

December 27, 1973

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Dr. S. O. Jones

Re: Tobacco Products Development Division
Monthly Report - December, 1973

NEW PRODUCTS DEVELOPMENT - RJR MARKETING

1. Import Type Smoking Tobacco

Topline results of NFO tests indicate the blend made by Rinsoz & Ormond containing our Borkum Riff-type top dressing scored even with Borkum Riff. A similar blend made by Assens containing the same top dressing lost significantly to Borkum Riff. Also, the Assens blend with maple flavor scored lower than Borkum Riff in monadic tests. We will work with Marketing in preparation for test marketing the R&O product in 1974. When the final NFO test results are available, they will be studied to determine if adjustments in the product are necessary.

2. PRINCE ALBERT Modification

Three products are undergoing Company-wide evaluation as potential candidates for PRINCE ALBERT with moderately reduced bite. Marketing is interested in such a product for the pouch and humidor market, and it is anticipated that a recommendation can be made by March, 1974. Studies are underway to develop a product with significantly less bite than current PRINCE ALBERT. It is hoped that this product will be available by July 1, 1974.

3. MGX Smoking Tobacco Project

a. Berry Flavored Product

Modified berry flavors are being tested on a mild blend consisting of all foreign tobaccos.

b. Wine Flavored Product

Several "pop" and domestic wines are under evaluation as potential flavors. To date, Madeira wines show the most promise.

c. Exceptionally Mild Domestic Product

A blend containing a relatively high level of flue-cured tobacco shows promise for this concept. Top dressing candidates include a Sir Walter Raleigh type and PRINCE ALBERT top dressing with increased sweetness.

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4. WINCHESTER Menthol

We modified the WINCHESTER Menthol candidate by changing the wrapper to an all cigar type and by elimination of the perforations in the tipping. Although neither of these products scored as well as the original products on our panels, we feel that the objectives have been met. We plan to submit a candidate to the Marketing Department in mid-January, 1974.

5. Product M

We are awaiting results of NFO tests evaluating a modified CAMEL Filter and Marlboro duplicate candidates. In the meantime, studies are underway to simplify making of the Marlboro-type product. Tests underway include adding ammonium carbonate and diammonium phosphate to G-7 as a casing and using this G-7 in the Marlboro-type blend. Internal panel results look promising; and if the outcome of Chicago tests among Marlboro smokers is satisfactory, we might suggest testing this product on NFO.

6. Kool Competitor

Two candidates for a Kool duplicate scored significantly better than Kool among Kool smokers in Chicago tests. A third candidate believed to be more like Kool and containing ammoniated G-7XX has been submitted for similar panel testing. A suitable Kool-type product, along with SALEM KS and SALEM SKS products with increased smoke pH, will be presented to Marketing early in February, 1974.

7. 80-mm. SALEM

Prototype cigarettes for an 80 mm. hard pack SALEM were made and Expert Smoking Panel judged their smoking qualities to be the same as SALEM 85. The cigarette is the same as SALEM 85 except the rod is 61 mm. long and the filter is 19 mm. long and made to WINSTON CP standards. A supply of the cigarettes were made and packed December 21st for a consumer test scheduled for early January, 1974.

8. MTP Project

Blends tentatively have been selected for both the regular and menthol versions, and final adjustments of the top dressings are underway. Paper and tipping specifications have been finalized. Sufficient supplies of both are expected by January 11th for extended making and packing tests at the pilot plant and for NFO tests scheduled for late January. Cigarettes made in the extended pilot run will be used to better establish the "tar" and nicotine delivery and the puff count. Data to date indicate a "tar" level of about 30 mg. per cigarette and a puff count of about 15.

Research has completed studies to determine if dyes used in the paper produces undesirable pyrolysis products, and a report is in preparation. However, DuPont recently announced that the dyes used in that paper were

removed from the market by order of the Federal Government, and substitute dyes are now being used. Therefore, pyrolysis studies will be repeated on paper containing the substitute dyes.

Complete specifications for making and packaging materials were provided to Purchasing and Manufacturing.

9. DORAL Improvement

Studies are underway to improve the smoking qualities of DORAL Regular and DORAL Menthol while maintaining current "tar" and nicotine deliveries. Although the pH of DORAL smoke generally is somewhat higher than other RJR cigarettes, there is some indication that using ammoniated G-7 and less casing in the blend further increases the pH and improves smoking qualities. This and top dressing modifications are being thoroughly studied, and a recommendation is expected to be made by late February, 1974.

10. WINSTON Lights and SALEM Lights Cigarette

Information we have gained on the effects of increased smoke pH and reduced casing is being applied to our candidates for these concepts to determine if smoking qualities can be improved. Test products have been made incorporating these changes as well as updating the blends with respect to G-13 content, and panel evaluations are underway. Further studies will include top dressing modifications and adaptation of the TC and HPF filters.

11. Scrap Chew

An all-cigar tobacco scrap chew blend has been processed for an NFO test against Red Man. We hope to have this blend on an NFO panel by the first of February.

12. TC Device

We have provided the Marketing Department with a complete range of samples incorporating several HPF and TC filter designs for their appraisal. Further development will depend in part on their response to this submission.

All three of the TC cigarette machines are being operated on extended runs to evaluate their effect on the product and the equipment. Further tests evaluating both the 100 mm. and 85 mm. VANTAGE type product with the V-3 filter are underway.

INTERNATIONAL MARKETING

1. International Low "Tar" and Nicotine Cigarette

The previous blend developed as a candidate for this prototype has been modified by incorporating the M-2000 tobacco. Panel results indicate the smoking qualities of the product are comparable to Lord Extra.

In addition, the "tar" and nicotine numbers are within the required levels. Sufficient quantities of this product will be made for International market testing beginning in January, 1974.

2. Ecuador

We are continuing to study modifications of the blend recommended for the King cigarette. The possibility of storing all the tobacco components except the G-7XX in Ecuador is under consideration. "Tar" and nicotine data on all cigarettes manufactured at El Progreso and imported from RJR will be provided to conform with the Ecuadorian requirements.

3. Canada

We provided information to the CCM Division in December which indicated that it would indeed be possible to make a WINSTON cigarette in Canada with leaf either available there or imported. Our prototype cigarettes met the required cost guidelines, and all indications are if we proceed with our work with McDonald that blended cigarettes can be made with few modifications at this company.

4. Indonesia

We have received word that R. J. Reynolds Indonesia has bought a good supply of new crop Indonesian flue-cured tobacco. We plan to send a blend specialist to this factory by January 28, 1974, to assist in finalizing blend improvements for Lancer, Oscar, Lancer Filter, Oscar Filter and possibly two Gallaher licensee brands.

5. Bastos, South Vietnam

International has requested that we investigate the possibility of lowering the cost of the blended strips used for SALEMS at Bastos. Studies are being made using lower cost surplus tobaccos in RJR inventory, G-7XX and casing reductions. We also plan to investigate the possibility of using off-shore tobacco in the Bastos blend.

6. Project M-2000

International indicates they would like to have product for consumer testing by March, 1974, and test market introduction by September 15, 1974. Tobaccos are being shipped from Haus Neuerburg for use in this product and will be blended and processed when received. The effect of M-2000 treatment on individual tobacco types is being conducted to further assist in blend preparation.

MANUFACTURING RELATED PROJECTS

1. Consolidation of Plug and Smoking Casing Departments

The DAYS WORK Test No. 197 made at No. 9 to prepare blend for NFO

testing had too high moisture content. As a result, NFO testing to determine consumer preference for cooked versus uncooked casing will be delayed until early 1974.

2. Casing Materials

Licorice reductions of 25 and 50% are being evaluated on CAMEL, WINSTON and SALEM cigarettes. Internal tests indicate no differences; however, Company-wide panels have been requested. Factory tests have been requested to qualify Russian and Turkish licorice for use in our products.

3. Steam Flotation Chamber

Blends were received from factory tests for SALEM KS and SALEM SKS, and a series of top dressings are being tested on the steam flotation parts. Similarly, a series of top dressings is being evaluated on steam flotation treated WINSTON KS cigarettes made from a factory test containing increased G-13.

4. Shorts Reclaiming from Reject Cigarettes

The evaluation of moisture conditioning of reject cigarettes was completed. This work indicated that moisture conditioning could improve the quality of shorts extracted and improve the filling capacity of these shorts. It was recommended that screening modifications should be made and a moisture addition system be installed on the equipment at 86 Shed.

5. Bright Flakes

Approximately 50,000 lbs. of CARTER HALL bright flakes were produced in a two-week run in Building 611-4. This will provide sufficient supply to last until May, 1974.

6. Wrinkled Cigarettes

We have made detailed recommendations to the Manufacturing Department for modifications to help reduce the amount of wrinkled cigarettes in the Production Division. These modifications are being made in Factory No. 1-6, No. 64-1, Whitaker Park Unit 3, and 97-1. Considerable discussion has been held with maintenance personnel in the various factories and memorandums describing proper maintenance for the packers have been provided. The quality determination of the effect of the changes are being monitored by Quality Control. It was observed that the major problems encountered during testing of the modified packers were the inconsistency of cigarettes from the Making Room at Factory 64-1 and Whitaker Park. For example, at 64-1 close examination showed 5% more wrinkles prior to packing. At Whitaker Park a cigarette length variance from 83.5 to 87 mm. was found in packs off the same machine.

It is our feeling that considerable progress has been made in this problem area. Exceptional cooperation has been received from all personnel from the departments involved. We presently feel that further improvement should come primarily from the efforts of the Production Division with assistance from both our division and Quality Control.

7. Code Dating

There have been several complaints on the legibility of code dating on cartons. The reason for this is caused by several factors, including boxer code dating equipment and dies being dirty or out of adjustment, worn marking dies, ink supply not enough or too much, and ink supply pad hardened. Our efforts, in addition to delineating the problem, have been directed towards insuring that the correct ink is used. In addition, we are studying a mechanism for automatically inking the pads and automatically cleaning the dies.

8. Current Brands Improvement

Listed below is the status of the several factory tests presently underway.

a. WINSTON KS Test No. 2097

This test was made to determine the effect on machinability and smoking qualities by increasing G-13 in WINSTON KS cigarettes. Although substantial weight reductions are possible, the smoker's tests indicate a decided flavor problem. The increased usage of G-13 will necessitate a continuing gradual approach, and it is definitely indicating flavor adjustments will continue to be necessary.

b. SALEM KS Test No. 2098 SALEM KS Test No. 2099

These tests were made to increase the K-13 portion of the blend to 9%. Physical testing indicates a weight reduction. Although smoker's tests indicated no significant differences, there were some indications of a flavor problem. These tests are being rerun as part of Test No. 2117 and 2119.

c. SALEM KS Test No. 2104

A memorandum was written giving the results of this test. The recommendation was made that the special cooling vibrator on the cutting line be incorporated as part of the process. In addition, all data indicated that an increased cutting rate was feasible.

d. WINSTON KS Test No. 2105

A report was issued describing the results from the test. The recommendation was made that dry shorts could be fed in front of the dryer as opposed to after the dryer.

The following tests have been made and are at varying stages of evaluation.

CAMEL Test No. 2106)	
WINSTON KS Test No. 2107)	Evaluation of the use of TPD-71 G-7.
SALEM KS Test No. 2108)	
WINSTON KS Test No. 2109)	
SALEM KS Test No. 2110)	Reduction of sugar content in the casing.
CAMEL Test No. 2111)	
WINSTON KS Test No. 2112)	Reduction of humectant level in cigarettes.
SALEM KS Test No. 2113)	
CAMEL Test No. 2115)	
WINSTON KS Test No. 2116)	
SALEM KS Test No. 2117)	Increase of C-13 to 3%.
WINSTON SKS Test No. 2118)	
SALEM SKS Test No. 2119)	
WINSTON KS Test No. 2120)	Usage of special purchased flue-cured and burley tobaccos.
CAMEL Test No. 2121)	
WINSTON KS Test No. 2122)	Usage of TPD-74 G-7 in cigarettes.
SALEM KS Test No. 2123)	

The following additional cigarette tests are scheduled.

WINSTON KS Test No. 2125)	To determine effects of strip moisture and temperature on gum buildup on cutters.
CAMEL Test No. 2126)	
WINSTON KS Test No. 2127)	Evaluation of ETAS licorice.

The following smoking tobacco tests is under evaluation.

PRINCE ALBERT Smoking Tobacco Test No. 255)	To evaluate blend changes in PA smoking tobacco. Initial testing indicates that our domestic K-15 can be replaced with K-15K. Further testing is underway to determine if K-15 can be replaced with K-14 or K-14K.
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PACKAGING PROJECTS1. Use of Polypropylene on Crushproof Boxes

The conversion of Scandias at #12 cigarette factory is approximately two weeks behind schedule. To date six machines have been converted to run polypropylene, and the remainder will be converted by January 31, 1974. The machines are also being converted to handle a larger roll which should improve their efficiencies. The addition of ceramic swing heaters has eliminated the loose wraps which were being produced on the first two machines.

The evaluation was completed on the Scandia 712 machine for wrapping soft packs. As soon as Scandia can supply two of these machines, they will be installed for Manufacturing evaluation.

2. CMT Cellophane Adjustments

Four CMT's have been converted with air-assist in-feed section. Manufacturing has adopted this unit for all CMT's; however, they will be delayed in converting to this device because of air supply. Indications are that overall packer efficiency can be increased 1-2% by using this device. In addition, we are able to use more of the cellophane which was previously rejected.

3. Plastic Lids on Humidors

The first two disc cutting/sealing machines have been installed at the Smoking Division. The machines are running well with only minor problems.

4. WINCHESTER Cartons

Perforations have been added to the top flap to allow better adhesion. Where these cartons are not to be tax stamped, they should remain completely sealed. WINSTON cartons were also tested for improved adhesion on the new case packer at Whitaker Park. We will test these cartons on the Pitney Bowes to determine the degree of improvement in adhesion.

5. Cigarette Print Ink

The change on WINSTON cigarettes to the new logo and blue/black ink has been completed. No difficulties have been encountered as yet. The CAMEL Filter name change will be made during the holidays.

TOBACCO DEVELOPMENT PROJECTS1. G-5 Product

The addition of G-5 stems to a strip blend before cutting was evaluated. Tests indicated that a satisfactory product could be obtained by rolling

stems to 10-15 thousandths of an inch and adding 5% of this product to a strip blend.

2. Drying Committee

A committee has been organized to investigate the drying of tobacco. The first step will be to evaluate the present cut filler drying systems. Progress of this committee will be reported in weekly and monthly status reports.

3. 6-8-6 Machine versus Mark 8 Machine

Cigarettes made from Mark 8 machine are made at a lower weight than that of the 6-8-6 machine. We are currently testing via Company pack panels products made from the two machines with an additional 1% weight reduction taken on cigarettes made on the Mark 8 machine.

4. Reduction of "Tar" and Nicotine

Special cigarette papers containing Carboxymethyl cellulose (CMC) and increased citrates are being evaluated on WINSTON KS. These papers were made by Ecusta to duplicate smoke deliveries provided by 853 paper with tensile strength of 856 paper. Alternate tow items are also under evaluation.

5. Flue-Cured Flavor Reconstitution

Reconstitution of the remaining three subfractions from the flue-cured essential oil recovered from C-13 steam effluent is in progress. Six of the ten subgroups from Fraction No. 4 are complete and readjustments on the other four are being made. The first attempts on reconstituting Fractions No. 6 and No. 7 have been made and are being checked for composition accuracy by Research. We expect that all seven fractions will have been duplicated by early 1974 and the total reconstitution achieved.

Emphasis has now shifted to application of practical flavor modifications resulting from the flue-cured reconstitution. These flavors are being used in our steam flotation, G-13, and reconstituted tobacco flavor work.

6. Oriental Tobacco Substitution

Work this month has been directed towards development of flavored blends of low grade off-shore tobaccos to demonstrate a 100% TB blend replacement. Flavored blends for TB replacement consisting of 100% off-shore flue-cured, 50/50 flue-cured/low grade oriental and 100% low grade oriental tobaccos are currently being made in the pilot plant. Some difficulty is still being encountered in minimizing the pack aroma for 100% TB substitution. This problem is not severe, however, at a 30% substitution level.

7. RJR/Firmenich Burley Project

Flavors from the Firmenich program are being utilized in virtually all new cigarette flavor development work and are prime candidates for the MTP, M-2000, steam flotation, increased stem utilization, and for increased G-13 usage.

The manuscript listing smoking evaluations of recent "GRAS" list additions in order to provide "right-to-use" protection has been accepted by "Tobacco Science".

8. Flavor for G-13

Flavor work is being directed towards improving both our current G-13 blend and a high percentage C-13 to K-13 blend ratio at a 25% level in cigarette blends. The practical reconstituted flue-cured flavor, PRF-5, derived from our basic flavor program in combination with a Firmenich Burley Flavor has performed very well on our current CK-13 blend on both booth and expert panel evaluations. A larger test is being made for Company-wide testing.



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