Russell IPM
INTEGRATED PEST MANAGEMENT

The Soil SOLUTION

0% RESIDUE

REcharge

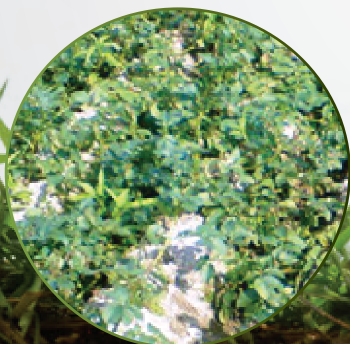
The sustainable foundation
for integrated crop pest management.

REcharge
for tomatoes

For more vigorous plant growth without pesticides, **Russell IPM** has developed **ReCharge**. **ReCharge** is a powerhouse of microbes that trigger the immunity of plants. It is more then a soil enhancer, combining the crop-boosting effects of the specially developed micro-fauna with the natural benefit of preventing pupation underground so pestilent insects don't emerge. Providing soil protection and stimulating crops from invasive pests and diseases, **ReCharge** revitalizes the soil by:

- Reintroducing beneficial microbes
- Stimulating plants' physiological vigour
- Staging symbiotic interactions amongst plants
- Triggering the plant's own defence system
- Making the soil less welcoming to pupating insect pests

Target Crops:



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Enhancing and protecting plants from the bottom up.

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Application

For the management of invasive diseases and pests' larvae and to revitalise the soil, apply 2-3 kg of ReCharge per hectare to the root area of plants or trees, or mix ReCharge with the irrigation system to apply during leaf and plant watering.

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An unmatched **bio-**rational soil enhancer

REcharge
for cucumber

Mode of Action

In a field trial in Iraq, Recharge was applied against nematode infestation and soil fungi in greenhouses. The damages appeared in the advanced stages of plant life and at the beginning of production. During all stages of plantation the soil was not treated with any fungicide, insecticide or Nematicide. Plants were examined periodically any injury was recorded during all growth stages. After roots examination, it was found that the entire plant system had developed well, giving a good branching, and had not suffered from any noted injuries. As shown in the pictures, a very good growth was observed in the cucumber plants not treated with Nematicide, fungicide or insecticide, but only Recharge.

Conclusions

Recharge improves cucumber’s capacity to cope with insect pest damage. Applying Recharge results in cucumbers that are helathy and free from whitefly, cutworms, aphids and mealybugs. The treatment also provides the plant with the ability to defend itself against fungal diseases, including downey and powdery mildew, leaf spot, leaf rot, fusarium wilt, root rot and blight.

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REcharge
for roses

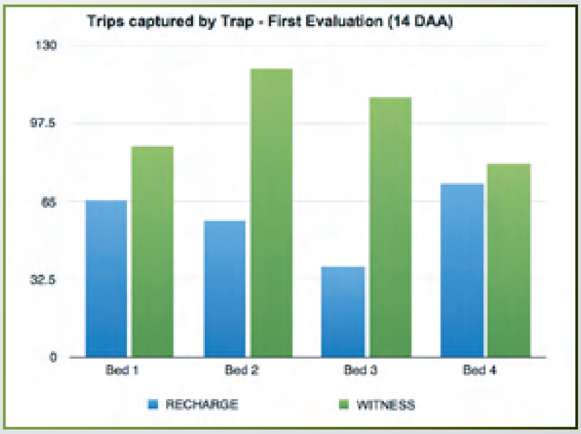
Mode of Action

Roses are succeptible to a variety of bacterial diseases and pests, notably thrips, aphids and two-spotted mite. Thrips that feed on the flowers are attracted by the bright colours, especially white, blue and yellow, and settle into objects of these colours trying to feed. Thrips reduce the value of the flowers directly, deforming and discolouring the petals and leaves. In this trial, Recharge was combined with Russell's scientifically-enhanced sticky roll traps, especially developed for the control of thrips.

Rose leaf affected by mildew

Results –Western flower Thrips in Rose

- The trial was conducted in four rows of roses in Ecuador.
- Application rate was 4 gm / liter of water.
- Population was monitored using Russell's blue sticky traps.
- After applying **Recharge** in roses, the population for western flower thrips, which are a key rose pest, decreased by 40% 14 days after application. In addition, the overall health of the roses was improved, with no other pests or diseases observed.



REcharge

For sugar beet

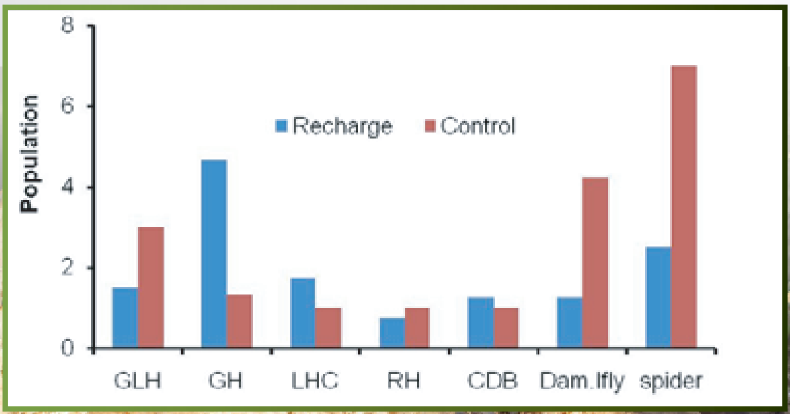
An unmatched **bio-** rational soil enhancer

Mode of Action

The main objective of the trial was to let the producer evaluate the product without any interference. He used Recharge in 1 ha of beet and considered a nearby beet plot as control to see the difference. Both plots have been cropped identically with the only difference being pesticide use. Beet was sown on November 1, 2015 for the first plot and on November 2 for the second plot (control).

Using Recharge in sugar beet improved soil components and provided strength to the crop, which stabilized the yield and increased sucrose content. The qualitative effect on beet shape and size, the total weight of beet production and sucrose content showed a better yield and an increase in grower's income by 12.77%.

The graph below Indicates that Recharge decreases damsel fly and spider populations in sugar beet.
Disease was not observed in any experimental plot.



Recharge re-establishes the soil microbial fauna to provide a healthy environment that encourages growth of natural enemies, reducing the amount of pesticide required. Farmers have reported a 30-50% reduction in pesticide usage.

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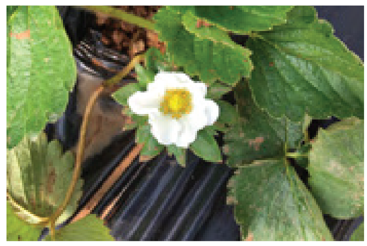
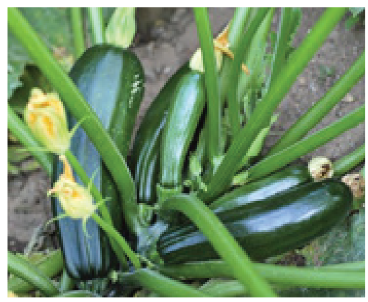
REcharge
Trials & results

Recharge was used for thrips control as part of an Integrated Pest Management programme in Jordan, 2016 season.

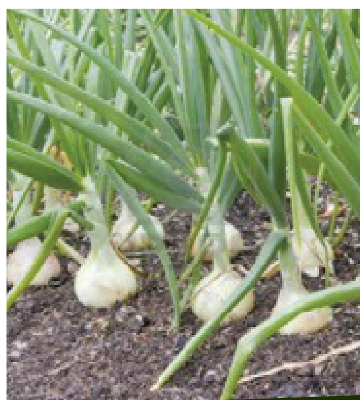


Recharge was used for powdery mildew control in Iraq, 2016 season.



A field experiment: Recharge was used for controlling bacterial blight and sheath blight in rice. Recharge was also used as a bio-pesticide against Rhizoctonia solani in experiments in Bangladesh, 2016 season.

Recharge was used for thrips control as part of an Integrated Pest Management programme in Tanzania, 2015 season.



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Russell IPM is one of the leading manufacturers of insect pheromones and control products. We specialise in the development of safe, smart and sustainable monitoring and control systems for agricultural and horticultural crop protection and pest management.

Our full product range works to protect all stages of the food supply chain through systems that support environmentally sensitive pest management and reduce the use of pesticides.

Summary of benefits

- **Recharge** triggers plants' natural defence systems.
- **Recharge** stimulates the biosynthesis of the plant, increasing its vigour and yield.
- **Recharge** forms a symbiotic layer of micro-oganisms around the root zone - improving plants' water and nutrient uptake, as well as providing a protective barrier against nematode and pathogenic fungi.

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