

TOBACCO MANUFACTURERS'  
STANDING COMMITTEE

REPORT

FOR

YEAR ENDED 31st MAY, 1958

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TOBACCO MANUFACTURERS'  
STANDING COMMITTEE

6-10 BRUTON STREET,  
LONDON, W.1.

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**TOBACCO MANUFACTURERS' STANDING COMMITTEE**

- SIR ALEXANDER H. MAXWELL, K.C.M.G., *Chairman.*  
 SIR EDWARD S. BARON (Carreras Ltd.).  
 C. W. MASON (Gallaher Ltd.).  
 A. D. McCORMICK (British-American Tobacco Co. Ltd.).  
 D. M. OPPENHEIM (British-American Tobacco Co. Ltd.).  
 E. J. PARTRIDGE (The Imperial Tobacco Co. Ltd.).  
 S. D. G. PHILLIPS (Godfrey Phillips Ltd.).  
 THE LORD SINCLAIR OF CLEEVE, K.C.B., K.B.E. (The Imperial Tobacco Co. Ltd.).  
 J. WALLINGTON (Ardath Tobacco Co. Ltd.).  
 F. H. WRIGHT (J. Wix & Sons Ltd.).
- Secretary:* C. H. JAMES, F.C.A.  
*Research Officer:* J. I. MASON, M.A.
- Scientific Consultants:* SIR ALFRED EGERTON, D.SC., F.R.S.  
 SIR RONALD A. FISHER, SC.D., F.R.S.

**TECHNICAL SUB-COMMITTEE**

- H. C. I. ROGERS, M.A., *Chairman.* (The Imperial Tobacco Co. Ltd.).  
 SIR CHARLES ELLIS, PH.D., F.R.S., *Deputy Chairman.* (British-American Tobacco Co. Ltd.).
- H. R. BENTLEY, D.PHIL. (The Imperial Tobacco Co. Ltd.).  
 D. G. I. FELTON, D.PHIL. (British-American Tobacco Co. Ltd.).  
 E. C. FIELDSEND, M.A. (The Imperial Tobacco Co. Ltd.).  
 J. C. GILMOUR, B.A., B.SC. (Godfrey Phillips Ltd.).  
 B. M. GREEN, M.A., F.R.I.C. (Ardath Tobacco Co. Ltd.).  
 M. H. HALL, PH.D. (Gallaher Ltd.).  
 I. W. HUGHES, PH.D. (British-American Tobacco Co. Ltd.).  
 W. W. REID, F.R.I.C. (Carreras Ltd.).  
 C. F. SHARMAN, PH.D. (The Imperial Tobacco Co. Ltd.).  
 G. F. TODD, M.A. (The Imperial Tobacco Co. Ltd.).

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**REPORT FOR YEAR ENDED 31st MAY, 1958**

**D**URING the past year the Tobacco Manufacturers' Standing Committee has continued to assist research into questions concerned with the relationship between smoking and health, to keep in touch with scientists and others working on this subject in the U.K. and abroad, and to make information available to scientific workers and the public.

The Medical Research Council has continued to make grants from the donation made by the manufacturer members of the Committee to support research designed to increase knowledge of the causes of lung cancer. The fields of research to which this money has been applied by the Medical Research Council include epidemiological studies of possible causal factors in the aetiology of lung cancer, studies of the possible inter-relationships of tobacco smoking, atmospheric pollution and respiratory disease, and various studies of the properties of tobacco smoke.

As foreshadowed in the Committee's last Annual Report, in addition to their donation to the Medical Research Council, the manufacturers are providing further funds in order to promote and assist research into any question relating to smoking and health. The application of these funds requires to be carefully planned if the best use is to be made of them and the Committee has been seeking advice from a number of authorities. It has further been pointed out to the Committee that in its pathological aspects lung cancer does not differ fundamentally from cancer in other sites and consequently that the problem of establishing the causes of lung cancer, to which the Committee is attempting to contribute, is essentially part of the much wider problem of establishing the causes of cancer generally. In accordance with this view, the Committee, while maintaining full support of research specifically concerned with the causes of lung cancer, hopes also to aid projects that may contribute to the solution of this wider problem.

During the year, the Committee published the first of a series of Research Papers designed to make information available to research workers and the public. This paper, "Statistics of Smoking," gave consumption data in the possession of the industry for which member companies had been asked by various research workers. The demand for this paper was such that a second and slightly enlarged edition is in process of publication.

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Chemical and physical research into the constituents of tobacco smoke has been continued in the laboratories of member companies. Amongst the subjects that have received attention are the following :—

#### Polycyclic Hydrocarbons

Last year's Annual Report noted the finding that minute traces of 3 : 4-benzpyrene were present in cigarette smoke. Medical and scientific opinion, however, now appears to entertain considerable doubt as to whether these traces could be in any way injurious. The Report of the Medical Research Council for 1955/56, published in June, 1957, commented :—

“ It may be supposed that a case is made out incriminating the carcinogenic substance 3 : 4-benzpyrene in tobacco smoke as a causative agent in lung cancer. But a closer examination leads to the conclusion that the case is not proven. The amount of 3 : 4-benzpyrene in the smoke from 100 cigarettes has been estimated to be about one-thirtieth of a millionth of an ounce ; about a fifteenth of this probably comes from the cigarette paper and the remainder from the tobacco. Even though this substance is known to be a powerful cancer-producing agent, there is no certainty that it is harmful in such low concentration.”

Nevertheless, experiments have been carried out in the industry's laboratories to discover substances which conceivably might be used in order to reduce the minute quantities of benzpyrene in cigarette smoke. A large number of compounds of different types have been examined and so far two substances—copper nitrate and platinum diamminonitrite—have been found, either of which reduces the benzpyrene content of cigarette smoke. It has been claimed that the addition of 4 per cent. of ammonium sulphamate to the paper could have a similar reducing effect. This claim has not been substantiated although it has been verified that the addition of a relatively large quantity of ammonium sulphamate to the tobacco does reduce the benzpyrene content of the smoke.

The work referred to above has consisted only of laboratory experiments. If it were ever shown that the use of such substances was desirable, much more exploratory work including detailed investigation of their side effects would require to be undertaken. As noted above, it is extremely doubtful if the minute traces of 3 : 4-benzpyrene present in cigarette smoke are in any way injurious to health.

A number of other aromatic polycyclic hydrocarbons have been detected in cigarette smoke and investigations of these are continuing.

The Committee will maintain close touch with the work that is being done in this field.

#### Arsenic

It has been suggested that the residue of arsenical dusts and sprays formerly used as insecticides on tobacco crops in U.S.A. might conceivably be dangerous. As stated in last year's report, steps were taken some years ago to bring about the virtual elimination of arsenical sprays as an insecticide for use on tobacco. Tests continue to show that arsenical traces have almost disappeared from cigarettes manufactured in this country.

#### Radioactive Material

The nature and extent of radioactive material occurring naturally in tobacco leaf received some publicity during the past year. A statement giving the facts on this subject was issued by the Committee. Further, the Chief Geologist of the Atomic Energy Division of the Geological Survey of Great Britain denied that the Survey had at any time stated that tobacco ash was radioactive to a dangerous degree.

In answer to a question in the House of Commons on 10th March, 1958, the Minister of Health said :—

“ Measurements of the radioactive content of tobacco, tobacco ash and tobacco smoke have been carried out under the auspices of the Medical Research Council. There is no evidence that the radioactive content of the tobacco plant is in any significant manner different from that in other forms of vegetable life. Very little radioactivity can be detected in tobacco smoke, since the greater part of the radioactivity in the plant remains in the ash. My noble Friend is advised that the dose of radiation to the lungs from this source, even in heavy smokers, is so small that it is unlikely to be a factor of any importance in the causation of cancer of the lung. . . . Measurements of the radioactivity in various forms of tobacco were taken under the auspices of the Medical Research Council by research workers of the Department of Medical Physics in Leeds University in 1953 and their results have been confirmed by other research groups including Professor Mayneord's group at the Institute of Cancer Research.”

#### Smoke Filtration

Filtration is a possible alternative to introducing substances into the tobacco or paper in order to remove specific gases or particles from cigarette smoke if any of these were shown to be injurious. Considerable experimental work on methods of filtration is being done in this and other countries but the problems involved are far from simple either theoretically or practically.

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**Supply of Experimental Material**

For some years the Committee has supplied cigarettes for experimental purposes to a number of research workers outside the industry. During the past year cigarette smoke condensates were also supplied for such purposes by the Committee.

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Sir Alfred Egerton, Scientific Consultant to the Committee in the field of physical chemistry, has recently proposed to the Committee that research should be carried out with the objective of establishing the principles of smouldering combustion, particularly in relation to forced air supply in products such as tobacco. He has recommended that such factors as rate of smouldering, temperature variations in the smouldering zone of the cigarette, and the oxygen consumption of the chief products formed should be investigated. The Committee has accepted these proposals, and steps are being taken to implement them.

Various other research projects are under consideration.

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Waterlow & Sons Limited, London and Dunstable

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