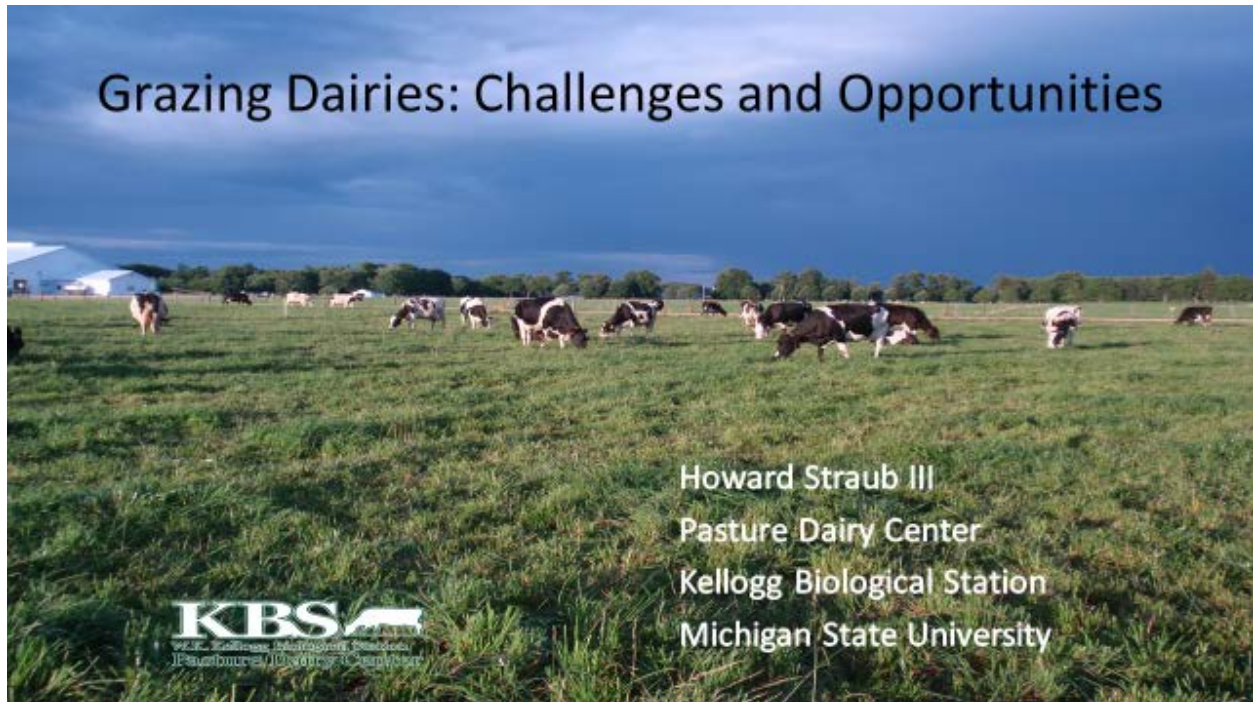


Grazing Dairies: Challenges and Opportunities

Howard Straub, III
Dairy Manager, KBS at Michigan State University



Quick History of the Pasture Dairy Center

- 2007 The Kellogg Foundation donates \$3.5 million to Michigan State University's Kellogg Biological Station for the construction of a grazing dairy research center.
- An Automated Milking System was included in the design. Lely Group NV was chosen to provide the Robots, Service, and Support.
- On July 7th, 2009 milking with just 79 cows and 2 robots
- As of October 1st, 2018 the robots have completed 900,500 successful milkings.
- We operate mostly from crop, meat, and milk sales!



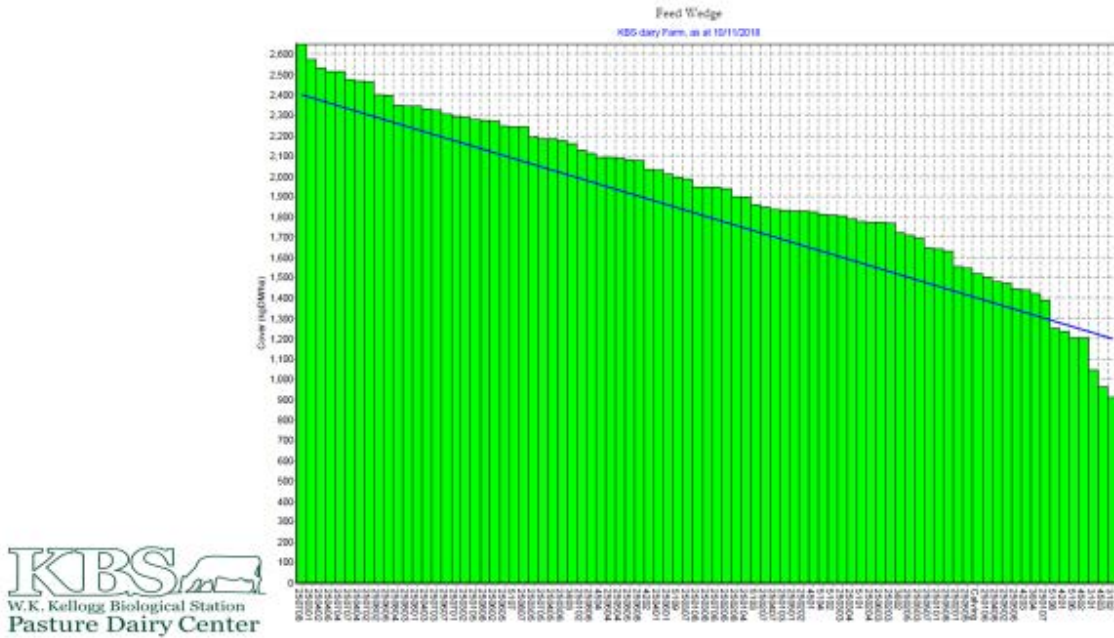
Production Improvements or Marketing – Where are your Opportunities?

Do you have areas in your system where you can improve pasture production? How about labor efficiency? Are there other cost savings available for your facility?

Are there opportunities to improve your marketing from you dairy enterprise? Is there room in your current contract to diversify sales? What other products can you sell to bring in additional incomes streams? Can you increase income from existing income streams?







Production Improvement - Know Your Pastures!

- How much grass do you have? Which paddocks are the most productive?
- Using this system to track and measure our pastures, we produce as much dry matter per acre as we do in our better alfalfa fields. Nearly 6 DM tons Acre!
- Do you (or can you) irrigate your pastures? Do you know when to irrigate?





200	9/18/2018 0:00	2330	0.113496	0.252321	0.314158	0.465142	0.424779	0.121108	0.109058	0.161033	0.233092	0.333517	0.503138	0.518567	0.474396	0.438446
200.2	9/18/2018 0:00	2328	0.267158	0.420888	0.458629	0.319213	0.113333	0.072046	0.159829	0.18685	0.284292	0.459688	0.484883	0.493729	9999999	0.420425
800	9/18/2018 0:00	2325	0.149	0.183	0.195	0.261	0.222	0.235	0.262	0.154	0.154	0.109	0.088	0.248	0.219	0.296
1000	9/18/2018 0:00	2337	0.109	0.136	0.172	0.098	0.105	0.2	0.257	0.203	0.168	0.147	0.164	0.109	0.104	0.096
			0.159664	0.248052						0.176221	0.209846			0.198446		
			0.248052	0.284947						0.209846	0.262301		0.251286			



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- Advanced solutions to soil moisture are being developed!





The 3,500-lb. (1,600 kilograms) SAOCOM-1A is headed for a perch 385 miles (620 kilometers) above Earth. The spacecraft, which was developed by Argentina's space agency CONAE, will study our planet in radar light, gathering data that should help researchers track soil-moisture levels and monitor disasters such as wildfires and floods.

SPACE

Can Measure Soil
Moisture up to 2
Meters Deep!

KBS
W.K. Kellogg Biological Station
Pasture Dairy Center

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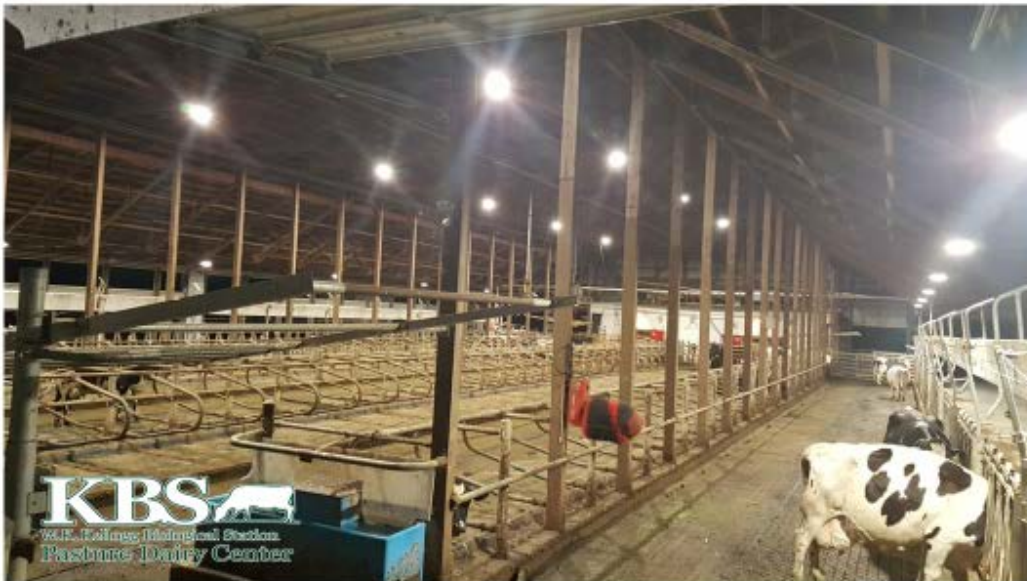
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- Cover crop balage provides all of our winter forage needs for yearling heifers and dry cows!



Any Other Production Side Opportunities?

- How are your utility costs? Any rebates available for upgrades?



Replacing the HP Sodium lights reduced the usage by 6000w and improved the lighting. Utility covered almost 50% of cost. Payback less than 1 year!

Current Marketing - More Challenge Than Opportunity?

- Do you know your milk marketing contract (or agreement) inside out? What clauses in the agreement can trigger its end? How much time can you really guarantee a market for your milk?
- Are you allowed to process a portion of your milk through a farmstead operation such as a bottling plant, creamery, or cheese house?



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- Can you partner with a local business or school to test and build a market?The Hatcher Model



Dairy Marketing - More Than Just Milk

- Do you raise any steers on your facility? Have you thought about marketing Grass Fed Beef?
- Are you located in a tourist area? Can you market a "Farm Experience"? How about an Air B&B?
- If you sell your bull calves, can you breed your late calving or low genetic stock to beef bulls to increase their value?
- Are you an excellent heifer raiser? Can your pastures support addition stock from other operations? Can you see yourself just raising calves or heifers?





Additional Photos





