PRECISE CONTROL OF RODENTS IN ALFALA FIELDS USING DRONES

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Rodent Damage in Alfalfa Fields

- Rodents can cause severe damage in alfalfa.
- These damages can accumulate with time, affecting crop yield in harvests as well as the longevity of the crop.
- Rodent damage to pipes also inhibits the opportunity to use advanced irrigation systems like SDI (Subsoil Drip Irrigation).

Rodent Damage in Alfalfa Fields

In Israel, the majority of damage to alfalfa is caused by three-four rodent species:

- Levant Voles Microtus guentheri
- Tristram's Jird Meriones tristrami
- Macedonian Mouse Mus macedonicus
- Mole Rat Spalax ehrenbergi (*)

Rodent Control - Current Options

- Barn Owls
- Deep Cultivation
- Flooding
- Poison

Rodent Control
Current Options

The Kestrel Method

- Researchers found that falcons search for UV marks in their paths in the field.
- We tried to search for those signs in the field using ambient light (with a spectrophotometer) and at night (using UV lights), but with little success.
- We assumed you need a strong UV light source (like the sun) and very specific UV filters to imitate the Kestrels' eye.
- But while examining the method, we discovered…


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The Problem

- Crop damage
- Prevention of SDI (Subsoil Drip Irrigation)
- extensive water loss and soil erosion
- secondary damage to other animals
- The current techniques are not efficient

The Solution

- PRECISION POISONING BY DRONE
- Crop Scanning using high resolution cameras built on drones
- Sophisticated autonomous software analysis to indicate rodents activity area
- “Gaya” - autonomous, innovative smart system for rodent control using drones

The Benefits

- Reduces the poison amount by 95-97%!!!
- Enables SDI (subsoil drip irrigation) solutions, reduces amount of water .
- Adds another growing season and reduces crop loss.
- Cost effective.
- More environmental
- Efficient, autonomous, and simple monitoring systems using drones.
- Can be done when the problem is minor before any irreversible damage.
- Enlarges the yield

HOW IT WORKS?

Play Video

California Pilot

- To prove yield enlargement, Alta will conduct field trials in California, utilizing our rodent control methods

- This will confirm the application of SDI irrigation in Alfalfa fields

- And monitor and control rodent population

Our Clients

ALTA

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Thank you

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