

Note to Dr. R. Salter

R&D Priorities

Since 1985 we have maintained a computer data-bank of R&D projects conducted throughout the entire BAT Group; this classifies projects by a variety of descriptors and records allocated effort. In order to give an indication of the relative priorities attached to these various projects, this note defines the major business objectives being addressed (which appear as one of the project descriptors), and the percentage of effort devoted to each business objective, averaged across the Group. It then illustrates each of them with some of the more important projects.

Smoke Quality Improvement

"To have the technology to enable Group Companies to achieve superiority over leading competitive brands and to be able to maintain smoke quality whilst responding to other probable restrictions. This will include the need for reliable methods of measuring consumer assessments".

Effort allocation: 30% (but as high as 57% for B&W).

This category includes evaluation of alternative tobacco grades and the potential for tobacco improvement through genetic adaptation. Also covered is the important area of sheet technology, including ammonia treatments, and the search for new casing and flavouring materials. Alternative techniques for consumer research and product testing represent an additional priority topic, as does many of the extensive range of projects associated with on and off-line quality control.

Product Modification in Response to Regulatory Authorities (and Consumer Demand generated by Regulatory Issues)

"To be aware of all legislative standards affecting present or proposed future Group products/processes and to ensure that technology exists to enable these standards to be achieved. Additionally, to ensure that the Group is technologically prepared to adapt products to meet standards imposed on the industry, without impairment of consumer acceptance."

Effort allocation: 15% (but as high as 24% for Southampton R&D).

This is a broad category encompassing such diverse activities as the search for appropriate measures of smoke biological activity, methods for assessing the fabric-ignitability of cigarettes and means of reducing the minor components of smoke including carbon monoxide, all of which increasingly are attracting regulatory interest. Also included in this sector is our basic research on environmental tobacco smoke and the reduction of sidestream smoke.

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Cost Reduction

"To have the technology capability of being the lowest cost producer for corresponding styles of products in Group markets whilst maintaining quality standards".

Effort allocation: 6%

Important projects in this category include the evaluation of alternative means of cutting and drying tobacco and of alternative feeding devices for cigarette making machines. In general the aim is to seek improved filling power and thus reduce tobacco costs.

Cigarette Physical Parameters (Subjective)

"To identify consumer standards for performance and to be able to achieve these both efficiently and consistently whilst responding to other probable restrictions".

Effort allocation: 5%

Several of the Cost Reduction projects also fall into this category: tobacco filling power and its potential for improved firmness and other cigarette features are priority topics.

Alternative Products

"To position the Group with appropriate technology in the event that alternative products to conventional cigarettes either become a significant threat to our business or constitute an appropriate diversification".

Effort allocation: 4%

This category comprises just two projects: NOVA, which represents the BAT Fundamental Research aimed at a Premier-like "cigarette" for the long term; and GREENDOT, which seeks to establish a range of products whose tar/nicotine ratio is much lower than for conventional products.

The above business objectives account for 60% of the total R&D activities of the Group. Apart from the specific topic of Agro-technology covering essentially the leaf programmes of Brazil which accounts for a further 5%, the rest of the Group projects either do not fall into the above categories, or span several.

The total expenditure of the Group on R&D is approximately £30 mn. p.a.

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