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## Problem

- There is a growing demand for biological control agents, e.g. for the expansion of organic farming.
- For conservation and release of cells to the soil, suitable formulation techniques are missing.



## Solution

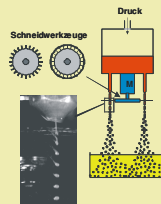
- encapsulation of microbials with additives (e.g. nutrients) enhances growth and sporulation in soil  
⇒ release from granules or powder  
or
- incorporation of encapsulated microbials in seed coatings with additives ⇒ release from seed coating

## A suitable formulation improves crucial pesticide characteristics:



- improved handling
- protection from extreme environmental conditions (temperature, soil humidity, UV, antagonists,...)
- extended shelf life
- controlled release at a definite time at the desired location  
(controlled by environmental conditions and material properties)
- enhanced efficacy

## Encapsulation technology



- JetCutter Technology
- large-scale production of monodisperse microcapsules of variable size
- manifold applications are possible

## Applications

The authors, the BBA and KWS Saat AG are about to bring the technology into practice within the frame of a joint research project.

### nematophagous fungi

- *Hirsutella rhossiliensis*
- high efficiency: >80 % reduction of infection
- host spectrum: *Heterodera*, *Meloidogyne*, *Globodera*, ...

### bacterial antagonists

- *Pseudomonas* sp.
- high survival rate
- host spectrum: *Aphanomyces*, *Pythium*,...



## Cooperation offer

We offer our know-how in encapsulation technology for formulation of microbials in trustful cooperation.  
contact: biocare@t-online.de