

The use of the fungus *Metarhizium acridum* in locust control

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Bands of the Australian plague locust visible from an aircraft *from* Hunter McCulloch & Spurgin 2008

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Treatment with *Metarhizium*

- Treatment with the naturally occurring fungus, *Metarhizium acridum*
- *acridum*: specific to locusts and grasshoppers
- The fungus is formulated as a ULV or an SC (as the BASF commercial product **Green Guard**[®])
- Used as part of normal control operations by the Australian Plague Locust Commission
- Since the year 2000: more than 100,000 ha treated with **Green Guard**

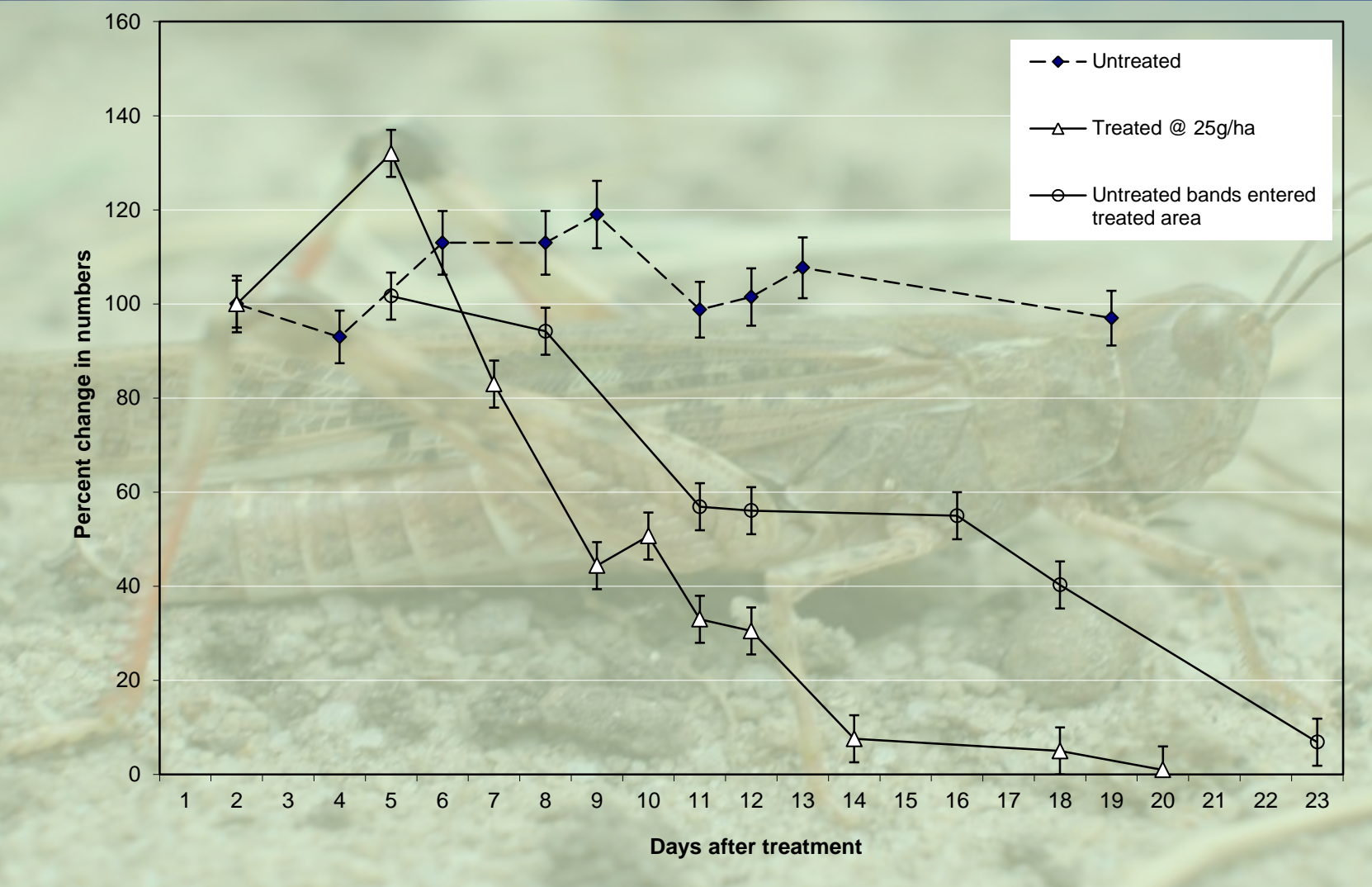


**Application is by aircraft fitted with micronairs
for spraying ULV formulations**

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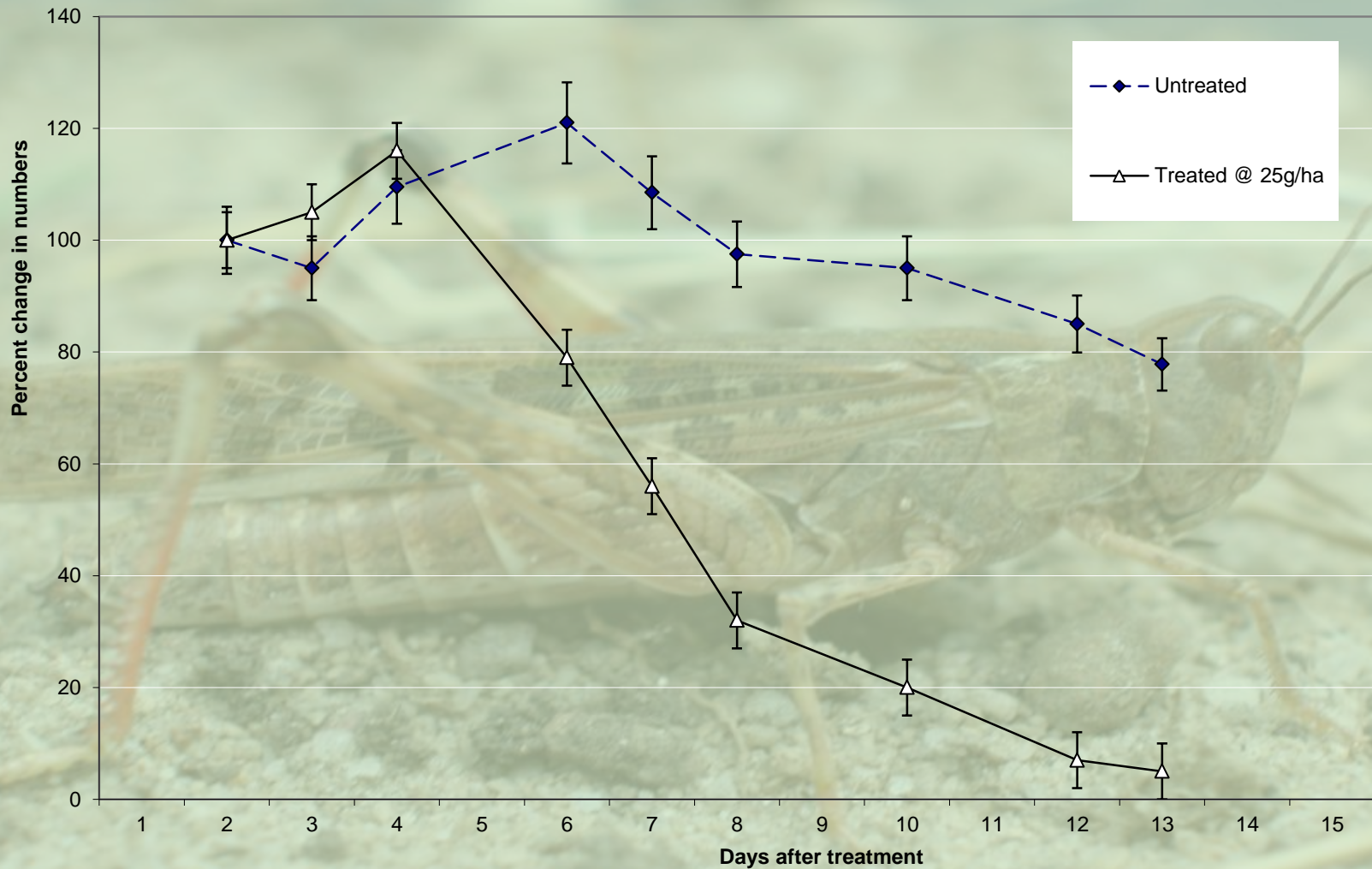


Decline in bands treated with *Metarhizium* in spring



Decline in bands treated with *Metarhizium* in summer in Western Queensland

(Maximum temperatures 35-42°C)



Damage caused by a band of Migratory locusts



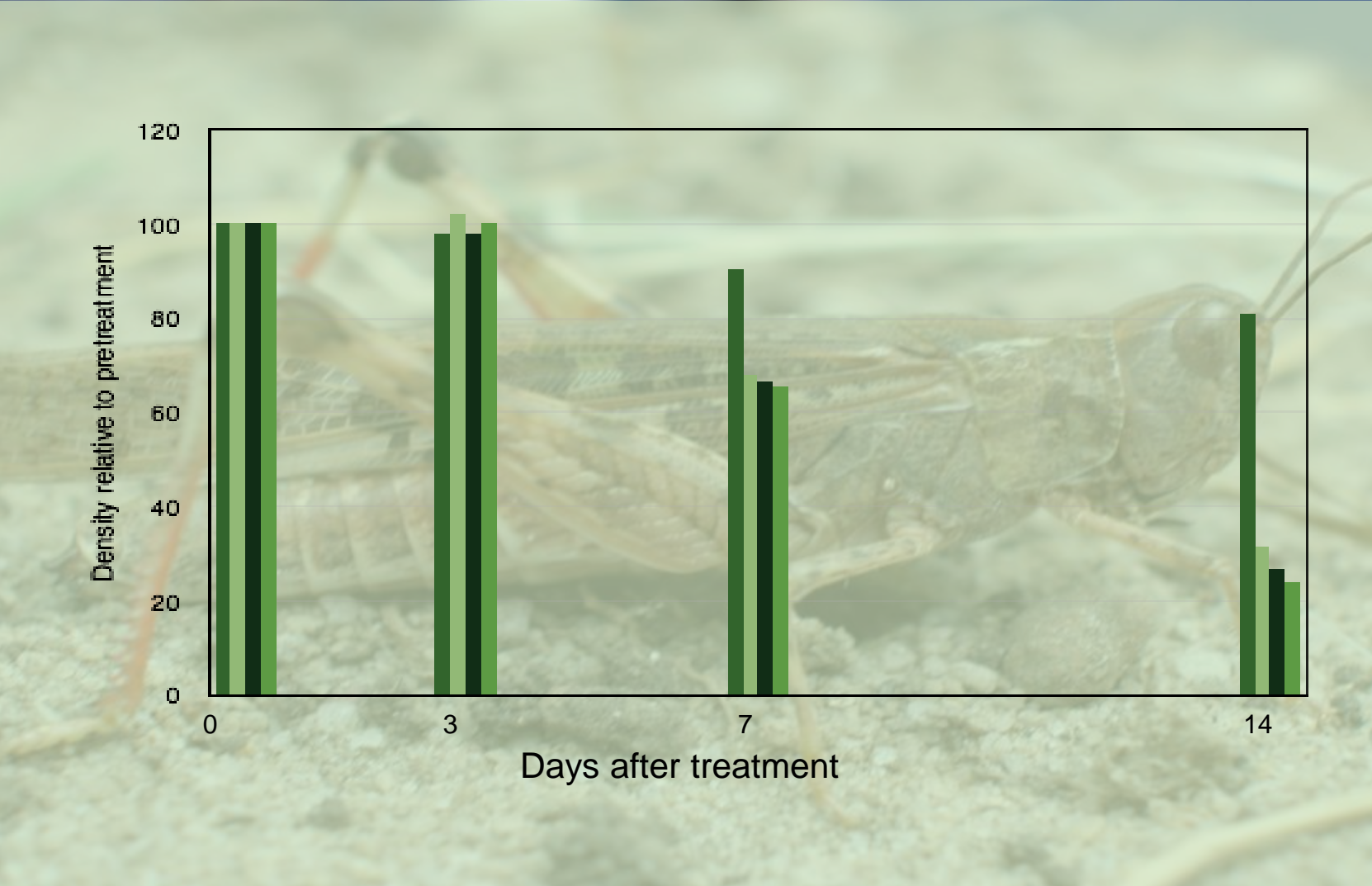
Use of *Metarhizium* as part of IPM preventive management of locusts

- Preventive management begins with treatment early in outbreaks
- Early treatment = control at a measured pace that includes biopesticides
- **Main areas where Green Guard *Metarhizium* is used:**
 - Properties in Western Queensland that produce organic beef for export to Asia
 - Environmentally sensitive areas such as near rivers, in reserves or national parks
 - Where there are rare or endangered species

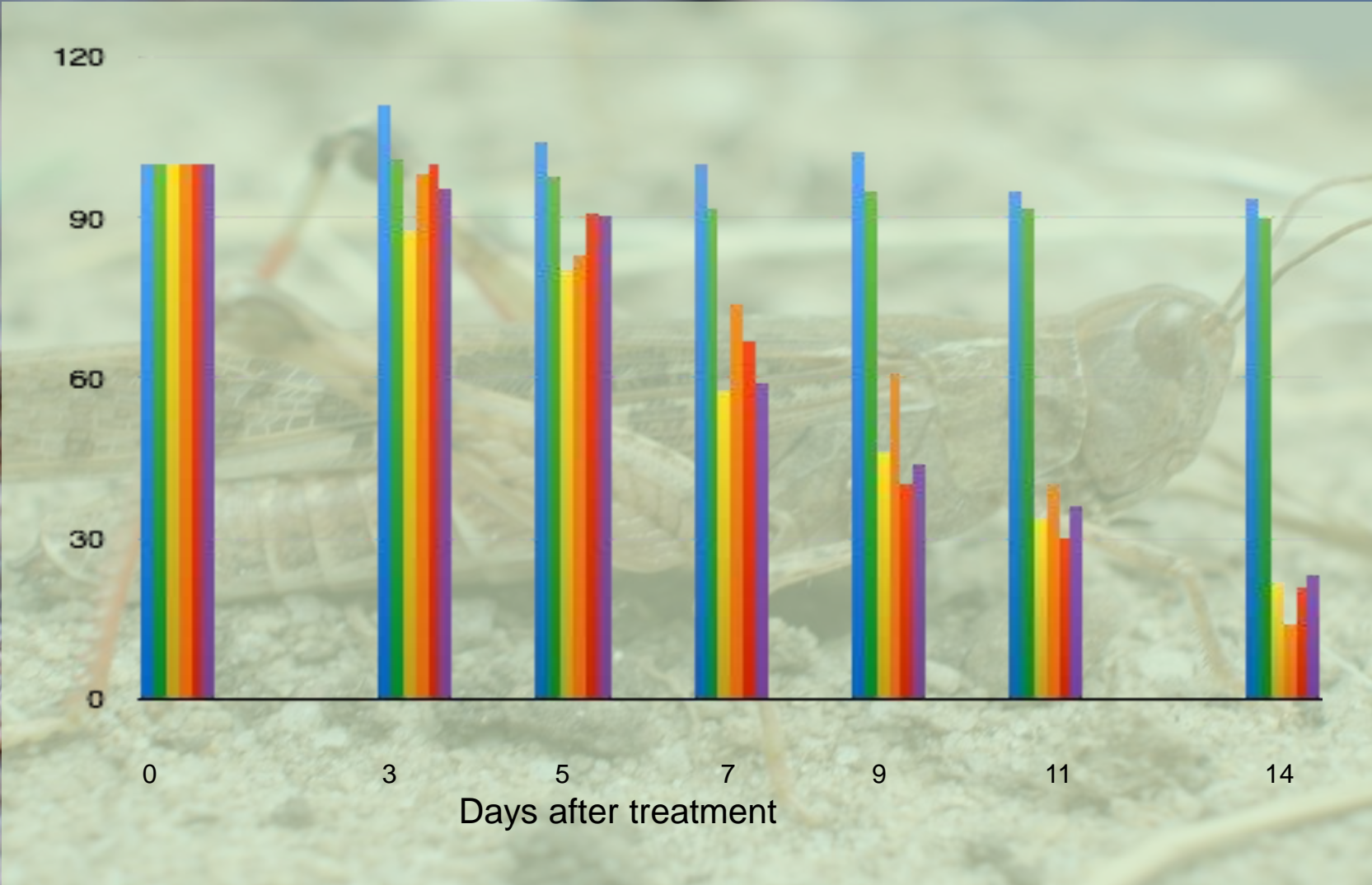




Decline in locust bands treated with *Metarhizium* in Uzbekistan 2010



Decline in locust bands treated with *Metarhizium* in Georgia during 2010



Green Guard: Normally treat locust bands

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GREEN GUARD[®] SC PREMIUM BIOLOGICAL INSECTICIDE

ACTIVE CONSTITUENT: 100g/L METARHIZIUM ANISOPLIAE VAR. ACRIDUM SPORES

For the Biological Control of Locusts and Grasshoppers

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