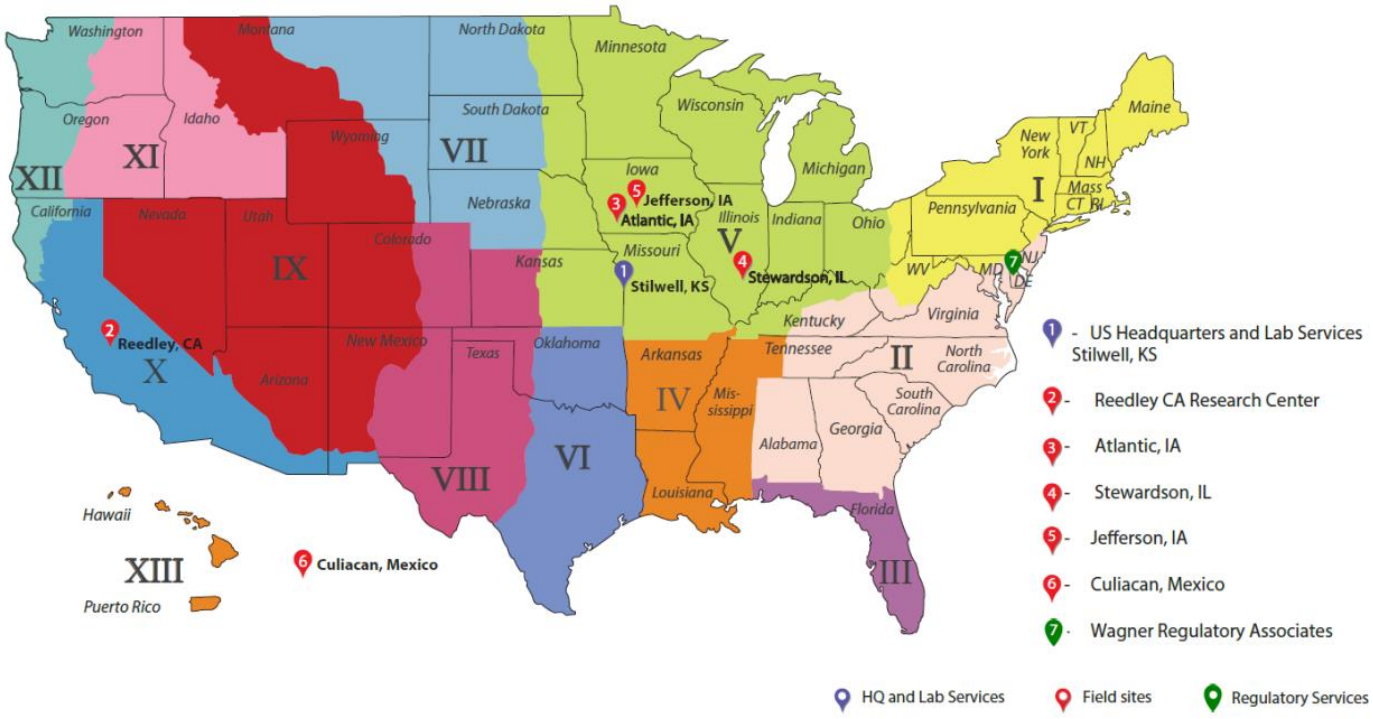
SynTech™ Research Group

Worldwide agricultural product R&D, registration, and market support services.

- Environmental Chemistry (GLP) - Lab & Field
- Primary Screens (GEP) - Lab, Greenhouse & Field
- Efficacy Trials (GEP) - Greenhouse, Field
- Seed/Traits GM & Conventional - Greenhouse, Field
- Regulatory Services - advice, submissions, support
- Study Directorship, Project/Program management
- Animal Samples (GLP & Non-GLP)
- Bee Ecotoxicology (GLP) - Lab, Field
- Protocol & Program Design
- Quality Assurance

For further information visit syntechresearch.com or email enquiries@syntechresearch.com

North America Operations



Contents

Analytical Laboratory

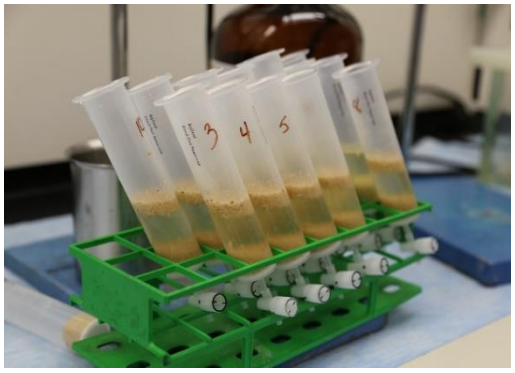
SynTech Research Laboratory Services, LLC
17745 Metcalf Ave., Stilwell, KS 66085
Lead By: Dr. Walter "Van" Vandaveer – Office: 913-378-0998 ext. 158
walter.vandaveer@syntechresearch.com

Walter "Van" Vandaveer - Analytical Chemistry Manager – PhD in analytical chemistry, over 16 years of chemistry experience in Crop Protection Chemicals.

SynTech Research has assembled an experienced team of residue scientists striving to complete your project on time with high quality GLP standards. Utilizing our 7 state-of-the-art triple quad LC mass spectrometers (AB Sciex and Thermo Fisher). SynTech Research offers the combination of instrumentation, experience, knowledge, communication and flexibility to provide project deliverables to meet a broad range of analytical needs. SynTech Research conducts its work under U.S. EPA/OECD GLP guidelines.

Sample homogenization can be provided for all types of crop and soil samples. A working kitchen is available for residue reduction studies in prepared foods. SynTech Research has nearly 7000 sq. ft. of temperature monitored freezer space. All necessary USDA/APHIS-issued import permits are available or can be obtained for any type of crop/matrix importation to the USA, including restricted import material permits for rice and sugarcane. SynTech Research also holds a USDA PPQ 525 soil permit for restricted soils.

Analytical Team Members:	**Sean Moore** – 20+ yrs. in Residue Analytical Chemistry – Team Leader **Michael Finley** – 5+ yrs. in Residue Analytical Chemistry – Team Leader **Laboratory Team,** 6 analytical chemists, experience ranging from 2-20+ yrs. **Katie Stone** – 16 yrs. in Sample Processing Management – Team Leader **Jennifer Shepherd** – 26 yrs. experience; Analytical Report Writer **Farah Rahimi** – 6+ yrs. experience; Quality Control Reviewer
Specialized Areas of Research:	Method development and validation. Method refinement for crops, processed commodities, animal tissues, animal feeds, water and pollinator matrices. Independent laboratory validation (ILV). Storage stability. Soil dissipation. Field volatility and spray drift measurement. Operator Exposure studies (Transferable Turf Residue & Dislodgeable Foliar Residues).
Types of services performed:	Trace residue analysis



Study Management – Stilwell, Kansas

SynTech Research
17745 Metcalf Ave. Stilwell, KS. 66085
Lead By: Denise Woodard – (913)221-4076
denise.woodard@syntechresearch.com


Denise Woodard


Chris Banman


Jaime Brungardt


Leah Fischer

Knowledge: SynTech Research Study Directors have a combined 65+ years of experience in the agriculture industry. The Study Directors have a wide variety of past experience from field and analytical to technical writing and project management. We work with a wide variety of crops including fruits, vegetables and grains

Study Types: Manage various residue and environmental field studies such as Processed Food/Feed, Magnitude of Residue, Import Tolerance, Field Accumulation in Rotational Crops, Animal Feeding, Pollinator, Dislodgeable Foliar Residue, Storage Stability, Soil Dissipation and Post-Harvest.

What We Do: Study Management Team offers valuable input and recommendations to the Sponsor relating to field phase design / agricultural management practices. Prepare detailed study protocols following appropriate guidelines.

Coordinate with field cooperators during the study conduct and monitor sample processing and analyses. Ensure that all work is being conducted under strict adherence to GLP Standards.

Provide the necessary technical direction to the various field cooperators and laboratory personnel in order to assure quality work and timely completion of the study.

Prepare final study reports at the conclusion of studies for Sponsors suitable for submission to the appropriate regulatory agency. Incorporate field work as well as analytical and processing data into final study reports. Interpret data based on various environmental factors/field conditions/maintenance practices/analytical challenges.

Guidance: EPA Residue Chemistry Test Guidelines, OCSPP Series 860
EPA GLPs 40 CFR Part 160
OECD Guidelines for the Test of Chemicals, 500 Series
SANCO 7525/VI/95 – rev 10.3
NAFTA Guidance DIR98-02 and DIR2010-05
USEPA/PMRA Joint Guidance Doc. SPN2017-02

Trial Locations: U.S., Canada, Mexico, Central America, South America, SE Asia, Asia Pacific

SynTech Research Regulatory

Wagner Regulatory Associates
7217 Lancaster Pike, Suite A
Hockessin, DE 19707
Director – Phillip Cassidy – Cell: (440) 479 5123
phillip.cassidy@syntechresearch.com

Phillip Cassidy – has over 30 years of experience in the Agrochemical Industry. He has 28 years of experience with oversight of animal and plant metabolism, environmental fate, residue chemistry, analytical, mammalian toxicology, microbiology, and compound synthesis. He worked in Washington, DC for 5 years conducting registration work on behalf of clients. Phillip has a firm understanding of registration and the studies required for data submission.

SynTech Research Regulatory (SRR) is a high-quality, cost-effective EPA registration consultants service established in 2001. SRR specialize in EPA and state registrations and licensing for pesticide & fertilizer products. SRR have successfully registered all types of products with EPA and states – conventional, biochemical, microbial, and antimicrobial.

SRR have achieved EPA approvals for crop residue tolerances and exemptions from tolerances for active ingredients and for inert ingredients such as adjuvants, surfactants and solvents.

Services for EPA Registrations

- Registration of products with EPA and States
- Formulated end use products
- Technical grade products for manufacturing use
- Amendments to product registrations
- Private label registrations
- Repack registrations
- FIFRA Section 25(b) products
- Pre-registration meetings with EPA
- Data compensation evaluations for generic post patent products
- Due diligence for company mergers and product acquisitions
- Preparation of generic product labeling and Safety Data Sheets
- Data generation at contract laboratories
- Petitions to EPA to approve inert ingredients
- Petitions to EPA to set tolerances (MRL) for crops
- Re-registration review by EPA
- Filing EPA establishment production reports
- Product label compliance review
- Project management

Services for State Registrations

- Initial registration for pesticide & fertilizer products
- Product registration renewal
- Sales reporting to states
- Label compliance review
- Submission of label updates to states
- Tonnage reports to States
- Client access to STARS® database

WHAT WE BELIEVE

Our mission is to provide high-quality, cost-effective consulting services that are responsive to the specific needs of each client. We understand every business is unique and we will tailor our regulatory services to suit you.

Reedley Research Center – EPA Crop Region 10

SynTech Research Group
23721 Clayton Ave Reedley, CA 93654
Site Leads: Mariana Krugner and Dr. Parsa Tehranchian – Office: 559 637-7070
mariana.krugner@syntechresearch.com & parsa.tehranchian@syntechresearch.com

Mariana Krugner – Reedley Research Center Manager/Business Development. Mariana had over 11 years of research experience on major crop pests and diseases at the University of California, and USDA / Agricultural Research Service in Parlier CA, before joining SynTech Research in 2011.

Dr. Parsa Tehranchian – Global Screening Unit Lead and Resistance Testing. Parsa received his PhD on weed science in Melbourne, Australia in 2012, followed by two post-doctoral research appointments at the University of Arkansas and the University of California-Davis before joining SynTech Research in 2018.

Specialized Areas of Research: Bioefficacy studies (laboratory, greenhouse, and field trials), GLP residue studies, Conventional & genetic modified (GM) seeds and traits, Terrestrial ecotoxicology

Trial Types:

Bioefficacy *in vivo* & *in vitro* studies

In vivo: Testing insecticides, fungicides, herbicides, plant growth regulators, fertilizers, biostimulants, harvest aids, and post-harvest products on wide range of crops including GMOs and treated seeds.

Seeds/Traits: Nutrient composition analysis, expressed trait protein analysis, agronomic characterization, seed bulk-up row and vegetable crops, regulated crop.

In vitro: Early-stage discovery screening on numbered compounds

GLP field studies

Processed food/feed, magnitude of residue, field accumulation in rotational crops, terrestrial/pollinator, dislodgeable foliar residue (DFR), turf transferable residue (TTR), nontarget organisms in the lab and field

Main crops at this location: Leafy, fruiting, and root vegetables, cucurbits, strawberry, row crops (e.g. grain crops and hemp), fruit and nut trees, grape vine varieties, ornamentals, and others available by request.

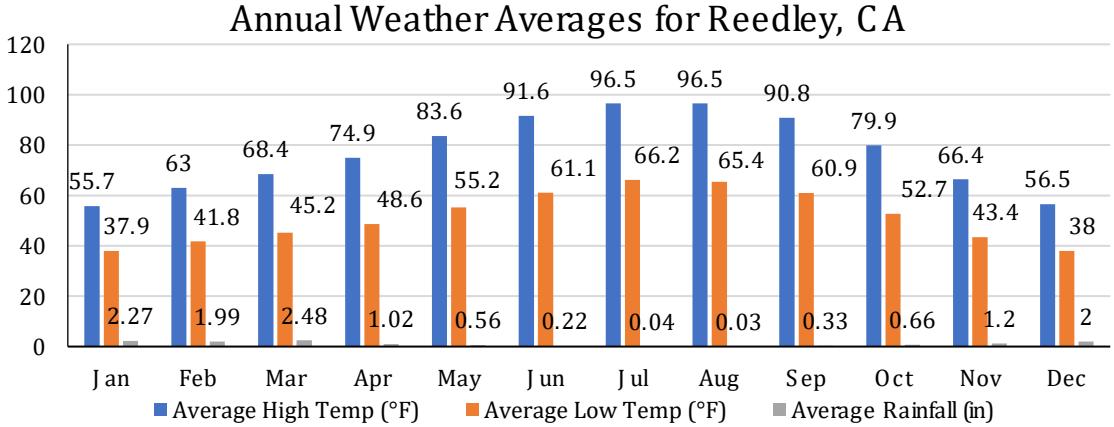
Diseases/Pests/Weeds: **Diseases:** Phytophthora sp., Fusarium sp., Alternaria sp., Botrytis cinerea, Rhizoctonia solani, Trichoderma harzianum, Penicilium sp., Aspergillus sp., Pseudomonas sp., Bacillus sp., etc.

Insects: Cabbage looper, soybean looper, beet armyworm, fall armyworm, southern armyworm, corn earworm, diamondback moth, codling moth, velvetbean caterpillar, spider mite spp., aphids spp., mealybugs, whitefly spp., etc.

Common weeds in the CA cropping systems – resistant weeds: Macro and micro plot studies for screening of winter and summer grass and broadleaf including rice weeds. Large collection of herbicide-resistant monocot (G1, G2, G9, G22, G10) & dicot (G2, G9, G22)

Soil Type: Sandy Clay Loam, 1.5% OM

Irrigation type: Drip tape, macro & micro sprinkler, furrow, and flood irrigation



www.ncdc.noaa.gov – Source for perception and weather averages

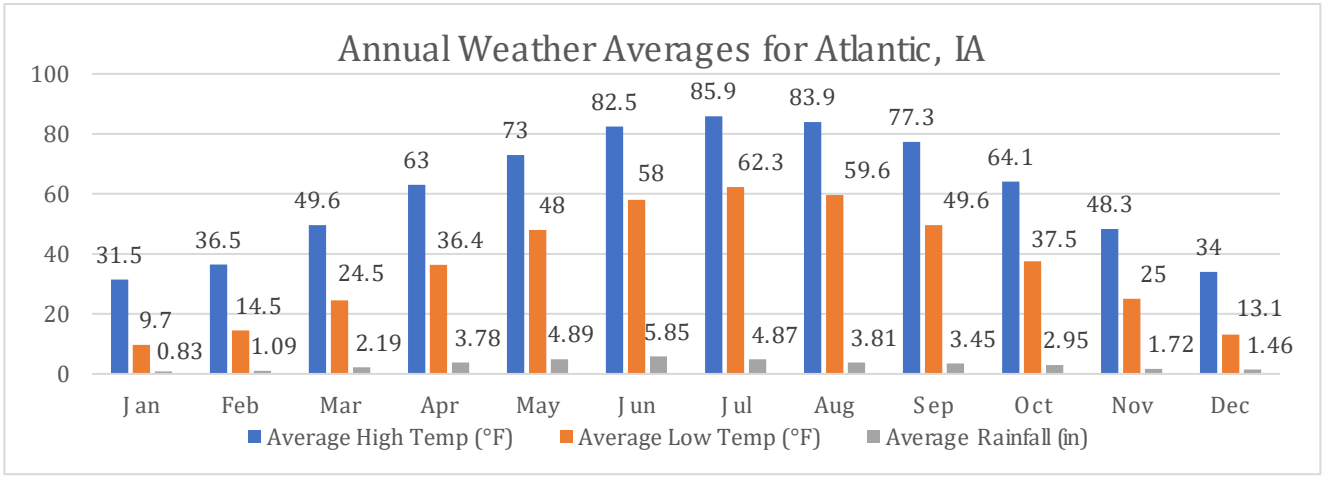
Iowa-A Field Station – EPA Crop Region 5

SynTech Research, Inc. 2633 300th Street Atlantic, IA 50022
Site Lead: Shane Andersen – Cell: 712-404-0074
shane.andersen@syntechresearch.com

Shane Andersen – over 13 years experience as a PFI, 18 years total experience in crop research and biotech.

John "Jack" Carroll – over 5 years experience in small plot field research.

Site Information:	Family-owned farms, isolation, and security for biotech work.
Specialized Areas of Research:	Biotech Seeds/Traits (USDA/EFSA/GLP), Regulated Nursery Work, Residue Studies.
Trial Types:	**Biotech Seeds/Traits -** Nutrient Composition Analysis, Expressed Trait Protein Analysis, Agronomic Characterization, Hybrid Nursery, Seed Bulk-Up, Processing, Regulated Crop Residue. **Bioefficacy -** Insecticide, herbicide, fungicide, seed treatments, biologicals. **GLP -** Processed Food/Feed, Magnitude of Residue/Decline, Field Accumulation in Rotational Crops, Terrestrial / Pollinator. **Plant growth regulator** evaluations **Biostimulants and Fertilizers**
Main crops at this location:	Corn, soybean, alfalfa, small grains, sunflower, grain sorghum, vegetables.
Diseases/Pests/Weeds:	**Diseases:** Grey leaf spot, common rust (Corn) **Pests:** Corn root worm **Weeds:** A variety of species common to upper Midwest
Soil Type:	Silty Clay Loam, Clay Loam, 3-4% OM



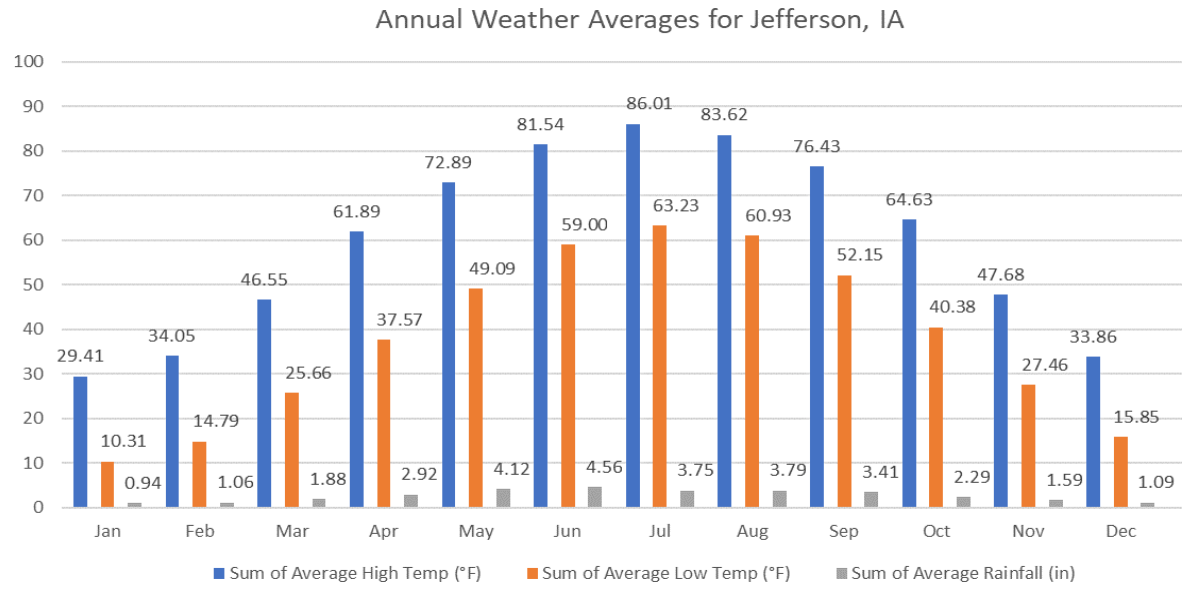
www.ncdc.noaa.gov – Source for precipitation and weather averages

Iowa-J Field Station – EPA Crop Region 5

SynTech Research, Inc.
1685 235th Street Jefferson, IA 50129
Site Lead - Brandon Muir – Cell: 515-480-9716
brandon.muir@syntechresearch.com

Brandon Muir – over 12 years of experience in ag research, including work with restricted material. Extensive experience in Crop Production in Central Iowa.

Site Information:	Family-owned farms, isolation for restricted biotech work. Other family-owned land options available in the area.
Trial Types:	**Biotech Seeds/Traits** – Nutrient Composition Analysis, Expressed Trait Protein Analysis, Agronomic Characterization, Hybrid Nursery, Seed Bulk-Up, Processing, Regulated Crop Residue. **Bioefficacy** - Insecticide, herbicide, fungicide, seed treatments, biologicals **GLP** - Processed Food/Feed, Magnitude of Residue, Field Accumulation in Rotational Crops, Terrestrial/Pollinator. **Plant growth regulator** evaluations **Biostimulants and Fertilizers**
Main crops at this location:	Corn, soybean, alfalfa, small grains, vegetables.
Diseases/Pests/Weeds:	**Diseases:** Grey leaf spot, Northern Corn Leaf Blight **Pests:** Corn root worm **Weeds:** A variety of species common to upper Midwest
Soil Type:	Nicollet Loam, Lester Loam, Clarion Loam, Webster Clay Loam, 2.7-4.3% OM



www.ncdc.noaa.gov – Source for precipitation and weather averages

Illinois Field Station – EPA Crop Region 5

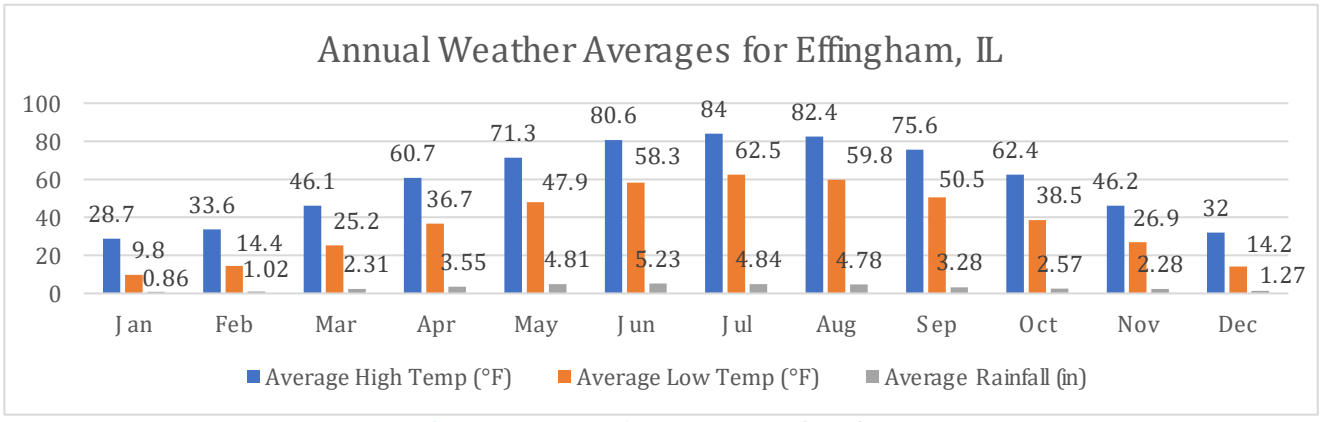
SynTech Research, Inc.
2911 E. 300 North Rd Stewardson, IL 62463
Site Lead: Gary Schultz – Cell: 217-690-1826
gary.schultz@syntechresearch.com

Gary Schultz – Over 30-years experience in crop research and production.

Sam Eident – Over 7-years experience in GLP and regulated field trials.

Jon Mette – 6-years experience in GLP, regulated field trials and bioefficacy.

Site Information:	Family-owned farm, isolation for biotech work, multiple sites >20 miles apart to conduct R&D trials
Trial Types:	**Biotech Seeds / Traits –** Nutrient Composition Analysis, Expressed Trait Protein Analysis, Agronomic Characterization, Hybrid Nursery, Seed Bulk-Up, Processing, Regulated Crop Residue. **Bioefficacy -** Insecticide, herbicide, fungicide, seed treatments, biologicals **GLP -** Processed Food/Feed, Magnitude of Residue, Field Accumulation in Rotational Crops, Terrestrial/Pollinator **Plant growth regulator** evaluations **Biostimulants and Fertilizers**
Main crops at this location:	Corn, soybean, alfalfa, small grains, sunflower, grain sorghum, vegetables
Diseases:	Gray Leaf Spot (Corn), Common Rust (Corn), Southern Rust (Corn), Stalk Rot (Corn) Phytophthora spp. (Soy)
Pests:	**Corn:** army worms, root worm; **Soy:** bean leaf beetles, aphids, stinkbugs
Weeds:	Lambsquarters, ragweed spp., morning glory spp., Marestail, resistant waterhemp, resistant cocklebur
Soil Type:	Silt Loams, 2-3% OM



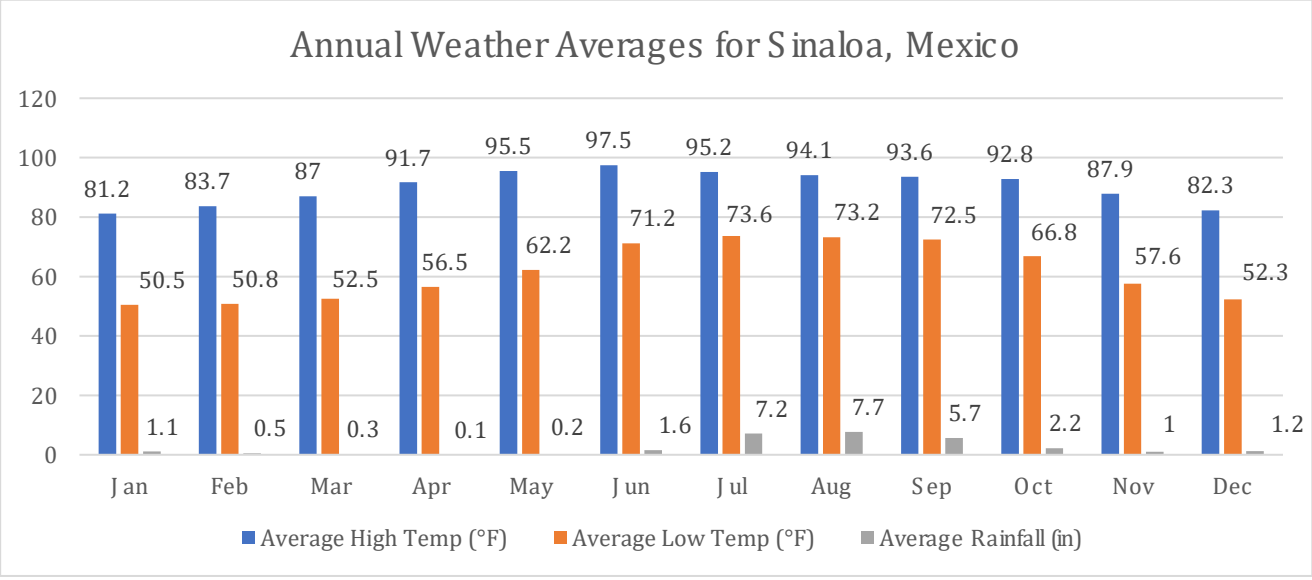
www.ncdc.noaa.gov – Source for precipitation and weather averages

Mexico Field Station

SynTech Research Mexico
Torre Eiffel #7088, Fracc. Las Torres Aeropuerto C.P. 80144.
Culiacán, Sinaloa - Mexico Site Lead: Alejandro Benitez
alejandro.benitez@syntechresearch.com

Alejandro Benitez – Specialist in horticulture. Alejandro joined SynTech Research in 2015

Specialized Areas of Research:	Seeds/Traits, Yield trials, GLP Crop Residue Studies, Bioefficacy, Terrestrial Ecotox, Plant Growth Regulators; Sample homogenization, storage, preparation, and shipping
Trial Types:	**Bioefficacy -** insecticide, herbicide, fungicide, seed treatments, biologicals, fertilizers, biostimulants, and plant growth regulators **GLP -** processed food/feed, magnitude of residue, field accumulation in rotational crops, terrestrial/pollinator **Seeds/Traits -** seed production for conventional row and vegetable crops
Main crops at this location:	Alfalfa, avocado, bean, carrot, cilantro, corn, cucumber, eggplant, lettuce, mango, mustardgreen, onion, orange, papaya, pea, peppers, potato, radish, sorghum, soybean, spinach, squashes, strawberry, sunflower, tomato, wheat.
Diseases/Pests/Weeds:	**Diseases:** Fusarium spp., Alternaria spp., bacterial canker, bacterial leaf spot, late blight, gray leaf spot, black dot, syringae leaf spot, downy mildew, tobacco mosaic virus, powdery mildew, leaf blight, gray mold, poinsettia mosaic virus. **Pests:** Whitefly spp., armyworm, thrips spp., red spider mite, American serpentine leaf miner, aphid spp., pickleworm, cutworm, pepper weevil, fall armyworm, corn earworm. **Weeds:** Palmer Amaranth, castorbean, wild sunflower, sedge spp., Johnsongrass.
Soil Type:	Clay, 1%OM



www.weatherbase.com – Source for precipitation and weather averages

SynTech™

Research Group

Research to Registration

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