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TOBACCO FERMENTATION - SUMMARY OF FINDINGS FROM A REVIEW OF ITS EFFECTS ON PRODUCT PROPERTIES

The information evaluated in this review suggests a limited number of ways in which tobacco fermentations might be applied for the improvement of product attributes. These are:-

a) As a way of increasing the acceptability of the smoke to the consumer by:

   i) reducing irritation levels;

   ii) increasing the nicotine transfer to smoke and the proportion of extractable nicotine;

   iii) enhancing smoke flavour.

b) As a route to altering/reducing pack nicotine deliveries without diminishing smoke acceptability to the consumer.

c) As a method of producing acceptable smoke products not requiring humectants or casing in order to produce a smoke aerosol of low retention in the lung.

d) As a treatment for air-cured tobaccos which would avoid the need for casing treatment, with the loss in dry matter offset by the saving in processing costs.

None of these are proven, particularly in relation to low-delivery cigarettes, and the tobaccos of most immediate interest in cigarettes. Similarly no case can be made for the use of traditional fermentation treatments to reduce smoke deliveries of tar, CO, NO etc. The available information suggests little prospect of a major reduction in tar, whilst for the other substances of concern, direct information is lacking on which a valid judgment could be made.

It is proposed that some evaluations of fermentation should be made, with particular respect to a) - d) above. It is suggested that this should be done by collating information on the fermentation treatments readily available to B.A.T, selecting from these a number to cover the extremes of treatment conditions, followed by an examination of the effect of them on the properties of cigarette tobaccos in low-delivery cigarettes.

Directed fermentations, in which enzymes or micro-organisms are added to the tobacco to obtain a very specific response, have not been considered in these recommendations. Their use would increase the possible scope for product change as a result of fermentation.

T.G. MITCHELL