

BAT/SA/75.

29th June, 1970.

J.M. Maxwell, Esq.,
Imperial Tobacco Co. of Canada, Ltd.,
P.O. Box 6500,
Montreal, P.Q., CANADA.

Dear Sir,

Nitrogen Nutrition and Smoke Composition

I was very pleased to receive your letter of the 15th June, giving information about experiments in Canada to compare different levels of nitrogen nutrition. It is most encouraging to learn that Mr. J. L. Elliot at Delhi already has this type of experiment in hand, and is prepared to make samples of his tobacco available to us. At the same time, judging from the figures which you quote, I rather doubt whether the samples which he can offer at the present moment differ sufficiently in their total nitrogen content. For instance, based on our greenhouse experiments, the predicted effect of increasing the nitrogen content from 1.51 to 2.13 would, for many smoke constituents, lie within the experimental error. This necessitates exaggerating the differences in leaf nitrogen content in order to see a clear-cut effect on smoke composition. For flue-cured tobacco I would like, if possible, to examine samples ranging from not more than 1.2% total N, to at least 2.5% total N, with one or preferably two intermediate levels. Naturally these levels should be achieved by a field experiment in which nitrogen fertilisation rate is the sole variable. Is it possible that Mr. Elliot may be able to conduct the necessary experiment in 1971? A level as low as 1.2% may cause some difficulty, and will obviously require careful selection of the experimental site.


For Burley tobacco the same principles apply, and ideally I would like four samples in which the nitrogen nutrition has been varied to give average total nitrogen levels ranging from about 2% to about 5%, although a slightly narrower range could still be useful. I am not sure what sort of nitrogen percentages will result from the two Burley experiments which you mention, but I doubt if the range will

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is sufficient. If that proves to be the case, is there any chance of Mr. Scott being able to run a special experiment next year? For either Burley or flue-cured tobacco, samples of 10 - 12 lb. per treatment are adequate for our purposes.

With many thanks for your help,

Yours sincerely,


D.J. Wood.

c.c. Dr. S.J. Green.

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