

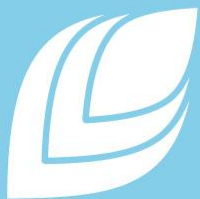
# Biological activation and N enrichment as tool to optimize biochar-based fertilizers

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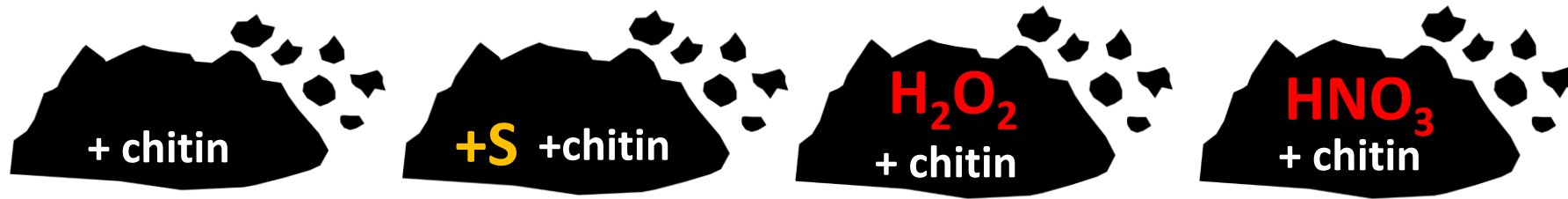
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## Chemical versus biological activation of biochars to produce biochar-based fertilizers (source of stable C and slow N release)

Mode of action: microbiological  
Effect: chemical

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# Microbial activation of biochar?

## Microbial activity:

**Elemental S:** change in pH, EC and sulphates

**Chitin:** mineral N release (but mineral N can be immobilized again)

## Microbial interaction:

**Chitin:** only N mineralization in presence of S

**S:** faster pH decrease when chitin is present

