Developing IPM strategies to address pest issues in urban environments and to protect the public's health from nuisance pests and the overuse of common household pesticides.[1]

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According to the U.S. Department of Agriculture (USDA), even though IPM is usually associated with agriculture, it is relevant in all areas where pests exist, including residential housing and other public areas. Despite the potential benefits of IPM, rates of adoption have been slow among farmers and the public, who rarely move beyond targeted pesticide applications. Although the overall use of pesticides in the U.S. has fluctuated in recent decades, the country still has a major market for pesticides and is one of the top four pesticide consumers globally. According to the U.S. Environmental Protection Agency in 2022, 75% of U.S. households used at least one pesticide product inside the home, and another study found 95% of 259 Northern California households stored at least one pesticide product. Yet, pesticide use and exposure in residential areas has been linked to adverse economic (e.g., costs associated with pesticide poisonings, costs to treat water), health (e.g., cancers, pregnancy complications, respiratory diseases), and environmental outcomes (e.g., water contamination, unintended toxic effects on other organisms).

Traditional IPM models have focused on pest management from an ecological perspective. Adoption is also critical to economic, health, and environmental well-being. Before these benefits can occur, consumers must be aware of IPM, interested in IPM, and willing to adopt IPM practices in their own homes. While the One Health Model currently doesn't mention IPM, that concept is effective in encouraging IPM adoption. However, many educators of IPM don't have the capacity to consider social and behavioral perspectives that amplify or attenuate consumer interest and purchasing patterns. Advancements in technology, communication, and consumer trends (e.g., increased awareness of environmental sustainability) that includes the social and behavioral perspectives of management, business, and sustainability will help further IPM adoption in a community that wants the benefits of IPM but don't know what it's called. To increase social acceptance of IPM through communication and education, it is important to first understand consumers' related knowledge, experiences, and behaviors.

Urban environments face unique pest issues that require tailored IPM strategies. Residents often have zero tolerance for pests and want to avoid pesticide exposure.

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Expanding IPM tools to address urban challenges protects public health and improves IPM Strategies in Public Housing. Results from a USDA-NIFA CPPM funded survey conducted in 2021, U.S. consumers indicated that most participants understood IPM but still applied pesticides at their residence themselves because that had done so successfully in the past and because they perceived their expertise to be sufficient. When deciding which pesticide products to purchase, participants considered ease of use, human safety, pet safety, and the environment, but when examining product labels, few looked for application or safety information. Consumers who did use professional pest control companies valued professional expertise, convenience, and safety

Objective 1: Increase program and funding efforts to offer additional education for housing providers, landlords, maintenance, and residents of multifamily housing on how to effectively and safely manage pests. Conduct and Coordinate Research that advances the science and adoption of IPM in the built environment. Promotion of "pest prevention by design" should be disseminated to architects and builders so that pest problems can be prevented using sound building practices that would not foster termite infestation, mice, rats, roaches and bats making their way into building structures through poor building practices.

Objective 2: Promote research and extension activities that look at, review and investigate relationships among medical problems, pests and pesticide exposure. The continued use of household products by American consumers has grown in the past four years and some of these home and garden products are known to lead some of the insecticide and herbicide resistance. Research and outreach activities of health effects of the most common household pests like bed bugs, cockroaches, mice, rats and public health pests on human and companion animal health.

Objective 3: Cooperate with HUD, EPA, CDC, US Fish and Wildlife and other agencies in implementing safer and more effective pest management policies that can be shared with their employees and stakeholders. Engage with the State Lead Agencies, the Pesticide Safety Education Educators, and state/local public health officials to engage in a dialogue that will foster a better understanding for what is IPM and how they can benefit from using IPM in their home or work settings.

Objective 4: Work with the Federal IPM Coordinating Committee to create a variety of ways to engage with state, county, municipal and local groups to engage in IPM Conversations as they relate to each sector. Using this network to create resources through funding initiatives and community engagement to promote IPM through local community networks to help sustain efforts for generations to come.

Evaluation metrics: 1) number of funded IPM proposals that address the following objectives: i) Human health; ii) Environmental impacts or externalities; 2) number of

new or revived outreach programs working with household consumers in underserved areas, support schools, nursing homes and child care centers on adopting IPM; 3 & 4) Increased networking across Federal, State, Tribal and Local Agencies on the implications of public health awareness for all pest and pesticide management.