STANDARDS & QUALITY CONTROL

(Personnel Organization)

1. What have we been doing to insure quality?

2. What are we doing now to insure quality?

Bill Baumbach

LEAF PROCESSING & MOISTURE CONTROL SECTION

1. Leaf Processing Control in our plants (Shifts 8 & 9)

   6 Quality Control Supervisors (3 plants)
   32 Seasonal Employees

Insuring Quality/How

a. Identifying problem areas and taking corrective action.

b. One test every 20 minutes for Moisture, Sieve Analysis and Stem Analysis.

2. Domestic & International Leaf Dealers, Assistance through visitation

   2 Supervisors

Insuring Quality/How

a. Audit tests the Dealers make and supply technical assistance.

3. G-13 Processing (Shifts 7, 8 & 9)

   1 Supervisor
   6 Technicians

Insuring Quality/How

a. Run Moisture, Filling Capacity and Temperature tests every 10 minutes.

4. Moisture Control of Product and Calibration of Meters and Special Tests (Shift 8)

   1 Supervisor
   13 Technicians

Insuring Quality/How

a. Product Moisture - Check one pack per shift, per unit
   Check chewing tobaccos each day
b. Calibration - Three checks per week, per meter
c. Moisture Loss & Seal Test - Check six cartons per brand, per month
d. Special Tests - Extra moisture, seal tests, and evaluation of process changes.

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FILTER, WEIGHT & WRAPPING MATERIALS SECTION

Filter Control Group

1. Instrument checks and maintenance (Shift 8)

   2 people

Insuring Quality/How

a. Control tow by keeping test instruments calibrated

   (Control instruments - Draft, size and weight)

2. Evaluation of new tow items, Process changes and Product Specifications (Shift 8)

   4 people

Insuring Quality/How

a. Check for optimum running condition of machines and how the tow processes with feed back to tow suppliers.

3. Quality Assurance of Filters (Shift 8)

   2 people

Insuring Quality/How

a. Data from process is summarized and fed back to suppliers to control the yield of their tow.

Weight Control Group

1. Performance of individual cigarette makers (weight and visual defects) (Shift 8)

   4 people

Insuring Quality/How

a. Each maker is checked once per month - Data is sent to Manufacturing for corrective action.

2. Technical support, check inspection devices and evaluate new controllers and machines (Shift 8)

   7 people

Insuring Quality/How

a. Supply technical assistance on the cigarette floor to reduce bad work and check performance of cigarette machinery.

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Wrapping Materials Group

1. Assurance of wrapping material (Shift 8)

6 people

Insuring Quality/How

a. All wrapping materials covered with limited amount of testing.

b. Properties checked: Weight
Porosity
Thickness
Tensil Strength
Opacity
Ink rub off
Fading
Fire retention of cigarettes

2. Special Tests - Qualifications, Technical assistance (Shift 8)

4 people

Insuring Quality/How

a. Check running characteristics of making materials on the production floor.

b. Spot problem areas and take corrective action.

FINISHED TOBACCO PRODUCTS SECTION

1. Quality Assurance - 38 Domestic Brands/49 units
33 Export Brands/38 units

8 people (Shift 7)
18 people (Shift 8)
16 people (Shift 9)

Insuring Quality/How

a. Check 26 cigarettes per unit per shift for weight, draft, size, firmness and moisture.

b. Check 20 packs (400 cigarettes) per unit, per shift, for visual defects.

c. Less frequent checks are made for filling capacity, filling capacity moisture, sieve and stem analysis.

d. Check moisture, sieve and chemical analysis, on Smoking Tobacco monthly.

e. Other tests: Tar - Smoke 25 cigarettes per brand, per week
Menthol - Check 5 packs, per day, per brand, per shift
Nicotine & Sugar in Tobacco - Check weekly on selected brands.

(Start-up of new or revised brands have priority and use above personnel at the expense of existing brands)

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2. Data Records & Instrumentation (Shift 8)

4 people

3. International Technical Service (Shift 8)

3 people

Insuring Quality/How

a. Orientation and training in Winston-Salem.

b. Visitation of International Plants

4. International Product Checks (Shift 8)

2 people

Insuring Quality/How

a. Quarterly checks for major brands

b. Semi-Annual for Competitive Brands

5. Process & Machinery Evaluation (Shift 8)

2 people

Insuring Quality/How

a. To improve or prevent the deterioration of quality through process or machinery changes.

6. Factory Numbered Test (Shift 8)

4 people

Insuring Quality/How

a. The physical and visual properties of cigarettes for 15 factory numbered test are run each week.

7. Competitive Brands (Shift 9)

2 people

Checking Quality/How

a. Properties checked by our personnel and others:

Physical - 16 test variables
Visual - 4 test variables
Chemical - 15 test variables, Smoke analysis
Chemical - 6 test variables, Tobacco analysis

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Difference between questions Nos. 1 & 2

Now Doing

a. Running tests on Export cigarettes.

b. Revised our testing procedure, added automation, and reduced the number of checks run for sieve analysis and filling capacity for higher priority testing.

c. When visual defects are found, the Manufacturing Supervisor is called immediately. The defective work is returned to source of origin for correction.

d. Operating under new guidelines of stopping machines and holding product in question.

e. Using new procedure for start-ups and holding product until critical specifications assured.

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#3 What should we be doing to completely and reliably fulfill our objective as stated above?

1) System rewards productivity at the expense of quality. System should be changed to reward quality work, preventing shipment of defective production. Line supervisors should spend their time on the floor observing quality and their worker's performance.

2) Field competitive smoking test on selected brands three to four times a year so that a confidence level can be determined on how our product is perceived by the customer. There is little virtue or rewards for faithfully maintaining specifications on product with less than desirable smoking qualities.

3) Moisture meter operators, maker checkers (weight, size, and visual defects) process inspections (filter) and quality scoring checkers should be combined into a single quality control function and report through the floor quality supervisor to Plant Manager and/or Standards and Quality Control. This would improve: quality image, objectivity, communications, and performance of checkers (not used on other jobs).

4) Low frequency of spot checking product - Frequency of checking should be increased in Standards and Quality Control and/or Manufacturing Department. Testing needs extending through case packing.

5) Lack of personnel on Shifts 7 and 9, to control product, provide technical assistance and follow-up.

6) Move into primary areas with moisture control. Moisture tests are good indicators of casing and top dressing applications and variations in processing.

7) Lack of control, especially on air dilution products. The great number of filters and wrapping materials on the floor have increased the chances of mix-ups and adversely affecting the 'Tar'. Delta P needs monitoring by makers and material handler's awareness increased by additional training.

8) Initial specifications should be more flexible (or more thoroughly tested so changes will not be necessary) so that during initial production, changes to improve quality can be implemented without affecting established economics.

9) New Products - Adequate testing of individual materials and finished product should be completed, reviewed, and approved before a new or revised brand is scheduled for production.

   Problems to this point:

   a) No time for testing wrapping materials
   b) Inadequate test runs
   c) Difficulty in taking corrective action and addressing problems that arise

10) 'Tar' control - Increase analyses on selected or problem brands to determine if trends can be identified earlier. Develop programs with quicker response time to correct 'tars' out of specifications.

11) Moisture control - On new brands and/or brands where aging varies, use plant moisture ovens to back up press meters. Use prong meters more frequently during redressing and mixing of tobacco.

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12) Audit the mixing of casing materials, top dressing, adhesives and the application of such.

13) Better inventory control especially on critical materials. First in, last out for better monitoring, balanced to meet changing demands for better 'Tar' control and more rejection of defective materials.

14) Blend over three or more crop years so that crop changes will have less affect on product.

15) If other physical or chemical tests related to smoking quality can be identified, start pick up for analyses.

#4 What do we need to change in order to accomplish that objective?

We need to change our system so that the lowest labor grade worker up to top management makes a commitment to quality. Each person must know what is expected of him and how his job relates to quality. He must be made responsible for quality in his area with sufficient checks or supervisor to control his action. We must keep our system honest and above board. If you ordain a quality program and don't show people how to accomplish what you desire, you will fail. At the present, supervisors are reporting as much product out of specifications as Standards and Quality Control finds. If you tell them to stop mixing up materials without giving them a system or approach to do this, they will simply stop calling Standards and Quality Control and ship it. People always respond to the greatest pressure, for example productivity over quality. A successful program will identify problem areas and follow up with corrective action. If corrected action is not taken then someone must assume the risk.

#5 How can we get there? When can we get there?

All the changes in Standards and Quality Control that will help us short term have probably been implemented. The changes needed as addressed above will take varying degrees of time. A few can be implemented as soon as management decisions are reached. Others will require a year or so.

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