

Supporting Sustainable Agriculture



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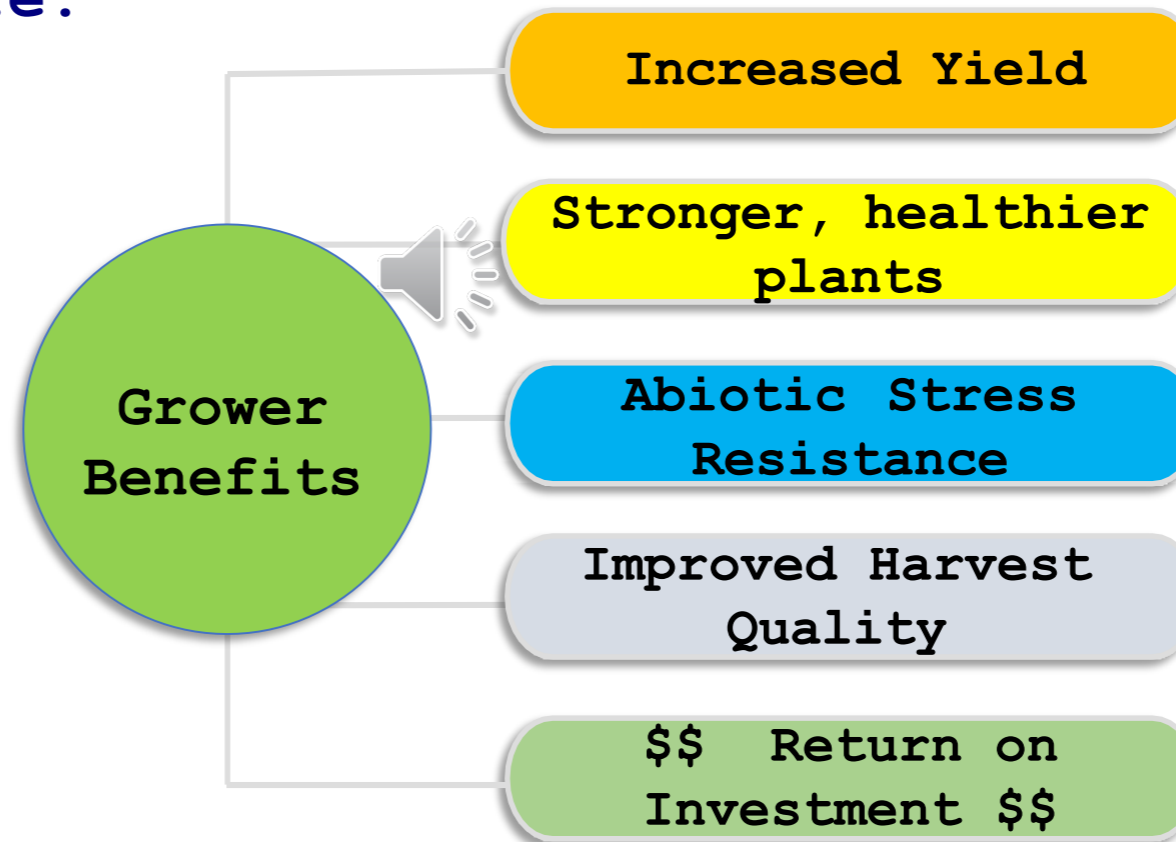
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Operations:

- HQ: Holly Springs, NC (outside of Research Triangle Park).
- Satellite offices: Seattle, WA (R&D lab), Spain, UK, Mexico, & Brazil.

Sustainable Agriculture:



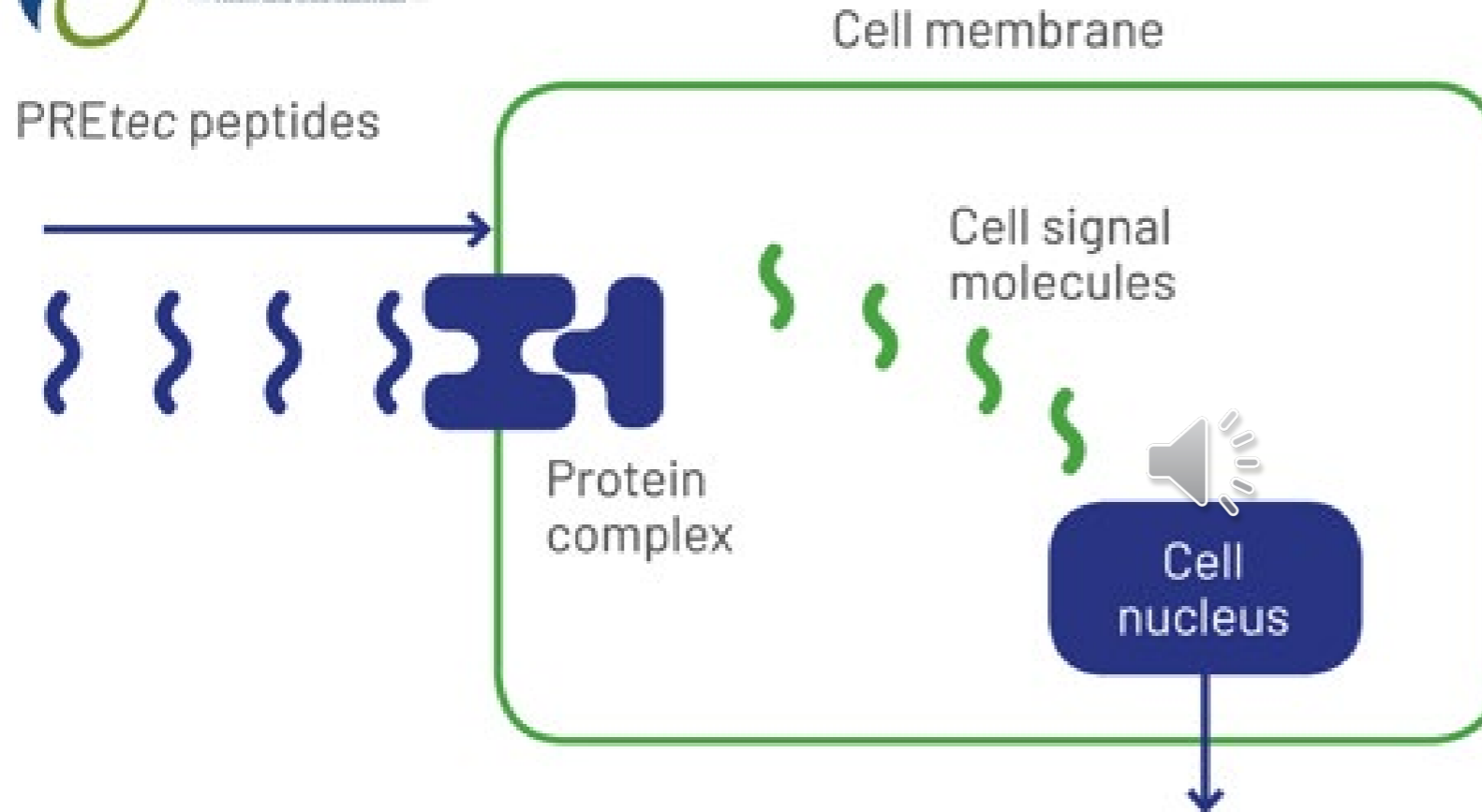
Harpins - peptide elicitors produced by plant pathogenic bacteria

- Harpina $\alpha\beta$ ~ 41kDa polypeptide formulated as 1% WDG.
- Launched in > 25 countries as biochemical pesticide or biostimulant / fertilizer.
- US Brands:    

Next Generation= PRETEC - 'Plant Response Elicitor Technology'

- ~ 2kDa Harpin-Derived Peptides, Biochemical Pesticides / EPA.
- PHC25279 - Fungal & Bacterial Pathogens.
- PHC68949 - Nematodes.
- Late State Development / Product Launch.





Late-Stage Products

PHC25279

- Broad-spectrum plant pathogen defense.
- Registered Brazil & USEPA.
- FRAC Code = BM-02



PHC68949

- Protection vs. nematode & drought.
- Under review Brazil & USEPA.

Elicitation of plant defense pathways / response.

- Systemic acquired resistance (SAR) → Not cidal, it has no direct activity on pathogens or pests.
- No residues... Peptides are Labile. No Crop Tolerance / MRL restrictions.



Product Profile

- Efficacy validated by years of field testing on annual & perennial crops.
- Novel MoA, option for reducing potential resistance issues.
- 0-day PHI, 4-hour REI
- Low Use Rates:
 - Seed Treatment = 30-90 µg/seed
 - Foliar = 35-140 g/Ha
- WDG Formulation:
 - 2+ years Shelf Life.
 - Compatible with Agrochemicals, Fertilizers, etc.
 - No special handling requirements.



PHC279 - Potato Late Blight / UK
2021 trial



Standard Program*



Untreated



Standard Program*
+ PHC25279**

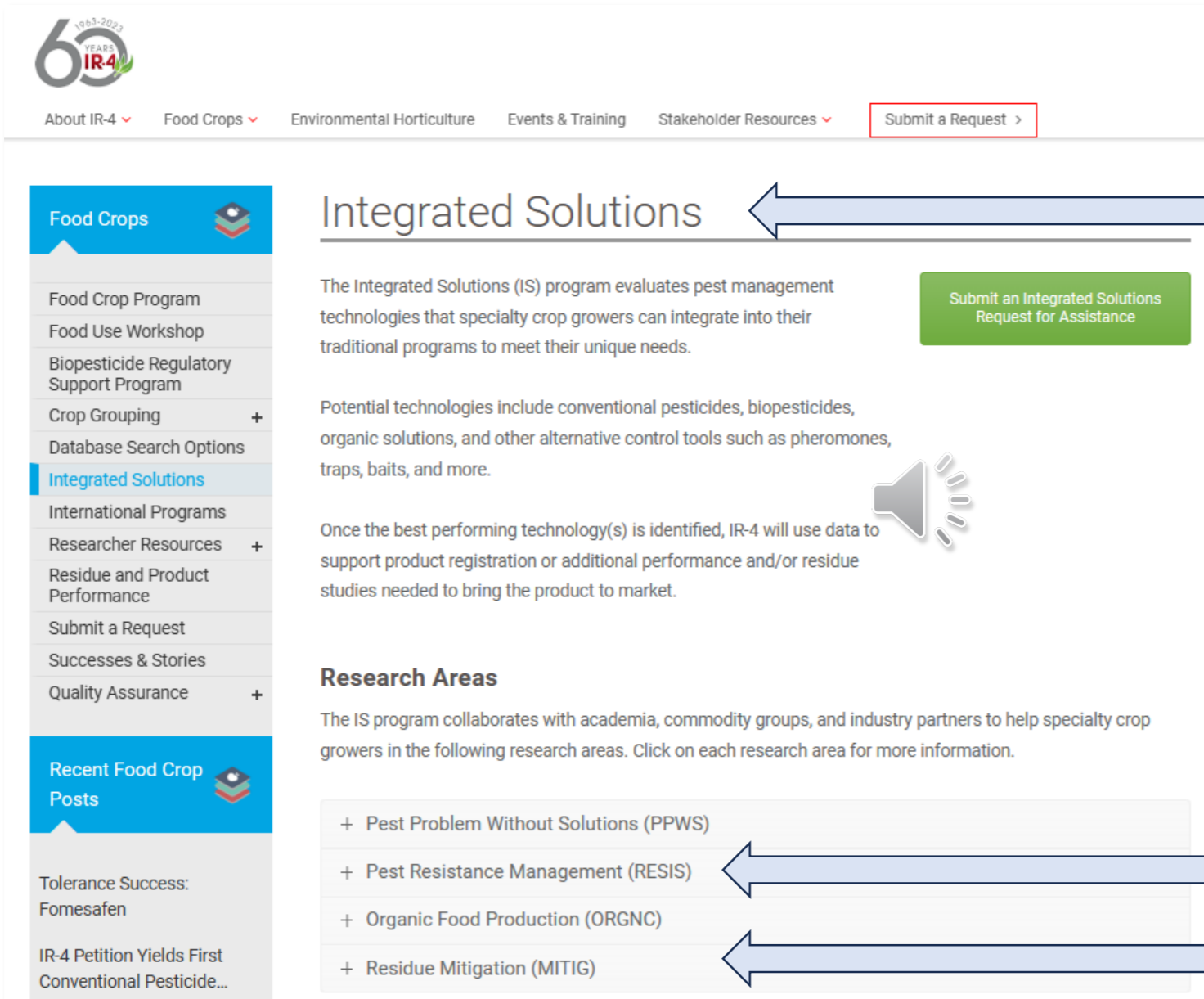


PHC25279** Solo

* Cymoxanil + Mancozeb at label rates / timings.

** PHC279 @ 140 g/ha, every 14 days from rosette.





1963-2023
60 YEARS
IR-4

About IR-4 ▾ Food Crops ▾ Environmental Horticulture Events & Training Stakeholder Resources ▾ [Submit a Request >](#)

Food Crops

- Food Crop Program
- Food Use Workshop
- Biopesticide Regulatory Support Program
- Crop Grouping +
- Database Search Options
- Integrated Solutions**
- International Programs
- Researcher Resources +
- Residue and Product Performance
- Submit a Request
- Successes & Stories
- Quality Assurance +

Recent Food Crop Posts

Tolerance Success: Fomesafen

IR-4 Petition Yields First Conventional Pesticide...

Integrated Solutions

The Integrated Solutions (IS) program evaluates pest management technologies that specialty crop growers can integrate into their traditional programs to meet their unique needs.

Potential technologies include conventional pesticides, biopesticides, organic solutions, and other alternative control tools such as pheromones, traps, baits, and more.

Once the best performing technology(s) is identified, IR-4 will use data to support product registration or additional performance and/or residue studies needed to bring the product to market.

[Submit an Integrated Solutions Request for Assistance](#)

Research Areas

The IS program collaborates with academia, commodity groups, and industry partners to help specialty crop growers in the following research areas. Click on each research area for more information.

- + Pest Problem Without Solutions (PPWS)
- + Pest Resistance Management (RESIS)
- + Organic Food Production (ORGNC)
- + Residue Mitigation (MITIG)

- e.g., PHC25279 FRAC BM-02.
- e.g., PHC68949 on Potato / Grapes.