

Performance Record

(Form PR-1)

RJ Reynolds
Tobacco Company

NAME: Lila H. O'Connor

DATE PREPARED 11/30/90

PLAN YEAR 1990

LE: Manager

DEPARTMENT: New Technology Products

OBJECTIVES		ACHIEVEMENTS	
COMPANY FINANCIAL			
		RATING	WEIGHTED RATING
WEIGHT			Weight X Rating
INDIVIDUAL FINANCIAL			
		RATING	WEIGHTED RATING
WEIGHT		Variance Target Actual Variance Rating	Weight X Rating
PROGRAM			
<ol style="list-style-type: none"> Formulate G7-12 to provide material for prototype (XA) development. <ul style="list-style-type: none"> acceptable taste sustain combustion processable cost Process carbon/dust base material and provide strips to run on current cigarette making equipment. <ul style="list-style-type: none"> formulation process/cutting materials specifications attributes (filling capacity, taste) Determine process conditions required to produce deproteinized materials and provide strips to run on current production equipment; investigate scale-up feasibility. 	<ul style="list-style-type: none"> G7-12A was reformulated with 45% carbon, 55% flue-cured stems and 'C' dust extract (G7-12B) and 46% carbon, 24% stems and 8% CaCO₃ (G7-12C) (3Q-4Q90). The G7-12B reconstituted sheet has an acceptable taste (internal panel) and the 55% stem content will make scale-up processing feasible. The Central Location Test (CLT) fielded in October contained a (XA) prototype with 30% G7-12B. A designed experiment to determine the optimum carbonization temperature and particle size of carbonized hardwood, softwood and cotton linter was completed (3Q90). Material was produced on the cast sheet line using DAP/Dust/Ground lamina with NH₃ (release endogenous pectin) and 30% carbon (G15-4) or 25% carbon/5% CaCO₃ (G15-5) (3Q90). These materials had negligible ember drop (.7), acceptable taste and can be processed on current cigarette making equipment. The CLT test fielded in October contained a (XA) prototype with 50% (G15-4). Two hundred pounds of deproteinized tobacco was produced at Bldg. 181 (4Q90). Products fabricated with 100% G7 deproteinized tobacco are being used to systematically determine the contributions of the pyrolysis products of the major components of tobacco to various biological tests. (Proposal 8/90) Two technical grade protease samples are being evaluated for efficiency and cost (Target 1/91). 		
		RATING	WEIGHTED RATING
WEIGHT			Weight X Rating

PROGRAM CONTINUED

4. Reduced Biological Activity

- Determine the technical feasibility of using solubility fractionation and/or chemical modified tobacco to reduce biological activity and retain flavor. Develop preliminary cost estimate.

5. Integrate biologically reduced tobacco or tobacco materials with alternate filler material to produce a processed sheet with reduced biological activity.

- A 10-gallon stainless steel stripping column was fitted with a recirculating pump (4Q90); the equipment can now be used with water and organic solvents. Sequential extraction of tobacco cut filler (20 lbs.) with water and hexane completed 12/90. This quantity of concentrated extract is required for solubility studies.
- The stripping column with freeze/thaw technique was used to produce extracts with varying water solubles (3-40%) to support G7-10, XE and flavor studies (4Q90).
- An antimutagen study commenced 11/90 (target 6/91).
- A 90% carbon sheet produced (4Q90) on the cast sheet line will serve as a substrate for solubility fractional studies.
- A study to determine the effect of reconstituted tobacco sheet with alternate filler on biological activity is in progress. (2/91)

PERFORMANCE SUMMARY AND RECOMMENDATIONS

Dr. O'Connor has made very substantial and important contributions in the exploration and development of new materials for product development efforts in R&D. Her most significant contribution was the development of workable formulations for both cast sheet and G-7 sheet which contain carbon to support the XA project. Through her efforts, the sheets were substantially improved, processing was demonstrated, and sufficient material was made to support a critical XA consumer test. She aggressively supported XA through work on materials specifications and in obtaining HRRC approval for the products.

She directed the tobacco deproteinization project for smoke biological activity reduction as well as tobacco extraction technology development with the use of column stripping. This extraction has major advantages, in particular the use of minimum water is required.

Dr. O'Connor has aggressively pursued several possible avenues to accomplish biological activity reduction. Through her efforts, an interfunctional working group was established. She developed a proposal for research in biological activity reduction and has begun the work.

Dr. O'Connor has successfully directed the work of a small but very productive group which has made very substantial contributions to our R&D efforts on sidestream reduction and biological activity reduction.

RATING SUMMARY

	WEIGHT	RATING	WEIGHTED RATING
FINANCIAL			
COMPANY	%	x	=
INDIVIDUAL	%	x	= +
PROGRAM	%	x	= +
OVERALL RATING			%

AWARD SUMMARY

\$	x	%	x	=	\$
AIAP EARNED		TARGET AIAP %		OVERALL	AIAP AWARD
BASE SALARY				RATING	
					+ \$
					EARNED BASE
					SALARY
					\$
					TOTAL CASH
					COMPENSATION

SIGNATURES

PARTICIPANT	DATE	REVIEWING MANAGER	DATE	NEXT LEVEL MANAGER	DATE
John O'Connor	12/4/90	[Signature]	12/3/90		
		[Signature]	12/10/90		

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