DEVELOPMENT OF BIODEGRADABLE POLYMERS FOR CONTROLLED NUTRIENT RELEASE FROM ORGANIC FERTILIZERS

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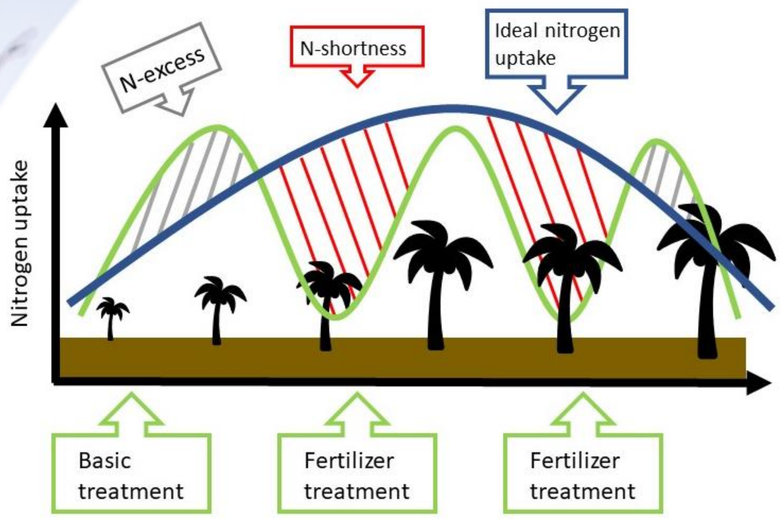
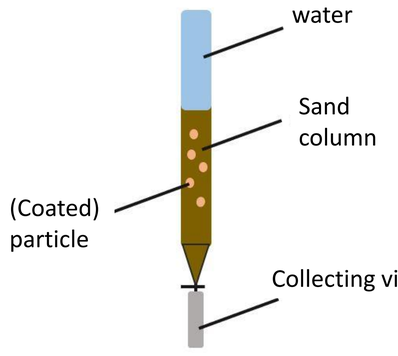
CONCEPT

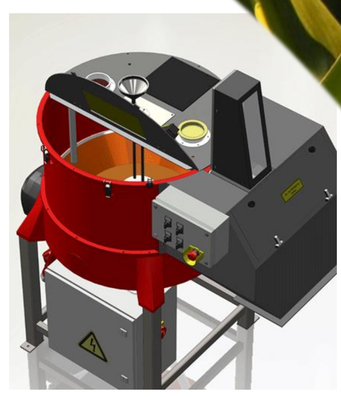
- higher fertilizer use efficiency[3]
- better alignment of nutrient release
- development of a biodegradable polymer coating for organic fertilizers



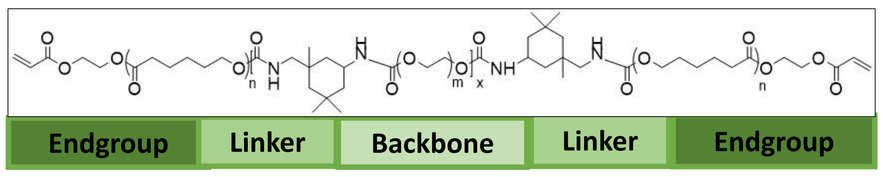
MATERIALS

- spheronizing technique to apply coating onto fertilizer particles
- Release set-up with sand column





- *Chemical structure of PEG based backbone polymer material.[1,4,5]*

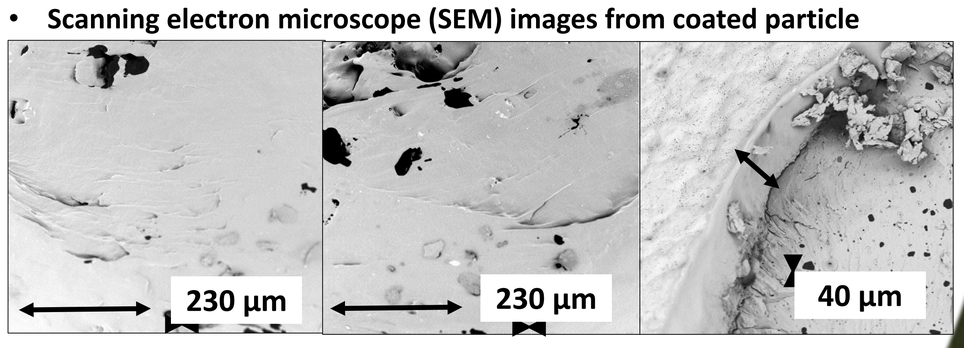


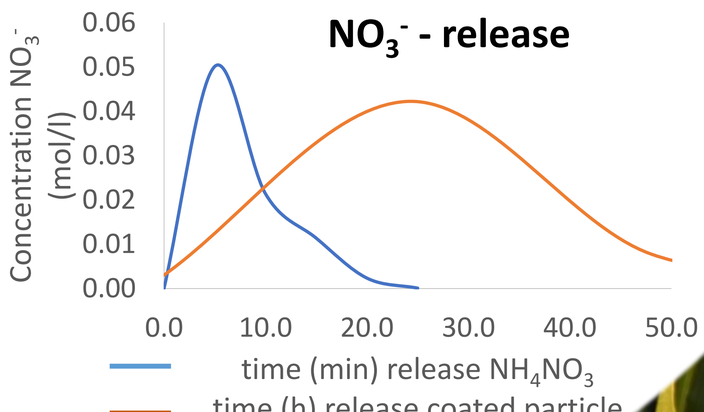
CONCLUSION

- *Release is slowed down by applied polymer coating*
  - *Not long enough*
  - *Increase release towards 3 months*
- *SEM results show not fully coated particles*
- *Increased thickness and full layer need to be achieved*
- *New coating techniques and/or design of materials*

RESULTS

- Scanning electron microscope (SEM) images from coated particle





Acknowledgements

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