

MIRC Update 2023

**Washington Mint Convention
December 5, 2023
Yakima, WA**



Research & Regulatory Update

- Pesticide regulatory
- IR-4
- Pesticides progress
- Research program
- MIRC committees



Pesticide Regulatory



The Regulatory Picture

- Mega lawsuit
 - EPA being sued for not complying – Required Endangered Species Consultation
 - Numerous pesticides named in suit
- EPA has choice
 - Vacate the use of all pesticides
 - Conduct review and consultation for every pesticide (past, present, future)
 - Implement strategies/mitigations to reduce or eliminate impact on non-target species
- Vulnerable Species Pilot Project
- Herbicide Strategy
- More to come



EPA Vulnerable Species Pilot Project

- Intent:
 - Identify and implement mitigation measures to protect vulnerable species
 - Group assessments and mitigations
- Issues:
 - Broad assumptions
 - General approach
 - Not considering science
 - Prior to effects determinations
 - Prior to consultations
- EPA issued update November 2023
- Further updates (final strategy?) – Sometime 2024



White Bluffs Bladderpod



EPA Herbicide Strategy

“...will have significant impact on future regulation.”

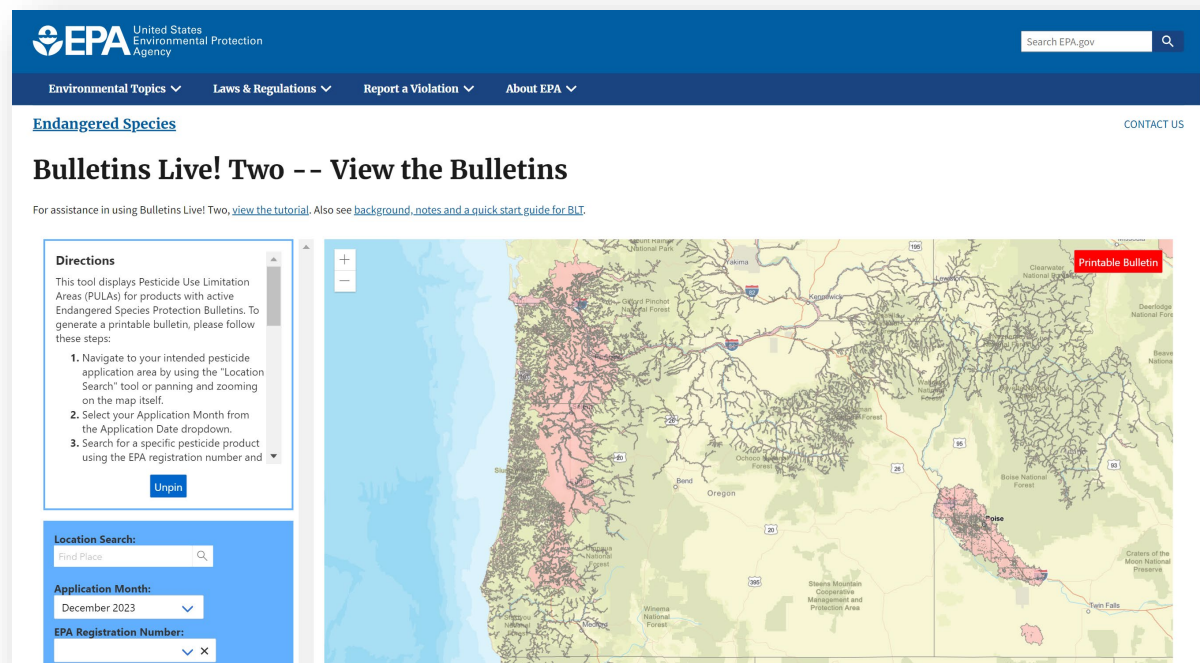
- Scope: All agriculture use patterns, listed plants in US, listed species that depend on plants
- Intent: Provide protections for 900+ listed species plus critical habitat.
- Timeline: Finalize strategy in early 2024.
- Fundamental change to regulation
- Point system for mitigations
 - Specific to herbicide
 - Use pattern / scenario
 - Pesticide Use Limitation Area (PULA)
 - Specific to listed species



Bulletins Live! Two (BLT)

<https://www.epa.gov/endangered-species/bulletins-live-two-view-bulletins>

- Will be incorporated onto labels and **will be required**
- Begin sometime in 2024
- BLT is still incorporating mitigations
- Your responsibilities:
 - If BLT statement on label
 - Go to BLT website
 - Enter application & location
 - If PULA and/or mitigation required, then print Bulletin
 - Print within 6 months of application
 - Implement mitigations for application



The screenshot shows the EPA website interface for the 'Bulletins Live! Two' tool. The header includes the EPA logo and navigation links for Environmental Topics, Laws & Regulations, Report a Violation, and About EPA. The main content area is titled 'Bulletins Live! Two -- View the Bulletins' and includes a search bar and a 'Printable Bulletin' button. Below the title, there are instructions for using the tool, a 'Location Search' field, an 'Application Month' dropdown menu (set to December 2023), and an 'EPA Registration Number' field. A map of the Pacific Northwest region is displayed on the right side of the page, showing various geographical features and a red shaded area indicating a selected location.



IR-4 & Pesticide Updates



The IR-4 Project



- Food Use Workshop – September 2023
 - No 'A' priorities received
 - Spirotetramat (Movento)
 - Requested
 - Denied by Bayer at FUW / Placed on Hold
- New EPA requirements and regulations increases difficulty
 - More complicated process
 - More data and trials needed
 - Fewer a.i.'s coming out of pipeline
- Commodity Liaison Committee
 - Budget increase achieved - \$15M
 - Current strategy:
 - \$25M allocation
 - \$50M authorization in new farm bill
- Friends of IR-4 Coalition



IR-4 Mint Project Updates

- Tiafenacil
 - Residue trials in 2023
 - MIRC weeds group evaluating double-cut use pattern
- Fluroxypyr
 - Residue trials in 2023
 - Performance is good
 - Dormant /or/ split: dormant – early postemergent
- Broflanilide



IR-4 Mint Project Updates

- **Linuron (Linex)**

- Herbicide
- 2016 priority
- Signed and ready for submission – June 2023
- Cancelled priority without communication – August 2023
- Has to be re-prioritized to continue
- If supported, then project starts over

- **Pyridate (Tough)**

- 30-day PHI
- Submitted to EPA July 2023
- Potential label revisions in 2024



IR-4 Mint Project Updates

- Saflufenacil (Sharpen)
 - Submitted to EPA December 2022
 - Estimating possible Q3 2024 EPA decision
 - Dormant only
- Broflanilide (BASF)
 - Wireworms and soil-dwelling insects
 - New MOA for mint
 - Efficacy and residue data needed
 - BASF only supporting soil application at planting



IR-4 Mint Project Updates



- Fluazaindolizine (Salibro)
 - Corteva nematicide
 - Developmental stages
 - 2-year soil fate study
 - Performance data – MIRC
 - Idaho – Hafez 2020, 2021, 2022
 - Idaho – Hafez/Jemmett 2023
 - Residue data needed

Velum Prime (fluopyram)

- Nematicide from Bayer Crop Science
- Tolerance approved February 2023
 - CFR 180.661
 - Pepp/Spear Dried leaves: 0.8ppm
 - Pepp/Spear Fresh leaves: 0.6ppm
- Bayer has not published a final approved label yet
- Hopeful they finalize before 2024 season



Spartan (Between Cuttings)

- FMC Corp. herbicide (sulfentrazone)
- “Renovation application” = Between cuttings
 - 4.0 floz/acre after 1st cutting removed
 - Irrigation to activate
 - Pre-harvest interval – 55 days
- Delay in Section 3 label revision at EPA
 - No definite timeline on Section 3 from EPA
- State SLN requests (Far West & Midwest)
- Oregon & Idaho approved
- Working with FMC to get SLNs in other states



Research Program



MIRC Research – 2023

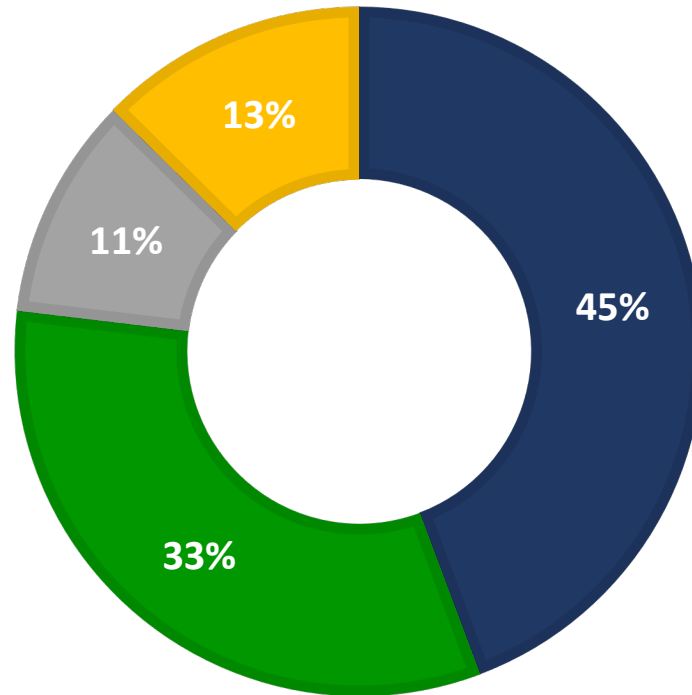
- Varietal improvement / Genetics
- Verticillium wilt
- Weeds – Multi-state
- Weeds – WSU
- Entomology
 - Pheromone disruption strategy
 - Mites: acaracides, resistance
- Nitrogen fertilizer in spearmint
- Distillation
- Novel uses – Sensory study



2023 MIRC Research Funding

2023 BREAKDOWN OF TOTAL FUNDED

■ Var. Impr. ■ IPM ■ Agrnmy / Sustbl ■ New Market



Varietal Improvement

- Visit UC Davis, Summer 2023
- Good progress, in good standing
- Objectives 1 – 3 as proposed
 1. Developing path to fertile peppermint clones
 2. Assess potential for BM ploidy variants
 3. Identify markers for decreased *vert.* sensitivity in BM
- Objective 4 – no cost extension approved
 - Characterize correlation between gene expression and oil yield & profile in different environments
 - Revised field protocols after pilot testing
 - Delayed sampling until harvest of 2024



Distillation Project

- Dr. Troy Peters, WSU
- January 2023 – Proposal discussions
- Characterize distillation methods and record oil production rates
 - Yield and quality
 - Thank you – RCB International for oil analysis
- Relate profitability and energy efficiency
 - Cost of distillation vs. return from total distilled oil
- Improve understanding of distillation and the variables that can affect profitability and oil quality.
- Potential basis for further useful research projects



Scent Effects on Sleep

Mentha spicata vs. other relaxing scents

- Treatments include
 - N.A. *Mentha spicata*
 - India *Mentha spicata*
 - Lavender
 - Jasmine
- Utilizing sleep lab at Wheeling University
- Evaluate participants sleep quality, activity level, physiological markers, and Profile of Moods States
- Thank you – Young Living and Callisons for providing materials



Scent Effects on Sleep

Mentha spicata vs. other relaxing scents

- *Mentha spicata*, both N.A. and Indian positively impacted:
 - Sleep condition
 - Sleep quality in the absence of increased sleep time
 - Mood and cognitive performance were enhanced
 - Enhanced alertness in later hours of the day
 - Less fatigue and greater vigor



Multi-state Weeds

- Tiafenacil (Reviton)
- Year 2 evaluating use between cuttings
- Dormant applications look good
- Double-cut timing – not consistent with last year
 - Crop injury – stunted growth
 - Midwest – too short of season
 - Farwest – Oregon substantial stunting
- Not sure if ISK will support the double-cut treatment use pattern



Nematode Research

- Dr. Saad Hafez
- Idaho Mint Commission funded 2023 project
 - Nematode Control in Mint with Salibro
 - Dr. Hafez with Jemmett Consulting and Research Farm
 - Micro-plots only (Parma R&E Center)
- Continue the evaluation of Salibro
- Important piece for pursuit of registration.



MIRC Committee Updates

- Risk Mitigation Committee – John Williams, RCB Intl. – Chair
 - Identifying action items to provide benefit to members
 - Possibly assist with universal regulatory and sustainability info requests
 - Provide a unified, accurate, and positive voice from mint industry
- Executive Committee
 - Jeff Johnson, Callisons – Chair
 - A.J. Todd, ADM-Mint – Vice chair
 - Mark Smith, Norwest – Secretary/Treasurer
- Scientific Affairs Committee
 - Eric Dowd, Mars - Chair





ADVANCEMINT

SUSTAINABLE AGRICULTURE AWARDS

- **Mars-Wrigley Sustainable Ag Grant Program**
- **Deadline for Submissions: December 15, 2023**



45TH ANNUAL

Information at:

usmintindustry.com

2024
Mint Industry
Research Council



**ANNUAL
MEETING**

San Diego



JANUARY 24-25, 2024

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