



EXPORT LEAF TOBACCO COMPANY  
INTERNAL CORRESPONDENCE

*RB*  
*1/22/84*

TO: Bud Currin

DATE: February 24, 1984

FROM: R. E. Tipps

COPY: SMA Reading File  
CMG  
P. Fisher - Louisville ✓

SUBJECT: INSTRUCTIONS FOR THE THOMSON-BARNETT PROJECT

Enclosed is the detailed instructions that Lexington has been using for the Thomson-Barnette project.

George Bisette and Steve Aloï will rewrite the instructions to cover receiving the tobacco in another county and change the person handling the accounting to Mr. Aloï instead of Mr. Davis. Also, the payment will be made from the Wilson office instead of the Lexington office.

Mr. Bisette will advise Mr. Fisher where the tobacco will be received next year. This is to advise that payment will be made from Wilson instead of the Lexington office. We request that Mr. Fisher advise Mr. Thomson and Mr. Barnett of these changes when contracting for next year's project, assuming that we will continue with this project next year.

Please advise if you want anything further from the undersigned in relation to this project.

Thank you!

*R. E. Tipps*  
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R. E. Tipps

*G. E. Bisette*  
\_\_\_\_\_  
G. E. Bisette

msh

PROJECT SOUTHAMPTON

Trial:- USA 1-84

Objective:- To observe chemical and physical differences in the cured leaf produced from six intertype crosses.

Sponsor:- Group Research and Development Centre, Southampton.

Location:- Thompson and Barnett Farm, Cynthiana, Kentucky.

Experimental Design:- Six plots - no randomisation or replication.

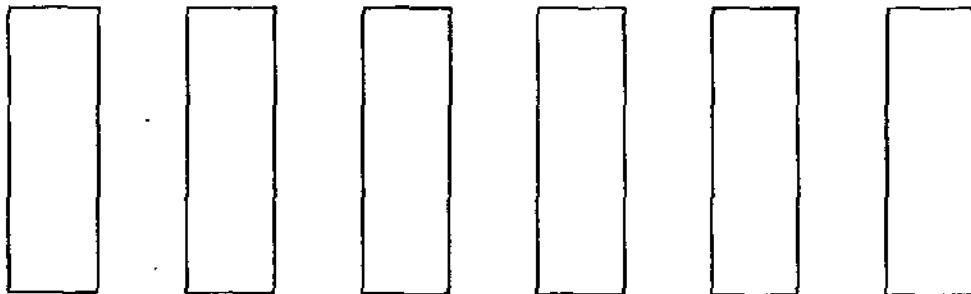
Plot Size:- 4 rows x 75 plants = 300 plants

Variable Treatments:-

a. "Variety"

1. Coker 319 x Burley 21
2. Burley 21 x Pendall 69 (Cigar)
3. Coker 319 x Walker Broad Leaf (Dark Fired)
4. Coker 319 x Maryland 609
5. Maryland 609 x Burley 21
6. Coker 319 x Little Sweet (Sun)

Field Layout:-



"Variety" 1

2

3

4

5

6

Plots will be identified by a code in which this trial is denoted by the letter A as a prefix to the code number given to the "variety" e.g. A1 denotes trial USA 1-84 "variety" 1.

Standard Treatments:-

1. Variety  
See Variable Treatments.
2. Seedbeds  
Standard practices; to include Ridomil.
3. Field Preparation; Preplanting Soil Treatment  
Standard practices; to include Ridomil.
4. Spacing  
Standard practices.
5. Fertilizer  
Total fertilization should represent three quarters of the normal levels applied to the commercial Burley crop on the Thompson and Barnett Farm.  
Timings and methods of application should follow the standard practices employed on that farm.
6. Postplanting Cultivation; Disease and Insect Control  
Standard practices.
7. Topping  
Standard practices; it is appreciated that difference varieties may have different topping levels; however, within any one "variety" the topping level must be uniform.
8. Sucker Control  
Contact only; no MH30.  
Timings and method of application - standard practices.
9. Harvesting and Curing  
Each treatment should be stalk cut when fully mature and air cured following standard practices. When stripping, the leaf should be separated into five plant positions. Each plant position should be identified by the following suffixes:-

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No. of leaves in each  
plant position

P - 1st plant position - Flyings	3
X - 2nd plant position - Lugs	3 - 5
C - 3rd plant position - Cutters	3 - 5
B - 4th plant position - Leaf	3 - 5
T - 5th plant position - Tips	3 - 5

All the tobacco should be labelled with the code denoting the trial, "variety" and plant position, e.g. A3P denotes the trial USA 1-84, the "variety" 3 and the first plant position - flyings.

There will for this trial, be a total of 30 lots (6 "varieties" x 5 plant positions).

10. Required Information

- a) Taking 50 plants in each plot:-
1. Measure and record the topping height in inches.
  2. Count and record the number of leaves after topping.
- b) Details of all field activities should be recorded on the attached Field Trial Record Sheet.
- c) Soil Test Report.
- d) Rainfall and temperature charts.
- e) Total cured weight of each plant position from each plot.

N.B. No chemical analysis of cured leaf is required.

11. Handling Cured Leaf

From each "variety"/plant position, a representative sample of 10 kilograms, or the whole of the leaf cured if less than 10 kilograms, should be taken and redried following standard procedures. Each sample should be individually labelled, using the identification scheme outlined above, e.g. A3P. Each sample should be wrapped separately in polythene and prepared for shipment according to standard procedure.

Shipping instructions will be advised at a later date.

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PROJECT SOUTHAMPTON

Trial:- USA 2-84

Objective:- To examine the properties of the Ruffled Leaf characteristic in a Virginia variety.

Sponsor:- Group Research and Development Centre, Southampton.

Location:- L.V. Jones Farm, Stantonsburg, North Carolina.

Experimental Design:- Three plots - no randomization or replication.

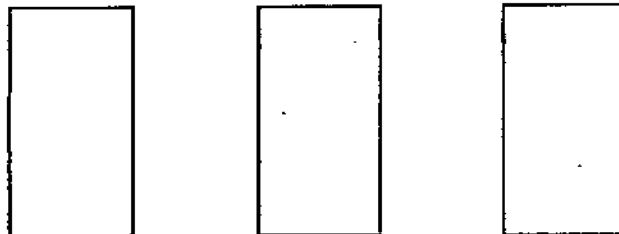
Plot Size:- 4 rows x 75 plants = 300 plants

Variable Treatments:-

a. "Variety"

1. McNair 944
2. F1 of McNair 944 x Ruffled Leaf variant of Va 509
3. Ruffled Leaf variant of Va 509

Field Layout:-



"Variety"

1

2

3

Plots will be identified by a code in which this trial is denoted by the letter B as a prefix to the code number given to the "variety", e.g. B1 denotes trial USA 2-84, "variety" McNair 944.

Standard Treatments:-

1. Variety

See Variable Treatments.

- 2 -

2. Seedbeds

Standard practices; to include Ridomil.

3. Field Preparation; Preplanting Soil Treatment

Standard practices; to include Ridomil.

4. Spacing

Standard practices.

5. Fertilizer

Basic:- 760 lbs per acre of 6:12:18  
 (45.6 lbs nitrogen:91.2 lbs phosphate:136.8 lbs  
 potassium)

Total nutrients:-

75.6 lbs nitrogen	(N)
91.2 lbs phosphate	(P)
164.8 lbs potassium	(K)

Timings and methods of application - standard practices.

6. Postplanting Cultivation; Disease and Insect Control

Standard practices.

7. Topping

Standard practices; it is appreciated that different "varieties" may have different topping levels; however, within any one "variety" the level must be uniform.

8. Sucker Control

Contacts only; no MH 30.

Timings and method of application - standard practices.

9. Harvesting and Curing

The bottom two sand leaves should be removed and discarded from all plants.

The remaining leaves should be harvested when fully mature, in five separate harvests.

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Harvests should be identified by the following suffixes:-

	<u>Leaves per harvest</u>
P - 1st Harvest - Primings	3
X - 2nd Harvest - Lugs	3 - 5
C - 3rd Harvest - Cutters	3 - 5
L - 4th Harvest - Leaf	3 - 5
T - 5th Harvest - Tips	3 - 5

If it is essential to harvest two plant positions on the same day, the procedure used in previous work to separate plant positions must be followed.

All harvests should be labelled with the code denoting the trial, "variety" and harvest, e.g. B1X denotes the trial USA 2-84, the variety McNair 944 and the second harvest - Lugs.

All leaf should be cured using standard practices for flue cured tobacco.

There will, for this trial, be a total of 15 lots (3 "varieties" x 5 harvests).

10. Required Information

- a) Taking 50 plants in each plot:-
  1. Measure and record the topping height in inches.
  2. Count and record the number of leaves after topping.
- b) Details of all field activities should be recorded on the attached Field Trial Record Sheet.
- c) Soil Test Report.
- d) Rainfall and temperature charts.
- e) Total cured weight of each harvest from each plot.
- f) Close observation and recording of any abnormal growth characteristics is required as neither the F1 hybrid (2) nor the Ruffled Leaf variant of Va 509 (3) have previously been subjected to full agronomic evaluation. If major problems are experienced these should be advised to T.G. Mitchell, Esq. as soon as possible.

N.B. No chemical analysis of cured leaf is required.

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**11. Handling Cured Leaf**

From each "variety"/harvest, a representative sample of 10 kilograms, or the whole of the leaf cured if less than 10 kilograms, should be taken and packed in sound keeping condition (not redried). Each sample should be individually labelled using the identification scheme outline above, e.g. B1X. Each sample should be wrapped separately in polythene and prepared for shipment according to standard practices.

Shipping instructions will be advised at a later date.

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PROJECT SOUTHAMPTON

Trial:- USA 3-84

Objective:- To obtain "gum" from the leaf surface of a Virginia variety.

Sponsor:- Group Research and Development Centre, Southampton.

Location:- L.V. Jones Farm, Stantonsburg, North Carolina.

Plot Size:- Half of one acre.

Standard Treatments:-

1. Variety

A Virginia variety from a commercial crop.

2. Harvesting

The bottom two sand leaves should be removed and discarded from all plants.

Harvests 1 and 2 (leaves 1 to 6) should be harvested following standard practice; these can be cured if considered a commercial proposition but no identification or recording is necessary. The remaining leaves (+ 12) should be harvested when fully mature in three harvests. It is accepted that each harvest may have to be spread over several days; it is expected, however, that there will be at least a 7 day interval between each harvest.

Harvests should be identified as follows:-

CC - 3rd Harvest  
CL - 4th Harvest  
CT - 5th Harvest

3. Handling of Green Leaf

A separate programme with instructions for extracting the "gum" will be sent by the 15th April 1984.

Shipping instructions will be advised at a later date.

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PROJECT SOUTHAMPTON

Trial:- USA 4-84

Objective:- To investigate the effect on smoke flavour of diterpenes applied to the leaf surface of two flue cured varieties before curing.

Sponsor:- Group Research and Development Centre, Southampton.

Location:- L.V. Jones Farm, Stantonsburg, North Carolina.

Experimental Design:- Two plots - no randomisation or replication.

Plot Size:- 4 rows x 200 plants = 800 plants

Variable Treatments:-

a. Variety

- 1. NC 744 (1)
- 2. McNair 944 (2)

b. Addition of diterpenes to leaf before curing

- 1. Diterpenes added. (T)
- 2. Diterpenes not added. (O)

Field Layout:-

"Variety"



Treatment T O T O

T O T O

Plots will be identified by a code in which this trial is denoted by the letter D as a prefix to the code number given to the variety, e.g. D1 denotes trial USA 4-84 and the variety NC 744.

Standard Treatments:-1. Variety

See Variable Treatments.

2. Seedbeds

Standard practices; to include Ridomil.

3. Field Preparation; Preplanting Soil Treatment

Standard practices; to include Ridomil.

4. Spacing

Standard practices.

5. Fertilizer

Basic:- 760 lbs per acre of 6:12:18  
(45.6 lbs nitrogen:91.2 lbs phosphate:136.8 lbs  
potassium)

Total nutrients:-

75.6 lbs nitrogen	(N)
91.2 lbs phosphate	(P)
164.8 lbs potassium	(K)

Timings and methods of application - standard practices.

6. Postplanting Cultivation; Disease and Insect Control

Standard practices.

7. Topping

Standard practices; it is appreciated that different varieties may have different topping levels; however, within any one variety the topping level must be uniform.

8. Sucker Control

Contact only; no MH 30.

Timings and method of application - standard practices.

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9. Harvesting and Curing

The bottom two sand leaves should be removed and discarded from all plants.

Leaf from the 1st and 2nd harvests (Primings and Lugs) will not be required for this experiment.

The remaining leaves should be harvested when fully mature in three separate harvests.

Sufficient leaf from the 1st and 3rd rows of each plot to fill the curing rack should be treated immediately after harvest and before curing. These leaves will, therefore, be kept separate from one rack of leaves from the 2nd and 4th rows which will not be treated.

Instructions for the treatment of the leaves from the 1st and 3rd rows will be provided by the 15th April 1984.

Harvests will be identified by the suffixes:-

	<u>Leaves per harvest</u>
CT - 3rd Harvest - Cutters (treated) )	3 - 5
CO - 3rd Harvest - Cutters (not treated) )	
LT - 4th Harvest - Leaf (treated) )	3 - 5
LO - 4th Harvest - Leaf (not treated) )	
TT - 5th Harvest - Tips (treated) )	3 - 5
TO - 5th Harvest - Tips (not treated) )	

If it is essential to harvest two plant positions on the same day, the procedure used in previous work to separate plant positions must be followed.

All harvests should be labelled with the code denoting the trial, variety, harvest and whether treated or not treated, e.g. DILT denotes the trial USA 4-B4, the variety NC 744 and the 4th Harvest - Leaf (treated).

There will for this trial, be a total of 12 lots (2 varieties x 3 harvests x 2 treatments - treated/untreated).

10. Required Information

a) Taking 50 plants in each plot:-

1. Measure and record the topping height in inches.
2. Count and record the number of leaves after topping.

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- b) Details of all field activities should be recorded on the attached Field Trial Record Sheet.
- c) Soil Test Report.
- d) Rainfall and temperature charts.
- e) Total cured weight of each harvest from each plot.

N.B. No chemical analysis of cured leaf is required.

11. Handling Cured Leaf

From each variety/harvest/treatment, the whole of the leaf cured in each rack should be taken and packed in sound keeping condition (not redried). Each sample should be individually labelled, using the identification scheme outlined above e.g. DILT. Each sample should be wrapped separately in polythene and prepared for shipment according to standard procedure.

Shipping instructions will be advised at a later date.

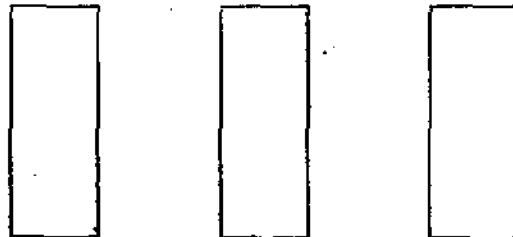
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PROJECT SOUTHAMPTONTrial:- USA 5-84Objective:- To evaluate differences in the physical characteristics of leaf from a Japanese air cured variety, Madura tobacco from Indonesia, and a standard Maryland variety.Sponsor:- Group Research and Development Centre, Southampton.Location:- L.V. Jones Farm, Stantonsburg, North Carolina.  
Thompson and Barnett Farm, Cynthiana, Kentucky.Experimental Design:- One plot for each variety at each location.Plot Size:- 4 rows x 150 plants = 600 plantsVariable Treatments:-a. Variety

1. TI 168 (1)
2. Maryland 872 (2)
3. Indonesian Madura (3)

b. Location

1. North Carolina (C)
2. Kentucky (K)

Field Layout:-

Variety

1

2

3

Plots will be identified by a code in which this trial is denoted by the letter E as a prefix to the code number given to the variety and location, e.g. E1K denotes trial USA 5-84, variety TI 168 grown in Kentucky.

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Standard Treatments:-1. Variety

See Variable Treatments

2. Seedbeds

Standard practices; to include Ridomil.

3. Field Preparation; Preplanting Soil Treatment

Standard practices; to include Ridomil.

4. Spacing

Standard practices for Maryland tobacco.

5. Fertilizer

## a) On L.V. Jones Farm, North Carolina:-

Basic:- 760 lbs per acre of 6:12:18  
(45.6 lbs nitrogen:91.2 lbs phosphate:136.8 lbs  
potassium)

Total nutrients:-

75.6 lbs nitrogen	(N)
91.2 lbs phosphate	(P)
164.8 lbs potassium	(K)

Timings and methods of application - standard practices.

## b) On Thompson and Barnett Farm, Kentucky:-

Total fertilization as well as timings and methods of application should follow the standard practices employed in the commercial Burley crop on that farm.

6. Postplanting Cultivation; Disease and Insect Control

Standard practices for Maryland tobacco.

7. Topping

Standard practices for Maryland tobacco. It is appreciated that different varieties may have different topping levels; however, within any one variety the topping level must be uniform.

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**11. Handling Cured Leaf**

From each variety/plant position/location, a representative sample of 20 kilograms, or the whole of the leaf cured if less than 20 kilograms, should be taken and redried following standard procedures. Each sample should be individually labelled, using the identification scheme outlined above, e.g. E1KX. Each sample should be wrapped separately in polythene and prepared for shipment according to standard procedure.

Shipping instructions will be advised at a later date.

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PROJECT SOUTHAMPTON

Trial:- USA 6-84

Objective:- To measure the changes in flavour precursors during the different stages of curing of Virginia and Burley tobaccos.

Sponsor:- Group Research and Development Centre, Southampton.

Location:- L.V. Jones Farm, Stantonburg, North Carolina  
Thompson and Barnett Farm, Cynthiana, Kentucky

Experimental Design:- Samples to be taken from commercial tobacco crop at each location.

Variable Treatments:-

1. Flue Cured Virginia (North Carolina)

Six samples to be taken through the phases of curing from harvest to completion of cure.

2. Air Cured Burley (Kentucky)

One sample to be taken at weekly intervals throughout the curing process.

Standard Treatments:-

1. Variety

- a. A Virginia variety from a commercial crop.
- b. A Burley variety from a commercial crop.

2. Leaf Sampling

A separate programme for leaf sampling, together with instructions for the extraction of flavour precursors will be sent by 15th April 1984.

Shipping instructions will be advised at a later date.

PROJECT SOUTHAMPTONTrial:- USA 7-84Objective:- To explore the effect of different nitrogen fertilization levels with and without added molybdenum on the nitrogenous compounds in leaf and smoke from a conventional and a "low nitrate" Burley "variety".Sponsor:- Group Research and Development Centre, Southampton.Location:- University of Kentucky Agricultural Experiment Station, Lexington, Kentucky.Experimental Design:- Randomized block - three replications.Plot Size:- To be determined by the University of Kentucky.Variable Treatments:-Nitrogen Application (Source - the most commonly used nitrogen source as recommended by the University of Kentucky).

1. One third normal rate (1)
2. Two thirds normal rate (2)
3. Normal rate (3)

Variety

1. Kentucky 14 (N)
2. Low nitrate line (L), (seed to be provided by P.R. Fisher)

Molybdenum

1. With added molybdenum (M), (1 lb/acre as Sodium Molybdate).
2. Without added molybdenum (O).

A total of twelve treatments.

Field Layout:- To be decided by the University of Kentucky.

Plots must be identified by a code in which this trial is denoted by the letter H as a prefix to the code number given to the nitrogen application, variety and molybdenum treatment, e.g. H2LM denotes USA 7-84, two thirds normal rate of nitrogen, low nitrate line with added molybdenum.

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Standard Treatments:-

1. Variety  
See Variable Treatments.
2. Seedbeds  
Standard practice.
3. Field Preparation; Preplanting Soil Treatment  
Standard practices; to include Ridomil.
4. Spacing  
Standard practices.
5. Fertilizer  
See Variable Treatments. Phosphate and Potash should be at levels normally applied at the University of Kentucky farm. Rates must be the same for all treatments.
6. Postplanting Cultivation; Disease and Insect Control  
Standard practices.
7. Topping  
Standard practices.
8. Sucker Control  
Maleic Hydrazide (Potassium salt) at topping.
9. Harvesting and Curing  
Each treatment should be stalk cut when fully mature and air cured following standard practices for Burley tobacco. When stripping, the leaf should be separated into four plant positions. Each plant position should be identified by the following suffixes:-

	<u>No. of leaves in each plant position</u>
X - 1st plant position - Flyings and Lugs	3 - 5
C - 2nd plant position - Cutters	3 - 5
B - 3rd plant position - Leaf	3 - 5
T - 4th plant position - Tips	3 - 5

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All the plant positions should be labelled with the code denoting the trial, fertilizer rate, variety and plant position, e.g. H2LMC denoting the trial USA 7-84, two thirds normal rate of nitrogen, low nitrate line, added molybdenum, second plant position - Cutters. It is intended that the tobacco from the three replications per treatment will be bulked together.

There will, for this trial, be a total of 48 lots (3 rates of nitrogen x 2 varieties x 2 molybdenum levels x 4 plant positions).

10. Required Information

- a) Taking 50 plants in each plot:-
  1. Measure and record the topping height in inches.
  2. Count and record the number of leaves after topping.
- b) Details of all field activities should be recorded on the attached Field Trial Record Sheets.
- c) Soil Test Report.
- d) Rainfall and temperature charts.
- e) Total cured weight from each plant position after stripping.

11. Handling Cured Leaf

From each lot of cured tobacco, a representative sample of 7 kilograms, or the whole of the leaf cured if less than 7 kilograms, should be taken and redried following standard procedures. Each sample should be individually labelled using the identification scheme outlined above, e.g. H2LMC. Each sample should be wrapped separately in polythene and prepared for shipment according to normal procedure.

Shipping instructions will be advised at a later date.

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