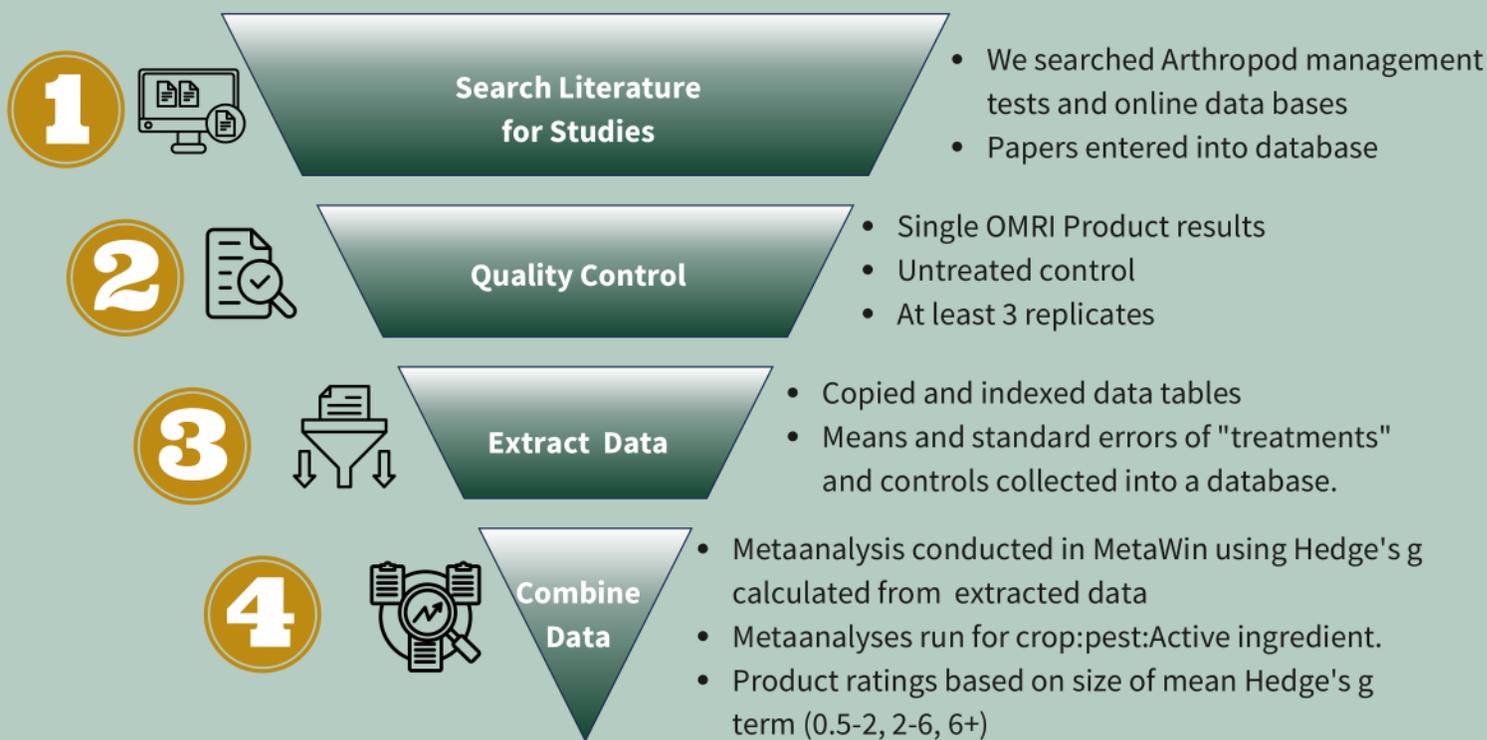




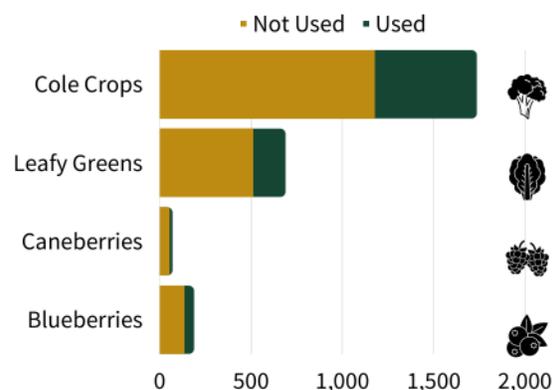
ORGANIC PESTICIDE EFFICACY TABLES: Pesticides should be the final step in an organic pest management plan. When selecting an insecticide or fungicide it is important to understand how they work and their relative efficacy on target pests. Entomologists and plant pathologists regularly evaluate plant protectants but often these studies are published in journals behind paywalls. Over the last year we have been evaluating 1000s of plant protectant studies to develop easy to read efficacy tables for growers and Pest Control Advisors. Here, we present an initial "efficacy" table derived from 100s of studies evaluating organic insecticides for common caterpillar pests of cabbage.

STUDY METHODS AND SOURCES

- We are using a quantitative "meta-analysis" approach to summarize efficacy work on insect and disease pests of brassica crops, leafy greens, blueberries, and caneberries.
- A Quantitative Meta-analysis involves combining data from multiple studies to draw overall conclusions to understand broader trends.



- Project began in Fall 2023
- We are nearing completion of steps 1-2 and data entry is ongoing.
- Cal Poly students have evaluated > 5000 studies!
- ~1000 of the papers evaluated so far have included usable data
- The figure (L) presents the relative number of papers found and used by target crop



CABBAGE WORM EFFICACY METANALYSIS



Active Ingredient	Product Examples	Diamond Back Moth*	Imported Cabbage Wm.	Cabbage Looper	Predators	Parasitoids	Pollinators
<i>Bt kurstaki</i>	Dipel, Javelin	++	+++	++	😊	😊	😊
<i>Bt aizawai</i>	Xentari, Agree	++	++	+++	😊	😊	😊
Spinosyn	Entrust	++	++	++	☠️	☠️☠️	☠️☠️
Azadirachtin	AzaGuard, Azatin	Ins.	Ins.	Ins.	☠️	☠️	☠️

*Diamondback moth data **do not reflect insecticide resistance in your area**. Check with your PCA or local extension specialist on current local resistance. Table generated on 07/30/2023.

Table Key:

For Pests: + Somewhat effective ++ Effective +++ Very effective Ins. Insufficient Data

For Beneficials: 😊 Mostly harmless ☠️ Can be harmful ☠️☠️ Often harmful

- Our initial summary focuses on Diamondback moth, Imported Cabbage Worm, and Cabbage looper.
- A beneficial insect friendliness guide is also included.
- This small table involves summarization of >200 pest management records!

Disclaimer: This table is for information purposes only and cannot replace guidance provided by a licensed Pest Control Advisor nor does it constitute a recommendation to apply pesticides. The efficacy of active ingredients and /or the status of EPA or CDFA pesticide label clearances may have changed since this publication was produced. Always check the label before making a pesticide application –*the label is the law!* For brevity, generic products are not listed, listed trade names are intended to aid in identification of products, and mention does not constitute or imply an endorsement or recommendation. For certified organic production: **always** check with your certifier **before** using any input for the first time. Cal Poly San Luis Obispo, the Cal Poly Corporation, and the Grimm Family Center for Organic Production and Research will not assume responsibility of any risks associated with the application of agrochemicals. The user of this publication shall assume such risks.

NEXT STEPS

- Complete entry, sorting, and summary of papers
- Develop tables for full pest complexes including factsheets on pests and key pesticide active ingredients
- Work with grower collaborators to improve accessibility and relevancy

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