

What the Quail?

INTEGRATED PEST MANAGEMENT AT WESTPORT COMMONS FARM



Japanese quail hatching from incubated eggs. The eggs were purchased from a farm in El Dorado, Kan.

The use of trap-crops to attract common pests has been widely studied in researchers of integrated pest management systems (see sidebar). The method lacks efficiency since it calls for repeated planting of trap crop after it is eaten by targeted pest populations. In addition, it calls for the use of pesticides and insecticides.

At Westport Commons Farm, Cultivate KC is exploring the use of the domesticated Japanese quail (*Coturnix japonica*) with trap-crops to eliminate the use of pesticide and the need to replant with the added benefit of providing meat, eggs, and fertility to a small organic farm operation.

The quail will be housed in 5'x5' pens on the edges of the cash-crop area. The trap-crop will be planted within each pen. Pests lured to the trap-crop will be eaten by the quail. While others have experimented with the use of chickens in similar applications, the quail have the advantage of being small, less destructive, and less prone to eat vegetation. Quail can be housed continuously with the trap-crop, eliminating the need for pesticides or to replant crops damaged by pests or larger fowl. This system will be more profitable by reducing inputs, time in the field, and by maximizing production of cash-crops and other marketable products.

PROJECT OBJECTIVES:

1. Successfully control the spread and impact of common pest insects using quail and trap-crops.
2. Produce marketable cash crops adjacent to and protected by the trap-crop quail system.
3. Produce marketable quail eggs, and meat.
4. Educate hundreds of visitors to the farm on sustainable farming methods.
5. Keep data on all parts of study to aid in development of best practices & to assess profitability of the system.

WHAT IS TRAP CROPPING?

Just like most animals do, insects have a preference for certain types of foods. Given a choice, insects will likely select their preferred food.

If no option is given, they will be happy feeding on the type of plants that are available.

Trap cropping means using very attractive plants growing in the perimeter of the garden or cucurbit field. These attractive plants pull the pest away from the cash crop.

Insects congregated on trap crop plants can be more easily killed with insecticides or by other means. Research conducted by the Lincoln University Integrated Pest Management program since 2011 indicates that Blue Hubbard squash is an excellent trap crop plant since it is very attractive to squash bugs and to squash vine borer.

In addition, Blue Hubbard squash is also attractive to spotted and striped cucumber beetles, so farmers and gardeners can actually control four insect pests using Blue Hubbard as a trap crop.

Pinero, Jaime. 2017. Trap cropping: A simple, effective, and affordable Integrated Pest Management strategy to control squash bugs and squash vine borers [Online]. Available at https://ipm.missouri.edu/MPG/2017/3/Trap_cropping/