

Root Juice™: Precision Restoration of the Soil Microbial Rhizosphere Ecosystem

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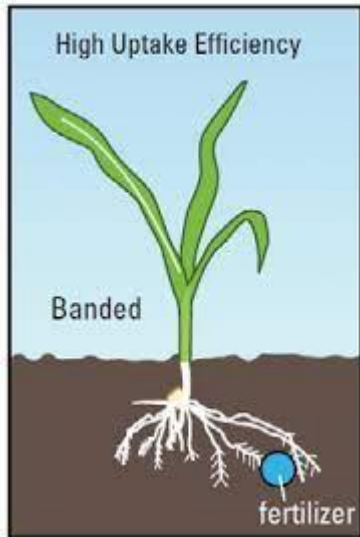
Paragon Casino Marksville, LA

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Root Juice™ is new technology to restore soil microbes in the root zone based on these established principles of ecology:

- 1. Attraction of roots to minerals in the soil (Root tropism)**
- 2. Germination of dormant microbes by elicitors**
- 3. Movement of soil microbes to roots (chemotaxis)**
- 4. Sustainable restoration of the soil microbial rhizosphere ecosystem for the growing season**

1. Plant Tropisms respond to environmental stimuli



Light → Phototropism

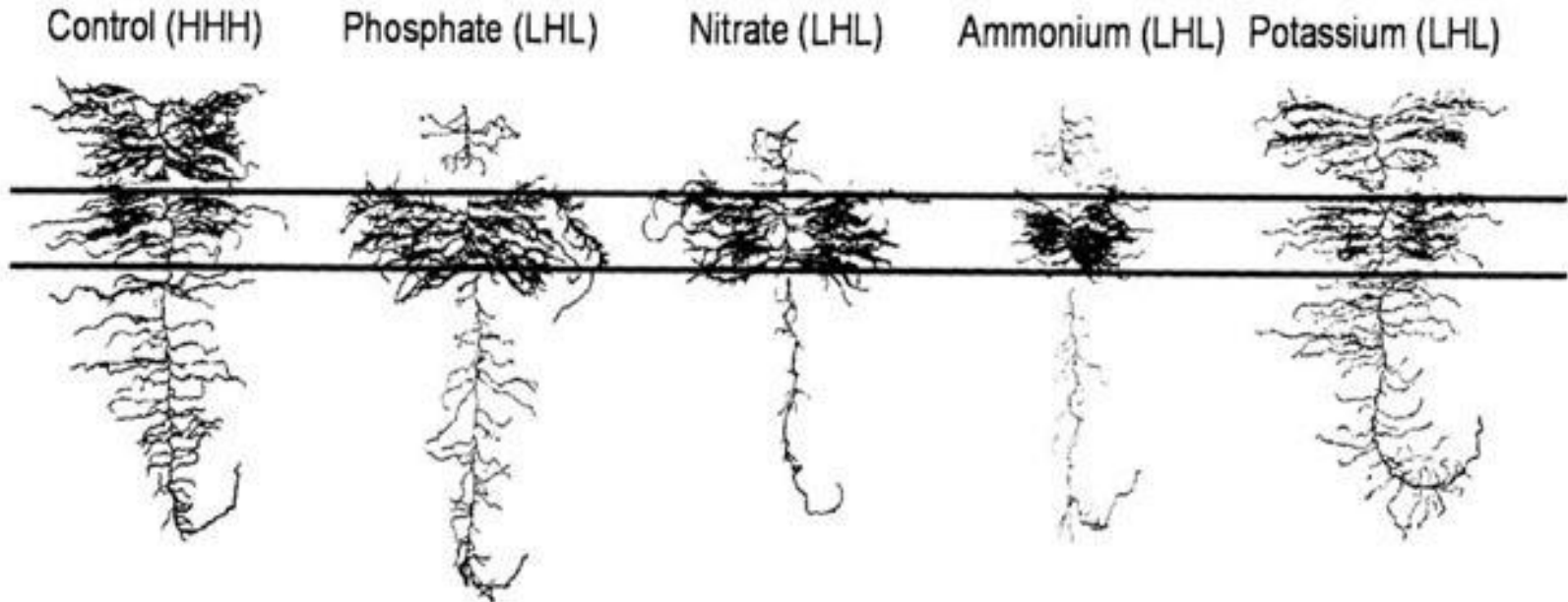
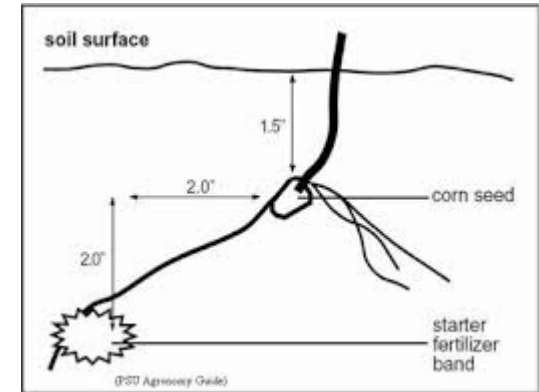
Gravity → geotropism

Touch → thigmotropism

Water → hydrotropism

Temperature → thermotropism

Minerals → chemotropism



2. Microbial spores, cysts and resting structures require activation / germination to form active microbial colonies at the prill.

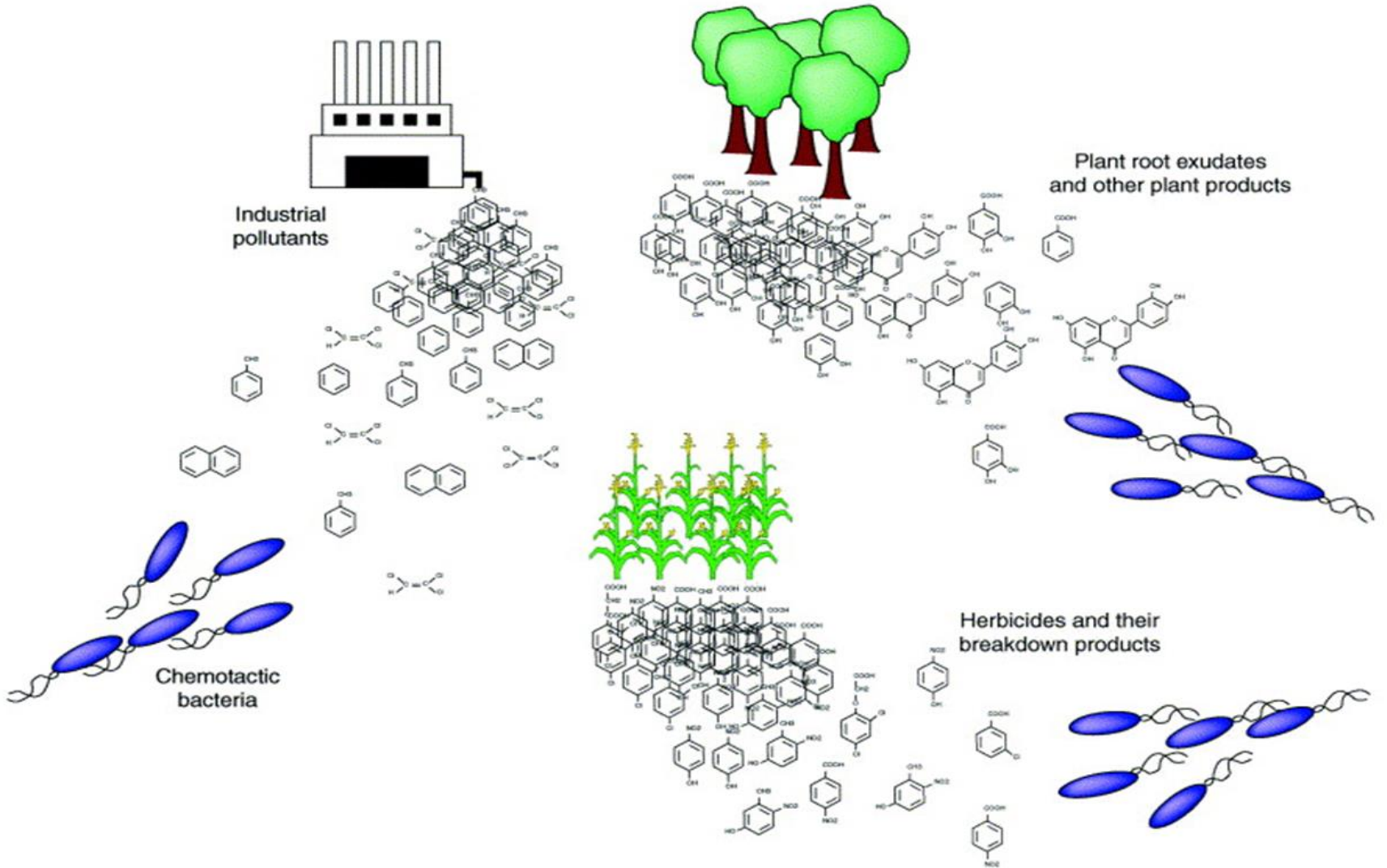
This restores the diversity and population numbers of chemically-damaged soil biology.

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3. Microbes are attracted to substrates they can use (chemotaxis).

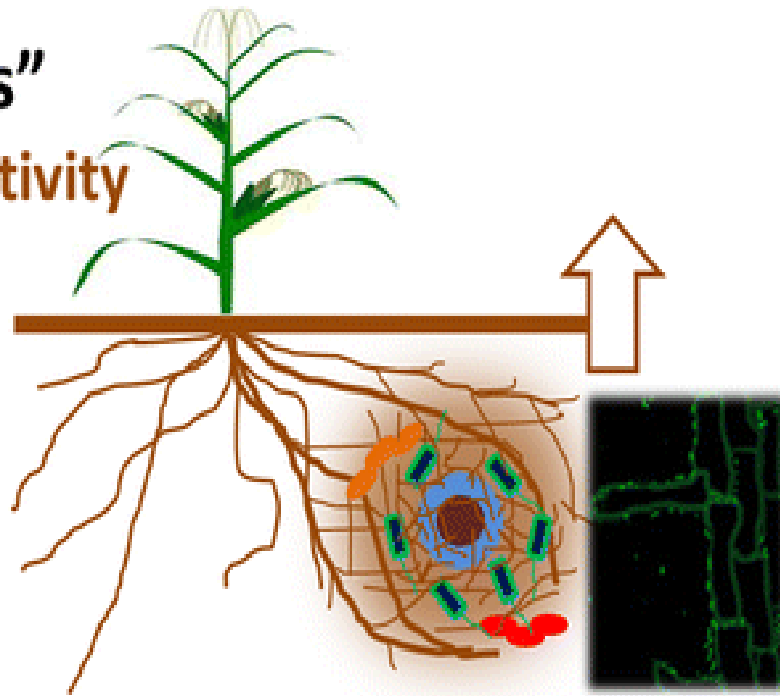


4. Root Juice™ uses Root Tropism and Microbial Chemotaxis to restore rhizosphere health

“Rhizosphere hotspots”
root proliferation and activity

-Root-attracting
Fertilizer depot

-Established **PGPRs**



Yield ✓

Nutrient
acquisition ✓

Use Root Juice™

- **Impregnate Root Juice™ on dry fertilizer 1 gal / ton to stimulate soil microbe germination / fertilizer activation in the prill zone.**
- **Fertilizer attracts plant feeder roots that are immediately colonized by new colonies of local microbes.**
- **Feeder root exudates nourish beneficial microbes for sustained root protection and growth benefits.**
- **Plants and microbes work together to restore and maintain the rhizosphere ecosystem for the growing season.**

Root Juice™ works well on

- Sweet potatoes
- Carrots
- Onion
- Turf
- Tomato, pepper
- Strawberry



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