COMPOSTING GARDEN REFUSE.

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When I received an invitation to speak at this Conference I was rather reluctant to accept, as I felt that the subjects you are most interested in were of such a nature that I could offer very little information likely to be of value, but after consideration I decided to place before you a few points concerned with the disposal and use of garden refuse and the benefits to be obtained as the result of its use.

The actual operations concerned with composting have received world-wide attention and books have been written on the subject. Care has been taken to analyse the resulting material to find the value as a means of supplying plant-food. At your meeting last year interesting facts and figures were put forward dealing with the manurial values and the cost of production in comparison with fertilizers.

I realise the tremendous difficulties experienced where large areas have to be considered. The cost in labour and transport is enormous, and this alone makes the process impossible to manage on such a scale. It is not my intention, to-day, to enter into any details upon the phases of the work which have been covered in books or at previous meetings. I would like to attract your interest from an entirely different point of view.

You will agree with me that healthy labour is half the battle in any job. For some time I have been taking an interest in the study of the health and welfare of non-European labour, studying the conditions in which they live and their manner of feeding. As there is a large population of such labour employed in the production of sugar, I feel that the subject might be considered here.

As you are aware, the health of many of these people is in a state which is causing alarm to many eminent authorities who are making a close study of it, and who are devoting their lives to attempt to improve the conditions. An example of what has been achieved in an area near Bulwer is an illustration of what I am going to propose.

Dr. S. Kark, of the Polela Health Unit at Bulwer, has been making a close study of the Native in his home conditions. Among other studies the question of foods and the materials used have been observed and recorded. It was noticed that the women walked miles to collect various plants used in their foods.

Specimens were collected and identified as being numerous forms of wild spinach. Dr. Kark set out to demonstrate a method to maintain a source of supply close at hand. He collected all waste vegetable matter and put it through a composting process and fed this to the land immediately adjacent to his house. He collected seeds of these various forms of spinach and grew these successfully.

Calling the women together, he pointed out how unnecessary it was to search for miles around for a few plants when it was possible to cultivate them at the door and have a stock on hand which could be obtained in all weathers without discomfort.

Interest was aroused and this led to greater progress. He gave a woman one shilling to buy vegetable seeds at the local store and she returned with two packets of vetegable seeds. Dr. Kark obtained a quantity of seeds at wholesale rates and made this up into packages valued at one shilling.

This illustrated the value of community work. Lessons were given in composting all forms of refuse and plots started near the homes. Vegetables were grown and used by the families. The records of individual weights were recorded and health records were kept. The results have proved most satisfactory.

You will have realised by this time that I have been dealing with the work being carried out to combat the rapid progress made by tuberculosis in this country, and I have brought with me some records made of the forms of plants used as food, their preparation and the results of the work being carried out.

Before dealing further with the life of these people in their reserves, I want to deal for a few minutes with those who labour for us in town and in the country. I will be fair and deal with our town-dwellers first. We have, in Durban, a city of which we should be proud, but, like every city and town in the world, it has features which require to be changed. We have our slums and we have under-nourished people, both Europeans as well as non-Europeans. Charity and relief work is not the solution of the problem. When we are at war we spend sums of money, far too large to appreciate their size, on destruction in order that we might survive. When war is over we are faced with all kinds of problems, and many of them are set aside because we cannot afford them—at least, that is usually the reason given.

In a vast country like South Africa there should be no need for the overcrowding and terrible conditions in which people live, if we tackled the job in the same costly way as we do a war. If we want war material a large sum is collected in a few days. If we want a housing scheme we talk about if for years. This may seem to be getting away from my main topic, but it illustrates what I have to suggest.

Unless we consider the health and living conditions of our labourers, then the labour is certain to suffer and the output is lessened. In recent years housing schemes have been commenced and plots of ground have been allocated to the tenants. At the Lamont Native Location, situated near the Umlaas River on the South Coast road, steps have been taken to encourage the tenants to produce vegetables for their own use. A lecture was given to a large audience of women a few days ago and interest was aroused.

Demonstrations have been arranged to teach the composting process and practical assistance will be given to produce a routine system of cropping to overcome the present method of putting in a crop and waiting until that is finished before putting in the next.

There are numerous compounds in the country areas, many of which I have not visited, and it would be interesting to know what has been achieved in the way of cultivation of crops to be used by the workers. Certain foods are issued out as rations, but the home production of green produce encourages thrift and economy.

The Indian is, by habit, a cultivator, but, if spoon-fed, soon becomes lazy and is inclined to rely upon others to supply him, and I favour the provision of plots and the encouragement to cultivate his own requirements as much as possible. I know this does not apply to the Indian alone, and it might do a lot of good to do half-an-hour in the garden every morning and evening.

I would like to see the establishment of a training centre where non-European instructors could be trained on the same lines as the European instructors are trained. They could be responsible for certain areas to train their own people in the correct methods of culitvation. Their services might be useful in the commercial gardens which supply our markets.

When I came to Durban I was disappointed to find the soil in such a poor condition after hearing such wonderful reports of the beautiful flora. When I say poor, I mean that it seemed to have no power to retain water. Soon after a rain or after watering it dried out quickly and became hard and young plants struggled for existence.

Lack of humus was the cause, and steps were taken to remedy this. The first place to be tackled was the Botanic Gardens, which dried out very quickly. The effect of using humus for a few years has improved the ground, and to-day we find it difficult to keep the grass in order. No water is applied to the grass other than that supplied by natural rainfall and seepage from the upper areas of the Berea.

Other parks have received similar treatment. One of the most outstanding examples is seen at Fynnland, where Lieutenant King Park is situated. The soil is of a light sandy nature, and when the earthworks were completed the levelled area consisted of a sandy subsoil. Liberal application of humus has resulted in a prolific growth of grass, thus forming a first-class sports area.

The methods employed in composting have been simple: 75 per cent. garden refuse is sprinkled with urinated earth and to this is added 25 per cent. stable manure. The stacks are formed on level ground up to a height of four feet and 24 feet in length. After a week the material is turned and lime and wood ash is added. Subsequent turnings take place and the material is available for use in three months.

By means of broadcast talks and practical demonstrations interest has been aroused to get more people to use humus. Usually I find people more willing to purchase the finished article than to be bothered to supervise the composting process in their own gardens.

The enormous amount of available material in Durban and the open spaces, parks and recreation grounds has led me to consider the proposition on more extensive lines, and it has been suggested that central stations be formed where composting can be undertaken to supply large quantities for these areas.

The question of supply for private gardens has not been decided, but I can well imagine that there will be numerous requests for supplies. If we can stop the burning of garden refuse we shall at least earn the gratitude of the neighbours of the offenders.

Apart from the recreational and floral areas which require humus, we can give consideration to the cultivation of vegetables. Prices are high, and I know many families are not in a position to provide the quantity and variety which should be in every home. It is a simple matter to give up part of a flower garden or lawn for the growing of a few lettuce, beans, cabbage, spinach and other valuable fresh foods, and these would make a great difference in helping to keep a family fit.

As I said at the outset, I was somewhat reluctant to speak to-day as I could not enter into a scientific discussion on the value of humus versus fertilizers without dragging out all well-worn facts with little to add.

I realise the value of fertilizers, but feel that it is a waste of material to apply fertilizers to a soil which is incapable of holding moisture. If the growers would get the mechanical state of their soils in order the chemical applications would have better chance of achieving success.

On the other hand, when we consider the Indian and the Native in their small plots we have to study expense, and they are not always keen to spend money on fertilizers. In the illustration I gave of the successes at Bulwer, I omitted one important point. Humus alone was added to the ground and no fertilizers were used. I am not going to suggest that this is ideal or even a correct procedure, but the results obtained were enough to justify the addition of humus, without which there would have been little to show for the efforts.

As time goes on we shall have to take a keener interest in what is being done and what remains to be done to provide an ample supply of fresh vegetables at reasonable cost to ensure all families of all races a chance to combat the scourge of diseases which are prevalent to-day. It is going to be a continuous job, and if responsible people who know the needs of the people and the soil get together, much can be achieved within a short space of time.

I have omitted one important point in my remarks about the cultivation of vegetables by the Natives at Lamont Location. Their own efforts appear to consist of the growing of mealies only, and it has been felt that the ground could produce vegetables of greater variety and value and the amount of mealies produced could be bought for a few pence.

It is with combined interest in view that I have ventured to present to you a case for the furtherance of the proper treatment of waste vegetable material, in order that the soil may produce the best results and that the health of the people may be raised to a standard of high quality. To produce the best results we must have the best type of labour. Health is the secret, and feeding is the means to this end.