

RESEARCH AND DEVELOPMENT PROJECT STATUS REPORT

DATE: JUL93

PROJECT NO.: B-514

PROJECT NAME: RL PRESERVATION

PROJECT DESCRIPTION:

The goal of this project is to develop strategies for extending the useful storage life of KRL to six months or more. Identification of the factors (bacteria type, storage conditions) that cause the deterioration (souring) will continue, as well as the means for mitigation of the undesirable reactions. Modification of the composition of the RL (addition of selective agents), the manufacturing conditions and its storage conditions will continue to be investigated. The effect of the ambient storage on the temperature and water activity within the cube, on RL received in different months, will continue to be studied. The basic concepts of Project B-395 (RL and shredded stem study) will be incorporated into this project; namely the organoleptic evaluation of fresh, monthly production and the evaluation of RL produced to achieve superior taste character or other specific taste attributes.

I. COSTS

MONTH	HOURS		WAGES/OVERHEAD		OTHER		TOTAL		CUMULATIVE	
	BUDGET	ACTUAL	BUDGET	ACTUAL	BUDGET	ACTUAL	BUDGET	ACTUAL	BUDGET	ACTUAL
			\$	\$	\$	\$	\$	\$	\$	\$
JAN 93	100	28	11,648	3,664	0	0	11,648	3,664	11,648	3,664
FEB 93	98	17	10,859	2,168	0	0	10,859	2,168	22,507	5,832
MAR 93	100	86	11,622	12,298	0	0	11,622	12,298	34,129	18,130
APR 93	101	64	9,642	7,091	0	0	9,642	7,091	43,771	25,221
MAY 93	100	62	11,387	6,520	0	0	11,387	6,520	55,158	31,741
JUN 93	102	103	11,705	12,329	0	0	11,705	12,329	66,863	44,070
JUL 93	101	97	11,356	10,954	0	0	11,356	10,954	78,219	55,024
AUG 93	102	0	11,379	0	0	0	11,379	0	89,598	55,024
SEP 93	97	0	10,830	0	0	0	10,830	0	100,428	55,024
OCT 93	100	0	9,662	0	0	0	9,662	0	110,090	55,024
NOV 93	99	0	10,642	0	0	0	10,642	0	120,732	55,024
DEC 93	100	0	10,320	0	0	0	10,320	0	131,052	55,024
TOTAL	1,200	457	131,052	55,024	0	0	131,052	55,024		

II. TECHNICAL APPROACH

COMPONENT	ESTIMATED TIME PERIOD	ESTIMATED HOURS	% COMPLETED
1. Investigate spoilage conditions	01/02/93 - 12/31/93	200	60
2. Biological investigations	01/02/93 - 12/31/93	200	70
3. Additive studies	01/02/93 - 12/31/93	200	30
4. RL monitoring	01/02/93 - 12/31/93	400	60
5. Other studies	01/04/93 - 12/31/93	200	20
	* TOTAL	1200	

III. MONTHLY ACTIVITY

The probe experiment continues to go fine. Room temperature averaging about 5 degrees F above last year, resulting in cube internal temperature up about 2 degrees F.

Met with Sean Kelly and UNCG personnel to discuss set up of this month's peroxide test in which the hydrogen peroxide is to be added into the system (via wire pit waters) at the start of the run. Larson has developed a test whereby we can monitor the peroxide content in the various aqueous systems. An 8-hour run was conducted on July 19th. The production system did not operate exactly as KC thought it would. Peroxide was either used up or lost further than expected. The peroxide apparently was almost completely used up in the extractor as detected little or no peroxide in the SEL and CEL waters. A lot of samples were taken by UNCG, frozen and returned to BSD for analysis. Bacteria counts exploded when peroxide content got low. Bacteria counts in finished sheet sort of normal. Still hope peroxide may have destroyed or changed bacteria which will afford a long lasting product.

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PREPARED BY


APPROVED

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