



Circular Economy IP Commercialization



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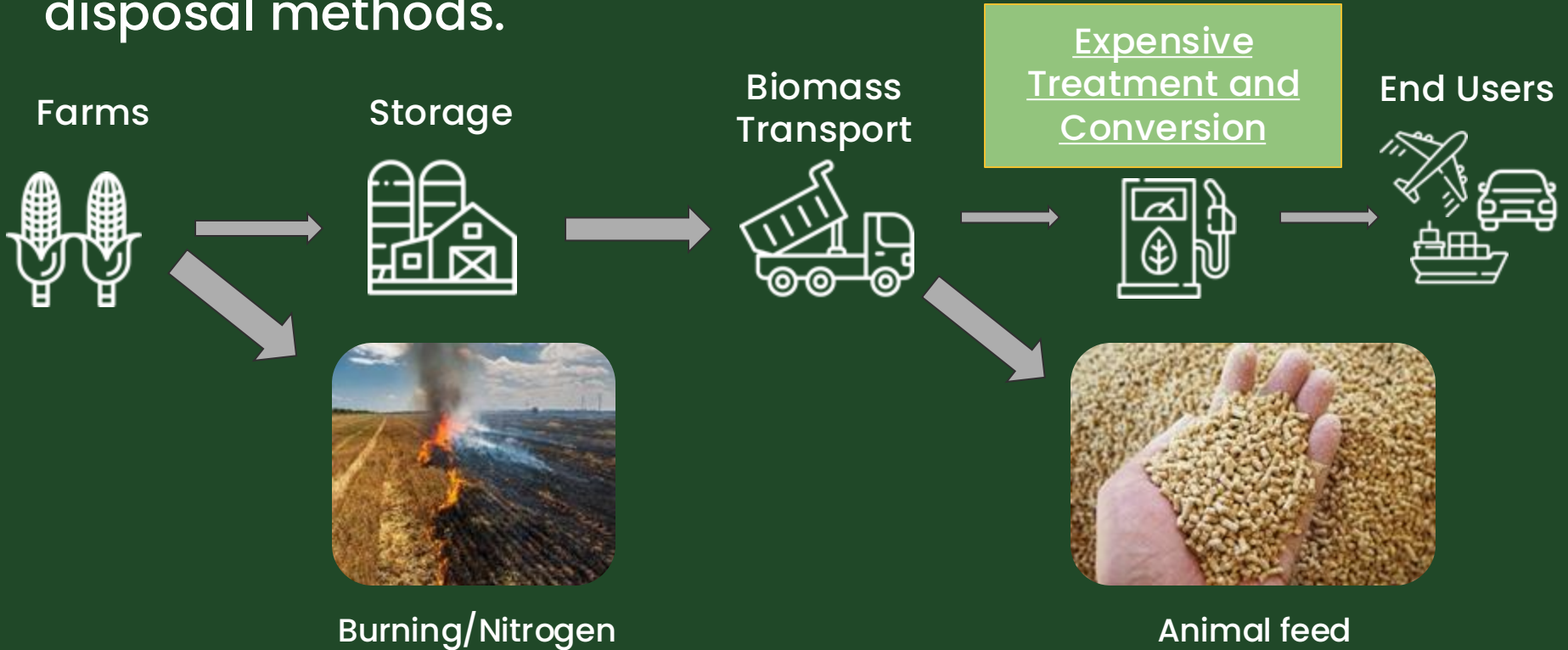
Julian
Watson

Billions of tons of agriculture waste and the technology to address it are both stuck in silos.

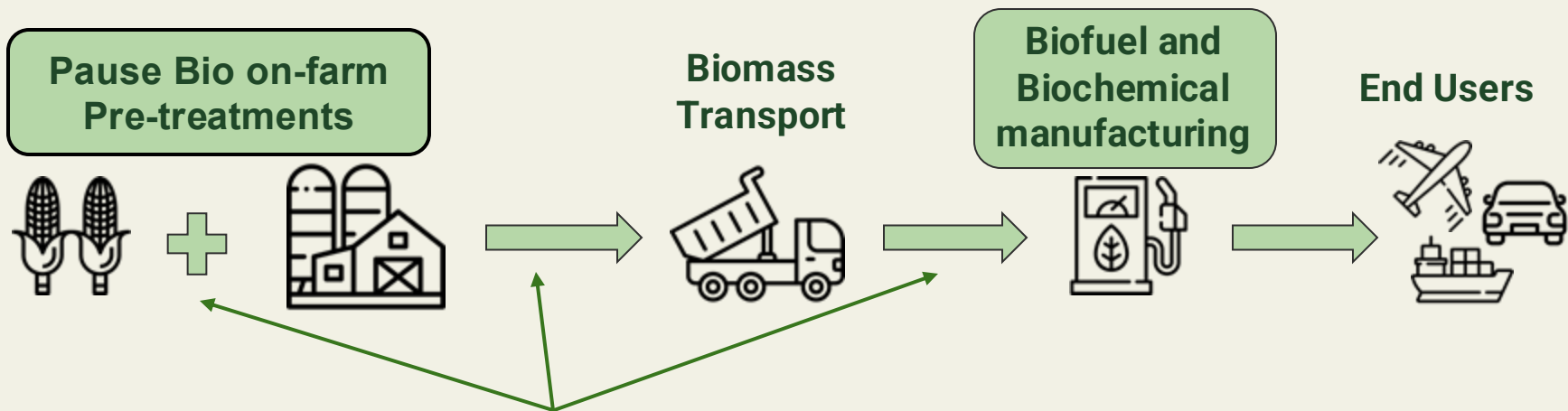
- **>1 billion tons of lignocellulosic waste generated in the US each year; >20B globally**
- **Low-value uses and disposal lead to annual economic losses on the order of \$10-100B**



Expensive treatment and conversion methods restrict most biomass crops and byproducts to low-value uses and disposal methods.



We're leveraging AI to map current supply chain limitations and address these needs throughout the supply chain.

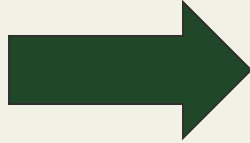


Pause Bio's Activities and Impact:

1. Identify large quantities of waste biomass
2. Assess relevant technologies and geographical factors
3. Work with processors, transporters, and chemical buyers to prove and pilot tech

We're going to market with an affordable, easy-to-apply treatment that can be applied to a variety of lignocellulosic biomass species.

**Applying salts to stover
before baling/siloing yields
a >20% boost in
bioavailability in
downstream use**

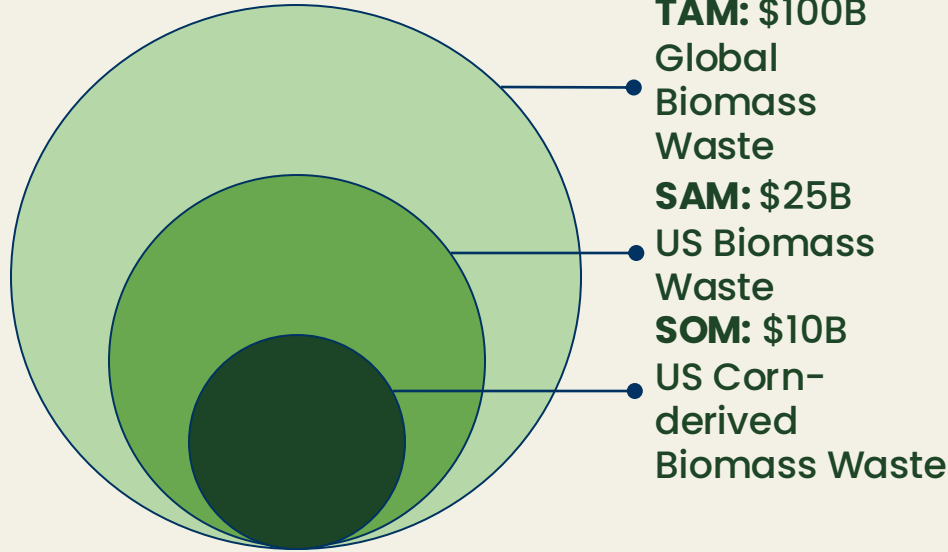


**Enabling more efficient conversion
into**

- **Biofuels**
- **Bioplastics**
- **Platform Chemicals**
- **Protein & Nutrients**
- **Pharmaceuticals**
- **Textiles**

This technology is being developed in collaboration with The US DOE Idaho National Lab, and is part of a portfolio of high-potential, untapped lignocellulosic treatment technologies.

Market Opportunity and Partnership Landscape



We will help innovation groups at large chemical manufacturers to rapidly identify opportunities to deploy and scale sustainable chemical and material production.

Though this waste has many uses (nitrogen soil content, wind erosion prevention, animal feed stock), there are still large amount that are not valorized, indicating space in the market to extract value.

XYLECO Xyleco Inc 485	DSM Dsm Ip Assets Bv 163	Versalis SpA Versalis SpA 141	BASF BASF Enzymes LLC 124	Shell Shell Oil Comp... 120
VERENIUM Verenium Corp... 115	Carbon Tech... Carbon Tech... 115	Bp Energies No... Bp Energies No... 100	Gevo Inc Gevo Inc 99	DANISCO Danisco US Inc 95
Novozymes A/S Novozymes A/S 90	Fynd The Fynd Gr... 79	Varda LLC Varda LLC 76	TerraVia TerraVia Hold... 67	bp Bp Corporatio... 67

Pause aims to commercialize technologies to reduce downtime in the supply chain and valorize both lignin AND cellulose.

Valorizing both byproducts is key to unlocking their widespread use in biofuels and biomaterials

Affordable pre-treatment technologies deployed during storage and shipment can achieve this effect and significantly reduce downstream processing costs



We are uniquely positioned to work with premier research institutions and innovation groups to de-risk and deploy these technologies into the **\$6B chemicals and materials industries.**



Thank You/Questions



Appendix

Techno-economic Analysis and Pricing

Key Takeaways

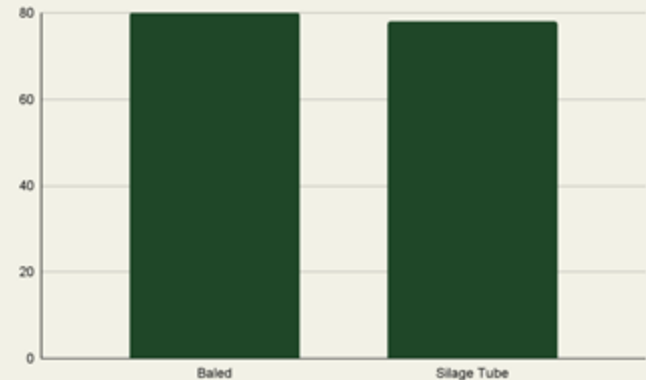
TRL 4/5 deployments show cost-competitive gains in bioavailability

Pricing model to be defined after fermentation performance data is available

Optimization levers:

- Increase silage tube density
- Reduce storage costs
- Explore alternate storage strategies

Unit Operation	Baled	Silage Tub
Grower Payment	\$20.13	\$20.13
Harvest and collection	\$18.79	\$17.28
Storage and queuing	\$6.53	\$21.70
Transportation and handling	\$14.97	\$17.65
In-plant receiving & processing	\$19.43	\$1.10
Dockage	\$0.89	-
Total	\$79.92	\$77.89



KPIs

30 days

- Sign CRADA
- Initiate discussions about piloting and licensing/ sublicensing with INL
- Understand INL supply chain mapping attempts/capabilities
- Commit co-founder, or identify new candidate (current candidate has connections to execs at leading ag processors and more to offer)
- Receive and synthesize insights from Berkeley student outreach

90 days

- Narrow on ideal piloting and licensing/ sublicensing plans
- Initiate TEA
- Acquire first MOU(s)
- Advance market discovery and prospecting to industry-leading processors
- Assess fit for student interns + funding programs

6-12 months

- Initiate CRADA; demonstrate viability of soybean husk/hull
- Complete TEA
- Seek/Receive additional funding
- Initiate “supply chain” mapping and/or modeling of mixed-stream utilization
- Solidify plans for (and ideally initiate) trials/pilot(s), starting with IDS



Pause

BIO SOLUTIONS