

'Medical Testament'

Nutrition & Soil Fertility

From Supplement to "*The New English Weekly*," England, April 6th, 1939

A Report of the Speeches of:

[Sir Robert McCarrison](#), C.I.E., M.D., F.R.C.P. and

[Sir Albert Howard](#), C.I.E., M.A., Fellow of the Imperial College, at a Meeting at the Town Hall, Crewe, on March 22nd, 1939, in support of the Medical Testament of the Local Medical and Panel Committees of the County Palatine of Chester.

[Medical Testament text] **"The Testament" was unanimously adopted by the audience of over 600 persons, representing the County of Cheshire, the County Council, the Medical profession and the National Farmers' Union.**

Sir Robert McCarrison

IN a book entitled "*Studies in Deficiency Disease*," which I published 19 years ago, I postulated, as a result of epidemiological, experimental and histopathological researches, that a large proportion of the common ailments of mankind were the direct or indirect consequences of faulty food: food deficient in certain essential substances -- suitable protein, mineral salts and vitamins -- *and excessively rich in carbohydrates*. I concluded an exhortation, contained in the introductory chapter to that book with a statement which I venture here to repeat:

"With increasing knowledge of nutritional problems, it has become apparent that our dietetic habits need remodeling, and that education of the people as to what to eat and why they eat it is urgently necessary. It is clear that green vegetables, milk and eggs should form a far higher proportion of the food of the nation than is now customary. Municipalities and other public bodies should concentrate on the provision of an abundance of milk and vegetables, for there is no measure that could be devised for improving the health and well-being of the people at the present time that surpasses this either in excellence or in urgency."

Those of you who are familiar with the progress of research on the relation of food to health and disease, during the past 19 years, will be aware of the great mass of evidence that has accumulated from all over the world, demonstrating beyond all possibility of doubt the truth of these statements.

You can imagine, then, with what pleasure I received last Christmas morning notice of the intention of the doctors of Cheshire to prepare a "Medical Testament" in which they would affirm -- as a result of their experiences during the last few years -- that a large part of the illness they are called upon to treat is the consequence of faulty nutrition, and this faulty nutrition the consequence of faulty food. You can imagine, too, with what gladness I read the passage in their "Medical Testament" in which amazement was expressed at the benefits accruing to their patients from the simple expedient of correcting defects in their diets; and with what whole-heartedness I would support their plea for the prevention of disease by these means. You can imagine, also, with what feelings of thankfulness I found the statement made in their "Testament" that my own work had helped them, in some measure, to arrive at the conclusions set out in this remarkable document. It is with such feelings as these that I find myself on this platform to-day, glad of the opportunity, and of the privilege, to lend support to their movement, and impressed by the zeal and public spirit which have impelled them to make their convictions known...

The science of nutrition tends, day by day, to become more and more complex. Biochemical and other facts accumulate with such rapidity and cover so wide a field that for some amongst us there is the risk of failing to see the wood for the trees. It is well, therefore, to have certain guiding principles constantly in mind. The first of these is an understanding of the nature of nutrition; the second is awareness of the factors that disturb nutrition; the third is the knowledge that food -- a chief, but not the only, instrument of nutrition -- is the dominant factor in determining man's general physical endowment, powers of endurance and resistance to disease; the fourth is that a well-constituted diet made up of fresh natural foodstuffs, largely lacto-vegetarian in character, contains all elements and complexes, known and unknown, needed for normal nutrition, so far as food can supply them, always provided that the fruits of the earth are produced on soils that are not impoverished. For me these four principles are the essence of the whole matter and their right application provides the means of preventing and alleviating a vast amount of human suffering no matter what future research has to reveal in regard to the factors in food responsible for this prevention and alleviation of disease...

The Nature of Nutrition

"Nutrition" is one of the most misused words in the English language. Some people seem to think that it merely means "food"; others that it is a condition of body depending on food -- a condition which may be good, bad or indifferent as the case may be. Actually it is a fundamental function on which the condition of the body depends. Food is the instrument, nutrition is the act of using it: the series of coordinated processes concerned in the growth, maintenance and repair of the living body as a whole or of its constituent parts. A primary purpose of the function of nutrition is, therefore, to establish and sustain the structure and function of all organs and parts of the body; to keep, in short the mechanism of the body in good repair and running order. Nutrition does for our bodies what we or our chauffeurs must do for our cars, in the way of constant attention to oiling, greasing, adjustment and fuel-supply, if they are to remain functionally efficient. Now health is that condition of body in which all organs and parts are sound and perform their functions duly, easily and satisfactorily. It follows, therefore, that the primary purpose of the function of nutrition is to maintain health; to prevent that disturbance of structure or function of organs or parts of the body which is disease. In these days, when the words 'nutrition' and 'malnutrition' are so loosely used, it is necessary to have this conception of the nature of nutrition as a fundamental function of the body, and of malnutrition as disorder of that function, constantly before us.

The acts and processes involved in nutrition are many. They include respiration, the acceptance of food and water, mastication, deglutition, digestion, circulation, assimilation, and excretion -- pulmonary, urinary, cutaneous and intestinal. Such, then, is 'nutrition': the most important of all functions of the body since upon it all other functions depend. I doubt whether in thinking of it we always think of all these processes as part of it: of 'excretion,' for instance, or of the efficient action of the bowels, the lungs or the skin. Yet they are as much a part of nutrition as is digestion. Nor do we, I venture to say, always remember that the efficiency of the processes involved in nutrition depends on the adequate nourishment of the organs and tissues responsible for them; of the nourishment of the gastrointestinal tract and endocrine organs, for instance. Nor do we always remember that proper exercise of the body not only aids the operation of the processes involved in nutrition but is actually essential to their fullest efficiency. Indeed, such exercise is part and parcel of nutrition.

Adaptation

There is another aspect of "nutrition" which is often forgotten. I refer to adaptation: that peculiar property of the body and its constituent parts by virtue of which they adapt themselves to all sorts of conditions.

Let me give you a few examples of it: examples for which I am indebted to Alexis Carrel's book, "*Man the Unknown*." The body adapts itself to heat and cold, to wind and rain, to sun and soil, to altitude and sea-level, to sudden changes of climate, to the most varied kinds of diet. The exercise of its powers of adaptation to these environmental conditions stimulates all organic functions; and this exercise, this stimulation, is essential to well-being and to the acquisition of stamina, vigour, powers of endurance and resistance to fatigue. Thus "we

resist cold as we resist heat, by nervous, circulatory, and nutritive changes of our whole body. All the organs as well as the skin are maintained in constant activity by exposure to heat, cold, wind, rain and sun. But when we spend our lives sheltered from the inclemencies of the weather our adaptive functions atrophy from disuse." (Carrel). We become "soft" and lack hardiness.

The same is true of different organs of the body. Thus, the stomach is designed by nature to digest all sorts of natural foods. But when we constantly present it with sloppy, disintegrated, highly sweetened, easily digested food it is relieved of half its work. It is deprived of the stimulus of effort and the less it has to do the less it does. So it becomes functionally inefficient. Quite recently an extensive inquiry was carried out in Sweden into the cause of the high incidence of achylia and its attendant gastrointestinal ailments (colitis, constipation, etc.). One factor in its causation was found to be this very thing acting in association with vitamin deficiency.

Factors influencing Nutrition

The efficiency of the function of nutrition may be said, then, to depend on four things:

First, the adequate provision of the materials with which the nourishment of the body is effected; oxygen, water, food and a substance or substances produced in the skin by the action of sunlight.

Secondly, the efficient performance of each one of the acts or processes involved in nutrition.

Thirdly, the efficient exercise of the body and of its adaptive functions.

Fourthly, the avoidance of all influences which adversely affect nutrition: such, for instance, as overeating, imbalance of the food, insufficient rest and sleep, smoke-laden atmosphere which cuts off the beneficent rays of sunlight, worry, emotional excitement, alcohol and infection. I often think that we fail to get the fullest benefits from properly constituted food owing to neglect of one or other or several of these things: such, for instance, as the sufficient consumption of water, proper action of the bowels, physical exercise, or adequate rest and sleep, especially in growing children.

So far I have spoken of the first two of the four guiding principles enumerated in my opening remarks.. The other two may be grouped together under the single heading:

Food, the foundation of Health

Food, as I have said, is the dominant factor in determining man's general physical endowment and powers of resistance to disease. The "Medical Testament" refers to certain experiments, carried out by me in India, which are amongst those the results of which led to this conclusion. Some of you may have read the account of them which the "Testament" gives, and those of you who have not will, I hope, do so, and be as convinced by their results as the authors of the "Testament" have been. It had been my purpose to refer to them myself in some detail but inasmuch as this document does so I shall content myself by summarizing their results in a few words.

Some races of India are of fine physique and enjoy good health; others are of poor physique and subject to much disease. The dominant factor in the production of these differences is food. Those races whose diets are made up for the most part of whole cereal grains, legumes, milk and its products, green leaf and root vegetables, fruit and meat in moderation -- "the protective foods," now so-called -- are of fine physique and healthy, provided the foodstuffs are fresh and produced on soils that are not impoverished. Those whose diets are made up for the most part of denatured foodstuffs, such as polished rice, with little or no milk, milk products, fresh vegetables, legumes, fruit and meat, are of poor physique and subject to disease in great variety of form. Animals (white rats) fed on these diets respond to them in the same way: on the former diet they remain healthy; on the latter they become diseased. This is understandable when we remember what the functions of food are.

Food has two functions: the first, to provide materials -- carbohydrates, fats, and, to a lesser extent, proteins -- from which energy is generated for the vital activities; and the second, to provide materials -- proteins, mineral elements, and vitamins needed for the growth, maintenance and repair of the body as a whole and of its constituent parts, and for the regulation of its processes. In accordance with these two functions, the food-stuffs available for our use are divisible into two classes: "the fuel foods" and "the protective foods."

The *fuel foods* are those rich in energy-bearing substances. They include the cereal grains, bread, potatoes, sugar and animal and vegetable fats. They may be likened to the petrol with which we provide our cars. Their combustion produces the energy needed for the work of the body, as the combustion of petrol produces the energy needed for the work of the car. And just as the engine of the car needs a suitable fuel-mixture, so does the engine of the body.

The *protective foods* are those rich in protective substances -- proteins, mineral elements calcium, phosphorus, iron, iodine, etc., and vitamins. They are so-called because these substances protect the body against deterioration of its structure and functions. They may be likened to the oil, grease, adjustments and other attentions needed to maintain the efficiency of our cars. Without their adequate provision structure and function will assuredly suffer: disease will result, for disease is disturbance of structure or of function of organs or parts of the body. The protective foods protect us, therefore, against disease: disease most likely to arise while the body is growing. The chief protective foods are milk and its products, green leaf and root vegetables, fruit, legumes, eggs, fish oils, and meat -- particularly glandular organs. Some of these are rich in one or more kinds of protective substances; some are rich in others. Their proper combination ensures the presence of all.

In this country everyone gets enough fuel foods, chiefly in the form of white bread, potatoes, margarine or butter; and nearly everyone gets enough protein in the form of meat of one kind or another. But many millions do not get enough of the protective foods. Consequently, they are prone to suffer from disturbances of structure or of function of organs or parts of the body, just as a car will when adequate oil, grease and attention are denied it.

Let our rule be, therefore, to select our foodstuffs, from the unsophisticated materials that nature provides. Let the energy-bearing foods be chosen not only because they are energy-bearing but because they are also protective: whole wheat flour, for instance, which is rich in mineral elements and vitamins of the B class, rather than white flour which is not. We are often told that provided the diet be varied enough there is no need for this; but the diet of millions of people is not varied enough. This "varied diet" string is one on which many are wont to harp, but it is a string that is often out of tune with modern conditions of life. So let us follow the example of the races of Northern India and consume the energy-yielding foods together with the protective substances that are linked to them by nature. Let us not divorce the one from the other; otherwise in balancing the constituents of the diet we will have to do for ourselves what nature does much better.

There are four chief faults in the diets of a great mass of the people in this country. First, the use of denatured white flour and of the bread, cakes, etc., made from it, in preference to the whole wheat flour, whole meal bread and whole cereal grains. Secondly, there is the excessive use of carbohydrate foods and the *inordinate* use of sugar, sweets and sweet cakes which is one of the outstanding dietetic vices of the day. This inordinate use of sugar disturbs the balance of the diet, causing it to be excessively rich in carbohydrate relative to vitamin B1 -- producing, in short, a relative deficiency of this very important vitamin -- and, it impairs the appetite, especially in children, for more nutritious foods. Thirdly, there is the insufficient use of fresh, green vegetable foodstuffs in the form of salads. And fourthly, there is the insufficient use of *safe* milk; and the large consumption, by many people, of meat and other animal foods -- a practice as unnecessary as it is uneconomical. This is not to decry meat, which is an excellent foodstuff, but to decry the excessive and wasteful use of it.

Before leaving the subject of the faults of British diets, let me read you an extract from a recent review article on the subject of wholemeal flour and bread versus white flour and bread. It was published in January of this

year and may be taken as the latest, if not the last, word on the subject:

Extract from a review article on "*The Nutritive Value of Wheaten Flour and Bread*," by Alice Mary Copping, Lister Institute, London, published in *Nutrition Abstracts and Reviews*, January, 1939. Vol. VIII No. 3. pp. 555.

"If one sums up the evidence which has been collected in the course of this review it is quite clear that the change over from wholemeal to white flour, that took place when steel roller mills were introduced nearly 70 years ago, has resulted in reduction of the nutritional value of the protein, in serious lowering of the content of calcium, phosphorus and iron, in reduction of the vitamin B, and vitamin B2 complex content, and carotene content and probably in complete removal of the vitamin E, all representing dead loss nutritionally. In order to change back to wholemeal it is necessary to alter the tastes of the people and to overcome the vested interests in the existing milling industry, and to find means of using wholemeal flour more quickly and of storing it more satisfactorily. The advantages to be gained in national health would make it well worth while to overcome these difficulties."

Dietetic Malnutrition

Malnutrition due to faulty food -- dietetic malnutrition -- is widespread. Poverty, ignorance, indifference and prejudice are responsible for it. While not attempting in any way to minimize the baneful influence of poverty it may be remarked that much can be done to ensure an adequate diet by the right choice of food, and that at relatively little cost. Much can be done with little to ensure a properly constituted diet if people set about it the right way and get rid of the idea that they are starving unless continually fortified with 'baked meats,' 'sugar and spice and all that's nice.'

In regard to ignorance all that I need say is that our educational system is deplorably lacking in facilities for the acquisition of knowledge of food values. "We spend millions on feeding the minds of the youth of the nation. Is it not time that we spent a little (as an essential part of all school curriculae) on showing those young people how rationally to feed their bodies and those of their prospective progeny?" (Lord Bledisloe).

Faulty nutrition, due usually to faulty food, is as you yourselves have found, responsible for a large proportion of human ailments. It is responsible for them because it gives rise to disturbances in structure and in functions of different organs and parts of the body -- disturbances varying according to the nature of the food faults -- and because it lowers the resistance of the body to infection. Malnutrition and infection: these two, acting singly or more often in consort, are the chief causes of much of the disease to which man is erroneously supposed to be heir -- erroneously because it is preventable. "Millions of people in all parts of the globe are either suffering from inadequate physical development or from disease due to malnutrition or are living in a state of sub-normal health which could be improved if they consumed more or different food. That this situation can exist in a world in which agricultural resources are so abundant and the arts of agriculture have been so improved that supply frequently tends to outstrip effective demand remains an outstanding challenge to constructive statesmanship and international cooperation." Such is the conclusion to which the Committee of the League of Nations on "The Problem of Nutrition" has arrived (1937).

Degenerative Diseases

Within the lifetime of many of us, great progress has been made in the prevention of one of the two great classes of disease: the infectious diseases. But so far relatively little progress has been made in the prevention of the other great class: the degenerative diseases, such as rheumatism, heart disease, diabetes, nervous disease, kidney disease, gastro-intestinal disease, cancer and mental disease, to which under modern conditions of life man seems to have become more subject.

The degenerative diseases are due to physiological decay of the organs or parts of the body concerned, and of this decay malnutrition is a chief cause. It is preventable only by so adjusting our ways of life -- social,

economic, agricultural and international -- as to ensure for everyone a diet that will satisfy physiological needs. No expenditure, however vast, on health services, housing or physical training can ensure *national fitness* unless and until these needs be satisfied. Their satisfaction is the primary essential for *national health*. Their satisfaction is the first principle of good government.

Sir Albert Howard

For the last forty years I have devoted a large amount of my time to the study of the health of crops, to the health of the live stock which live thereon, and to the discovery of the conditions necessary for both crops and stock to resist disease.

My qualifications for such an undertaking are these. I belong to an old agricultural family and was brought up on a farm. After a long training in science -- three years devoted mostly to chemistry and physics at the Royal College of Science, London, and three years to biological subjects at Cambridge -- I began research in agriculture in 1899 in the West Indies as a mycologist, where I specialised in the diseases of the sugar cane and cacao, and also began a study of tropical agriculture. My next post was Botanist at Wye College, where I was in charge of the hop experiments and where I had ample opportunities for the study of this interesting crop and its diseases. In 1905 I was appointed Imperial Economic Botanist to the Government of India at Pusa and for the first time was provided with real facilities for work -- land, money, and freedom to grow crops in my own way and to observe among other things the reaction to insect and fungous pests of suitable varieties when properly grown. My real education as an investigator then began -- six years after taking my degree and after obtaining all the paper qualifications then needed for research. My duties at the Pusa Research Institute, fortunately for me, had not been clearly defined and I escaped the fate of many of our agricultural investigators -- a life devoted to a research organisation already becoming obsolete. It was possible, therefore, to attempt to break new ground and to try out an idea which had occurred to me in the West Indies, namely, to see what happened when insect and fungous diseases were left alone and allowed to develop unchecked and where indirect methods only, such as a combination of better varieties and improved methods of agriculture, were employed to prevent attack.

I took up all the land that was still available at Pusa, some 75 acres, and spent my first five years in India ascertaining by practical experience the principles underlying health in crops. I rapidly discovered that my best teachers were the peasants of India themselves and Nature's own Professors of Agriculture, the insects and fungi which attack crops. By 1910 I had learnt a great deal from my new instructors -- how to grow healthy crops practically free from disease without any help from mycologists, entomologists, bacteriologists, agricultural chemists, statisticians, clearing-houses of information, artificial manures, spraying machines, insecticides, fungicides, germicides and all the other expensive paraphernalia of the modern Experiment Station.

I then posed to myself the principles which appeared to underlie the diseases of plants:

1. Insects and fungi are not the real cause of plant diseases and only attack unsuitable varieties or crops improperly grown. Their true role is that of censors for pointing out the crops which are imperfectly nourished and so keeping our agriculture up to the mark.
2. The policy of protecting crops from pests by means of sprays, powders and so forth is unscientific and unsound as, even when successful, such procedure merely preserves the unfit and obscures the real problem -- how to grow healthy crops.

I then took steps to have my own oxen and to ascertain, from first-hand experience, the reaction of well-chosen and well-fed animals to diseases like rinderpest, Johnne's disease, septicaemia, foot and mouth disease and so forth which are so common in India. After a short time my animals duly came in contact with other oxen suffering, among other things, from foot and mouth disease. I have myself seen my oxen rubbing noses with foot and mouth cases. Nothing happened. The healthy, well-fed animal reacted towards this disease exactly as improved and properly cultivated crops did to insects and fungi -- no infection occurred.

These preliminary results suggested that the birthright of every crop and of every animal is health and that the

correct method of dealing with disease is not to destroy the parasite but to make use of it for keeping agricultural practice up to the mark -- in other words to regard the diseases of crops and livestock as Nature's Professors of Agriculture. These ideas were put to the test during the next 21 years at three centres in India, at all of which I had to manage large areas of land and look after numerous oxen: Pusa (1910-1924); Quetta (summers of 1910 to 1918); Indore (1924-1931). Everything possible was done to grow crops properly: everything possible was done for the livestock as regards food, hygiene and general management. The result was freedom from disease.

In the course of this work it was soon discovered that the thing that matters most in soil management is a regular supply of freshly made humus, prepared from animal and vegetable wastes, and that the maintenance of soil fertility is the real basis of health.

It was then necessary to study how best to convert vegetable and animal wastes into humus so that every holding and every farm could become self-supporting as regards manure. Eventually a simple method of composting these wastes was devised, tested and tried out on the 300 acres of land at the disposal of the Institute of Plant Industry, Indore. This area was manured with the humus made from the vegetable and animal wastes produced on the farm only. In a few years production more than doubled: disease to all intents and purposes disappeared. The results were published in book form in 1931 under the title "*The Waste Products of Agriculture*," by the Oxford University Press, just when I became due for retirement from tropical service.

Had it been possible to foresee the future, I should have added another item to my research programme -- the raising on fertile soil of all the food needed by a section of the labour force and their families, so as to demonstrate the connection, which I am convinced exists, between humus and the health of mankind. I hope some at any rate of the Experiment Stations of the world will rectify this omission at the earliest possible moment. It could also be done by any institution or any large estate in this country which controls sufficient land to feed the resident population. The contrast between the health of such a community and that of the countryside around would soon lead to "Medical Testament" No. 2.

Since 1931 steps have been taken to get the Indore Process taken up all over the world and particularly by the plantation industries directed from London, including coffee, tea, sugar, sisal, maize, cotton, tobacco and rubber. In tea, for example, in 1938 not less than 1,000,000 tons of compost were being made every year: this was five years after the first trial had been completed. In coffee the progress has been even more spectacular. An account of the position at the end of 1935 has been published by the Royal Society of Arts in a pamphlet entitled "The Manufacture of Humus by the Indore Process." In all these trials the results have been the same: the conversion of vegetable and animal wastes into humus has been followed by a definite improvement in soil fertility, in the health of the crops and of the livestock. My own experience in India has, therefore, been repeated all over the world.

In 1935 it was decided to make a beginning in Great Britain at a few centres, so that the results could be written on the land itself -- a method which tends to reduce discussion and argument to a minimum. The first large-scale trial was carried out on a market garden at Surfleet in South Lincs. by Captain R. G. M. Wilson, who in 1937 summed up his results as follows:

"The method of humus making which has been employed is the Indore Process and it has proved remarkably successful. The output in the current year (1937) will be about 1,000 tons. As a result of this utilisation of humus, the land under intensive cultivation has already reached a state of independence and for the last two years no chemicals have been used in the gardens either as fertilisers or as sprays for disease and pest control."

A little later a much larger trial of the Indore Process was started at Bodiam in Sussex on the largest hop garden in Great Britain, the property of Messrs. Arthur Guinness, Son & Co. Here the old hop bine, hop string and the miscellaneous wastes of the garden have been composted with pulverised dustbin refuse from Southwark, about 10,000 tons of finished humus a year being manufactured. The results have been satisfactory in every way.

Humus has proved considerably cheaper than artificials. I have never seen healthier or finer hops than those grown on humus in this garden.

Another large-scale trial of humus has been carried out by [Sir Bernard Greenwell](#) on 13,000 acres of land in Surrey and Suffolk. Sir Bernard has composted the pulverised town wastes from Southwark with farm yard manure and vegetable wastes and has applied thousands of tons of humus to his land. He summed up his experiences in a paper read at the Farmers' Club on January 30th last, in the following words: "A fertile soil means healthy crops, healthy animals and last but not least healthy human beings." In the discussion which took place on this paper it was suggested that these words should be adopted as the motto of the Ministry of Agriculture and of the Ministry of Health.

I am convinced that it will be only a few years before this motto is put into practice all over the country. Quality and taste in food is all-important as every owner of live stock in this country fully realises. What is true for animals is surely true for ourselves.

How does humus affect the health of plants? The mycorrhizal association provides the clue. Living threads of fungous tissue pass from the humus in the soil into the active roots and are digested there.

This happens in practically all crops and particularly in the grasses and clovers of our best pastures. This explains why a really good pasture will feed a bullock and yield high quality meat, milk and cheese. Humus, of course, will feed a plant in another way, by providing indirectly the small quantities of nutrients needed by the green leaf for growth. Artificials only supply salts for the leaf and cannot, therefore, influence quality. For this reason the use of sulphate of ammonia on some of the celebrated pastures of Europe has led to loss of taste and quality in the meat and in the cheese. A fertile soil on the other hand influences both quality and yield and therefore health.

The view that soil fertility is the basis of the public health system of the future is incorporated in the "Medical Testament" which is before this Meeting. I am convinced that the adoption of this document will help to place medicine on a new plane. That portion of the National Health Insurance Act dealing with the prevention of sickness will be developed. Agriculture will fall into its proper place as the real foundation of preventive medicine. The medical profession will come into its own as the guardian of the greatest of our national possessions -- a healthy, virile, sturdy population. This will give the country real security. A Great Britain properly nourished can face the world in arms.

The Lord Lieutenant of Cheshire, Brig.-General Sir William Bromley-Davenport, K.C.B., C.M.G., C.B.E., D.S.O., in moving a vote of thanks to the speakers, paid tribute to the care with which the "Medical Testament" had been drawn up by Dr. Picton, Secretary of the Cheshire Panel Committee.

"The Testament" was unanimously adopted by the audience of over 600 persons, representing the County of Cheshire, the County Council, the Medical profession and the National Farmers' Union.