Imperial County Agricultural Briefs

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Features from your Advisors

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THE UNIVERSITY OF CALIFORNIA COOPERATIVE EXTENSION HOSTS THE IMPERIAL COUNTY HEMP SUMMIT AND EXPO REGIONAL TOUR

Kristian Salgado, Community Education Specialist 2 – Climate Smart Agriculture

On Saturday, Sept 28, 2019 the University of California Cooperative Extension Imperial County hosted 80 guests as part of a regional tour for the Imperial County Hemp Summit and Expo. Since the passing of the 2018 Farm Bill that decriminalized the cultivation of hemp, there has been an overwhelming interest and much needed research for farmers and the Industry to successfully grow this long-prohibited cash crop in Imperial County, and California at large.

Figure 1: A large group of visitors listen to speakers regarding the future of hemp research at DREC in Holtville, CA.

Industrial hemp is distinct from marijuana as it doesn't have a high concentration of tetrahydrocannabinol (THC), the chemical compound that induces psychoactive effects, and is grown primarily for oil (CBD), seeds, and fiber.

During the visit, County Director and Agronomy Advisor, Dr. Oli Bachie, shared with an eager audience that, "While hemp is a versatile plant, there are many critical concerns and uncertainties that need to be resolved through research and development." He further explained some areas of hemp cultivation concerns such as "cross-pollination effects, pest and pest management challenges, and sustainability of cultivars for the low desert."

Irrigation and Water Management Advisor, Dr. Ali Montazar, also spoke to the need for broader research design testing resource use efficiency, such as irrigation and fertilizer treatments. He stated that "We plan to do research on the viability of drip and furrow irrigation practices for hemp production and develop crop water use information in the different growth stages". Overall, there are many literature gaps in industrial hemp research that need to be done to understand the best practices to cultivate this crop, especially in the low desert environment. He also mentioned that developing industrial hemp crop production guidelines for the low desert region is one of our high priorities.

"There are no current industrial hemp projects in the ground here at DREC", stated Dr. Oli Bachie. He informed the public that "UCCE Imperial is expected to begin its first hemp research trails in the Spring 2020". The University of California Agricultural and Natural Resources (UCANR) has also planned for multi-regional experiments at five UCANR research and extension centers (RECs) locations, which includes the Desert Research and Extension Center in Holtville, CA. These research projects will only be managed and controlled by UC personnel.

Figure 2: Oli Bachie, Ali Montazar and Kristian Salgado give brief presentations on the UCCE Imperial County's intended Industrial hemp project and climate smart farming issues.

The previous day, Dr. Oli Bachie spoke at IC Hemp as a panelist and gave a brief presentation and discussion about "local opportunities and resources: "Why hemp in Imperial County?" More than 400 people attended the IC Hemp Summit and Expo which was organized to serve as an all-encompassing marketplace for education, networking and marketing for growers, processors, manufacturers and retailers in the hemp industry and was conducted at the Imperial Valley Fairgrounds.

During the university tour, Kristian Salgado, a Climate Smart Agriculture (CSA), Community Education Specialist, gave a brief explanation on California's greenhouse gas reduction initiatives and the availability of grants from the California Department of Agriculture (CDFA) to support farmers and ranchers planning to

participate in CSA. Kristian distributed a handout on manure management, healthy soil, and efficient irrigation investment programs that are available.

For further information on the IC Hemp Summit and Expo, readers are encouraged to contact the organizers, the Imperial Valley Economic Development Corporation (IVEDC) at 760.353.8332 or visit their website at https://hemp.ivedc.com/

LIVESTOCK RESEARCH BRIEF

UC CE University of California Agriculture and Natural Resources Cooperative Extension

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Hello,

This month examines a study looking at the effect of feeding yeast cell wall and yeast culture on the performance of calf-fed Holstein steers.

If you have any comments, questions, recommendations, or know someone who would like to be included on the mailing list, please feel free to contact me.

Best wishes,

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FEEDING YEAST CELL WALL + YEAST CULTURE TO CALF-FED HOLSTEINS

Brooke Latack
Livestock Advisor

Introduction

Yeast and yeast cell wall supplementation have been shown to improve the health status and production of dairy cattle and lambs. There has been little research on the effects of hydrolyzed yeast cell wall plus yeast culture (EHY) on feedlot cattle, though preliminary work has shown an improvement in performance for medium weight cattle during periods of high THI and when fed in a steam flaked corn diet. This study aimed to evaluate the influence of supplemental EHY on calf-fed Holstein performance.

Methods

168 calf-fed Holstein steers (133 ±7 kg) housed at UC DREC were sorted into 28 pens (6 animals per pen) for a 336-d trial. Steers were fed a finishing diet containing 0, 195, 390, or 585 mg/kg enzymatically hydrolyzed yeast cell wall plus yeast culture (EHY). Treatment diets are shown in Table 1. Weights were taken every 28 days and carcass data collected at harvest.

Results and Implications

Treatment effects are shown in Table 2. Overall, DMI and ADG was greater for treatments with supplemented with EHY. Improvements ADG was largely the result of increased DMI since gain efficiency and estimated dietary NE did not change with supplementation. DMI and ADG had the greatest increase when cattle were supplemented with 195 mg/kg EHY.

Supplementation of EHY increased carcass weight (Table 3). The maximum response for carcass weight was when cattle were supplemented with 195 mg/kg EHY. No other carcass characteristics were affected by EHY supplementation.

Overall, EHY supplementation at 195 mg/kg maximized DMI, ADG, and carcass weight.

Table 1.
Ingredient composition of experiment diet

Ingredient Composition	EHY, mg/kg of diet DM			
Item	0	195	390	585
Sudangrass hay	8.00	8.00	8.00	8.00
Alfalfa hay	4.00	4.00	4.00	4.00
Tallow	2.50	2.50	2.50	2.50
Molasses, cane	4.00	4.00	4.00	4.00
Distillers grain	10.00	10.00	10.00	10.00
Steam-flaked corn	68.10	68.10	68.10	68.10
Urea	1.15	1.15	1.15	1.15
Limestone	1.68	1.68	1.68	1.68
Dicalcium phosphate	0.10	0.10	0.10	0.10
Magnesium oxide	0.15	0.15	0.15	0.15
Rumensin 90	0.01820	0.01820	0.01820	0.01820
Trace-mineral salt	0.30	0.30	0.30	0.30
Celmanax (mg/kg)	0	195	390	585

Table 2.
Growth performance treatment effects

	EHY, mg/kg of diet DM			
Item	0	195	390	585
Weight, kg				
Initial	133	133	133	133
Final	588	616	604	597
ADG, kg	1.35	1.44	1.40	1.38
DMI, g/d	7.79	8.39	8.20	8.01
ADG/DMI	0.174	0.171	0.171	0.171
Dietary NE, Mcal/kg				
Maintenance	2.12	2.11	2.10	2.10
Gain	1.45	1.44	1.43	1.43

Table 3.
Carcass characteristics treatment effects

	EHY, mg/kg of diet DM			
Item	0	195	390	585
Hot carcass weight (kg)	367	382	378	376
Dressing %	62.5	62.2	62.7	63.1
LM area (cm^2)	81.6	80.6	79.8	82.4
Fat thickness (cm)	0.81	0.95	0.76	1.00
KPH (%)	2.34	2.46	2.26	2.41
Yield grade (%)	50.1	49.6	50.0	49.7
Marbling score	4.65	5.61	4.96	5.22

References

Salinas-Chavira, J., Montano, M. F., Torrentera, N, and Zinn, R.A. Influence of feeding enzymatically hydrolysed yeast cell wall + yeast culture on growth performance of calf-fed Holstein steers. 2018. Journal of Applied Animal Research, 46:1, 327-330.

2019 Date Palm Field Day

November 21, 2019
8:30 - 2:15 PM

Coachella Valley Agricultural Research Station
86501 72nd Ave, Thermal, CA 92274

Fee: $25, lunch included

Agenda

8:00am – Registration for CE units, coffee, pastries

8:30am- Welcome- Sonia Rios, UCCE Riverside

8:45am- Tom Perring, UC Riverside. Current status of Insect and Mite Pests of dates

9:15am- Tom Perring, UC Riverside. Part 1: What we know about puffy skin of medjool dates

9:30am- Robert Krueger, USDA/ARS. Part 2: What we know about puffy skin of medjool dates/Date research pollination update

9:45- Ali Montazar, UCCE. An update on the on-going irrigation management project in California date palm

10:15am-Break

10:35- Mark Hoddle, UCR. Updates on the South American Palm Weevil Invasion

11:35- MaryLou Polek, USDA/ARS. Update on Date Palm Activities at the Repository

12:05pm- Lunch- Sponsored by Corteva

1:15pm- Peggy Mauk, UC Riverside.

1:45 - Bob Mulherin, Riverside Agriculture Commission. Laws and Regulation Updates

2:15 – Wrap up

Space is Limited-Register online at:
http://ucanr.edu/survey/survey.cfm?surveynumber=28232
*No Cash/Check payment will be excepted on site, day of
DPR/ISA Continuing Education Credits Upon Request

UC RIVERSIDE
University of California Agriculture and Natural Resources Cooperative Extension
USDA ARS United States Department of Agriculture Agricultural Research Service
CORTEVA agriscience

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IMPERIAL VALLEY CIMIS REPORT AND UC WATER MANAGEMENT RESOURCES

Ali Montazar, Irrigation & Water Mgmt Advisor, UCCE Imperial & Riverside County

The reference evapotranspiration (ET_o) is derived from a well-watered grass field and may be obtained from the nearest CIMIS (California Irrigation Management Information System) station. CIMIS is a program unit in the Water Use and Efficiency Branch, California Department of Water Resources that manages a network of over 145 automated weather stations in California. The network was designed to assist irrigators in managing their water resources more efficiently. CIMIS ET data are a good guideline for planning irrigations as bottom line, while crop ET may be estimated by multiplying ET_o by a crop coefficient (K_c) which is specific for each crop.

There are three CIMIS stations in Imperial County include Calipatria (CIMIS #41), Seeley (CIMIS #68), and Meloland (CIMIS #87). Data from the CIMIS network are available at: http://www.cim is.water.ca.gov. Estimates of the average daily ET_o for the period of October 1 to December 31 for the Imperial Valley stations are presented in Table 1. These values were calculated using the long-term data of each station.

Table 1. Estimates of average daily potential evapotranspiration (ET_o) in inches per day

Station	October		November		December	
	1-15	16-31	1-15	16-30	1-15	16-31
Calipatria	0.21	0.18	0.13	0.11	0.09	0.09
El Centro (Seeley)	0.22	0.18	0.14	0.12	0.10	0.09
Holtville (Meloland)	0.20	0.16	0.13	0.11	0.09	0.08

For more information about ET and crop coefficients, feel free to contact the UC Imperial County Cooperative Extension office (442-265-7700). You can also find the latest research-based advice and California water & drought management information/resources through link below:
http://ciwr.ucanr.edu/.