



MJC's Biomass Fellowship

MJC Innovation Center



Students & Mentors

MJC West Campus

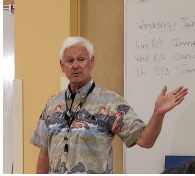
- 12 fellows
- 3 mentors
- 2 videographers
- 1 graphic designer



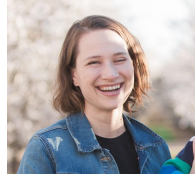
Mission statement

During the workshop, Biomass Research Fellow's interviewed and visited community members with knowledge about the ways that biomass gets sourced, converted, and sold as well as informants with a stake in bio-industrial talent development. Together, the Research Team built a Challenge Bank to inspire students and faculty to engage in ongoing, mentored research projects in alignment with students' academic interests related to the conversion of biomass in traded goods.





**Jim DeKloe -
Solano College**



**Karen Warner - Beam
Circular**



Michael Dark



**Josette Lewis -
Almond Board**



Keyes Facility

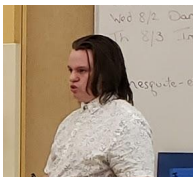


**Myriah Hill -
Modesto Waste Management**





Holly Yanai - Divert



David Tavares



Zheng Huang
Modesto JC



AEMETIS

Drew and Jarrett



Noah Hughes - MJC



Presentations



David Tavares

Michael Dark



Jim DeKloe

Interviewees

- Juan Linarez - Aemetis Project Engineer
- Jessica Cardoso - Aemetis Project Coordinator
- Robbie Macias - VP for Aemetis biogas division
- Dave Menshew - Enochs High School Biotech/Forensics Program Founder
- David Silva - Dairyman
- Mrs. Cheryl Westburg - Almond grower with Blue Diamond
- Noah Hughes - Earth Science/Climate Change professor at MJC
- Adrian DeAngelis - Electronics & Industrial Technology at MJC
- Christine Gemperle - Gemperle Almond Farm
- Tanya Gemperle - Gemperle Almond Farm
- Trevor Wingett - Agricultural Biologist



Interviewees

- Cheetah Tchudi - Turkey Tail Farms
- Lyn Bright - Elum CEO
- Roy Dowd - Aemetis
- Dr. Dennis Gervin - Retired MJC Biology Professor
- Dr. Tara Bunag - MJC Chemistry professor
- George Oraha - Science/Engineering/Math Professor
- Pedro Mendez - MJC Career and Technical Education Dean
- Benina Montes - Burroughs Family Farms
- Lori Marchy - MJC Ag and Environmental Science Professor
- Joel Bernard - Hughson High AP Environmental Science teacher
- Katy Christiansen - Lawrence Berkeley National Lab
- Paul Maglio - Professor of Management at UC Merced



Aemetis Facility Tour



Modesto Junior College's Innovation Center
Research Fellows present:

The Biomass Challenge Bank



Our Challenge Bank



End goal

Through the work of the Biomass Fellows, 152 challenges were identified.

The hope for these challenges is for them to be taken up as research projects by local students in an attempt to alleviate the difficulties faced by our community.



Ongoing research

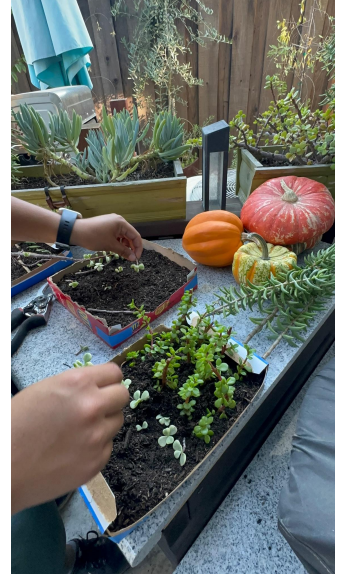
- ❖ Utilizing local agricultural waste to convert biomass into products with varying levels of complexity in conjunction with creating social media content to spread awareness and create exposure about sustainability and environmental conservation with the mentorship of Professors Sam Pierstorff and Liz McInnes
- ❖ Through the guidance of Professor Noah Hughes, group two is working on taking inventory of MJC's biomass and pursuing a project to increase bio-circulatory on campus



Ongoing research

- ❖ Michael Dark, in collaboration with Professor Brown and Dean of Environmental Sciences, Troy Gravatt, is experimenting with using biomass as substrate for mushroom cultivation and will be teaching a mushroom cultivation course with Richard Carnes through Community Education
- ❖ Group 4 is exploring options for developing a biomanufacturing certificate in collaboration with Career and Tech Education





Thank you



Questions & Answers

