

Implementing Lygus Management Strategies in Alfalfa Seed Production

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Our multi-state (Washington, Idaho, California), multi-institutional (WSU, UI, UC) research and extension team proposes conducted research and outreach to improve pollination services while simultaneously preserving and protecting key managed pollinators. Studies were initiated to increase the abundance of endemic pollinators. Crop protection research has reduced the risk imposed by Lygus bug feeding injury to high-value Western U.S. alfalfa seed grown as a non-food/non-feed crop. Our projects specifically addressed Goal 1 of the NIFA ARFP Research, Education, and Economic Action Plan by facilitating local and global food supply and security and Priority 1 of the Alfalfa and Forage Research Program, improving alfalfa forage and seed yield through better pest management. Specifically, pollinator safety has become the greatest barrier against registering reduced-risk pesticides on alfalfa produced for seed. Unfortunately, Lygus bugs, the key direct pest of alfalfa produced for seed reaches its greatest population abundance concurrent with alfalfa bloom when key managed and endemic pollinators are actively completing pollination services in fields of alfalfa produced for seed. By quantifying the pesticide exposure rates on beneficial pollinators we have successfully been granted emergency exemptions in Washington State. Our results will soon extrapolate to other states. Finally, we have disseminated our research results in a timely and multi-modal fashion to the appropriate relevant state-based and regional alfalfa seed grower groups.