

# EFFECT OF BULKING ADDITIVES ON BIOCHEMICAL CONVERSION OF BIOMASS IN HIGH-SOLIDS FERMENTORS

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We aim to increase the production of methane through the use of bulking additives in high-solids fermentors. Our hypothesis is that bulking additives increase the porosity of the biomass particle bed. We are exploring this hypothesis via a combination of reactor experiments and discrete element method (DEM) simulations.

- Experiments have shown that increasing the concentration of the bulking additives increases conversion.
- We have also successfully predicted the packing fraction of cylindrical rigid particles with the approximate dimensions of the biomass particles.

