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# PROBLEMS IN ACHIEVING GOOD QUALITY IN OUR FOOD INDUSTRY

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## 1. INTRODUCTION

You cannot make a good product from a bad raw material but you can manufacture a bad product from a good raw material. The manufacture of a good quality food product demands a proper selection of raw materials, careful handling, judicious processing, adequate packaging and consistent sanitation. The various problems encountered by our food industries in meeting these demands will be discussed in this paper.

## 2. BACKGROUND OF FOOD MANUFACTURERS

When we take a look at the background of food processing establishments in Ghana, we find two categories of people involved in the business. These are:

- (a) people who use traditional methods of processing food, for example, fish smokers, home bakers, small jam manufacturers;
- (b) those who use modern scientific methods of processing food, for example, the distilleries, breweries, the canneries.

The traditional food processors started from the kitchen or the back-yard where they made small quantities of various items for a small market. They built up experience with time and as the demand for processed food increased due to urbanisation, they expanded beyond the kitchen and back-yard into small factories.

In many cases these small manufacturers lack training in food processing, and they are

not able to employ trained personnel because of the high salary demand. Products of such factories are usually not of uniform quality since the manufacturers have no means of controlling processes, detecting the causes of faults in products and solving problems. There is also a lack of proper management to plan operations of the factory so that production can go on uninterrupted.

The big manufacturers have facilities for producing good quality products, but in some cases their products fall below standard either due to false economy or improper control of production lines.

## 3. SANITATION

### (a) Premises

Poor sanitation is one of the major problems facing most manufacturers, especially the small ones; this is usually reflected in the quality of their products. The maintenance of high standards of hygiene in any food premises implies that effective measures have been taken to eliminate or at least to reduce to a minimum possible sources of contamination with micro-organisms, whether they are of public health significance or liable to affect the keeping quality of the end product. High standards of hygiene also imply the elimination of possible sources of contamination by insect and rodents. To achieve these aims, the premises should be constructed in such a way that they are insect and rodent proof. Walls should be tiled, at least, to above working height. Ceilings should have a smooth internal surface to prevent collection of dust. Floors should be so contruc-

ted that they may be easily cleaned. They should be impervious to moisture and grease and be free from crevices which will harbour dust. They should be smooth but not slippery with a durable surface. Where the floor requires frequent washing either to remove spillage or for the cleaning and sterilization of the plant, suitable drainage should be provided and the floors should slope evenly towards the drainage outlets. The junctions of the floors with the wall should be covered or curved for easy cleaning.

The premises of many of our small food manufacturers and even some of the fairly big ones, do not meet these requirements, either due to ignorance or an attempt to cut down cost. For example, insects such as house flies, bees etc., occur in abundance in some small factories but very little is done to eradicate them.

#### (b) Processing plants

The production of good quality food products requires daily cleaning of plants and equipment to prevent accumulation of food spoilage micro-organisms. Because of false economy or lack of proper supervision, daily cleaning of plants and equipment is not practised in some small factories.

#### (c) Factory worker

From the public health point of view, food manufacturers are expected to screen their factory workers for carriers of disease causing micro-organisms such as *Salmonella* which can be transmitted through food. Since there is the absence of rigidly enforced food laws, manufacturers have relaxed in this exercise.

There is the tendency on the part of some food manufacturers to economise on the running cost of their factories, consequently the factory workers are not clothed properly. Where the manufacturer provides adequate clothing, the factory workers usually do not care to dress up properly because of lack of constant supervision, articles like hats or headties, gloves, aprons, may not be worn. In such factories, contamination of food products by hair, nails etc. is very likely.

Where there is laxity in the maintenance of high standards of hygiene, the factory workers

also do not observe simple rules of personal hygiene, and, spitting in factory premises, failure to wash hands after use of toilet, smoking in the production room, are common features. In some factories the workers are not taught to maintain high standards of hygiene because the manufacturers themselves lack such knowledge.

#### 4. CONSTRAINTS ON THE FOOD MANUFACTURER

- (a) i. **Raw Materials:** The proper selection of suitable raw material is a prerequisite to the manufacture of a good quality food. There is a general scarcity of food in Ghana and the manufacturer is restricted in his choice of raw materials. For example, because of the scarcity of spanish mackerel, the Fish Canning Section of Tema Food Complex has had to can horse mackerel which is more difficult to can because of its tough flesh. Another example is the Bolgatanga Meat Factory, where best cuts of meat, instead of scraps, are turned into corned beef. In this case the raw material is too expensive. Some factories have in fact, owing to lack of raw materials, never started operation, although they have been completed for a number of years. Examples are, the Pawlugu Tomato Factory which has not gone into production because the factory cannot obtain enough tomatoes and the Wenchi Tomato Factory which is operating under capacity.

There is lack of concentrated primary food production areas near food factories, therefore manufacturers have to depend on several sources for their raw materials. Consequently there is no uniformity in the raw materials, and this is reflected in the end products.

In this country agricultural research is not geared towards food processing and provision is not made for the cultivation of varieties which are suitable for processing.

#### ii. Pre-harvest Treatment and Harvesting

Due to poor pre-harvest treatment, a greater part of the raw materials is usually infested with insects and fungi.

For example, apparently sound garden-eggs are known to contain insect larvae; if these are canned whole, serious quality problems are bound to arise. Unfortunately, many of the food manufacturers have not expanded to the point where they own farms and therefore have control on pre-harvest treatment of the raw materials.

The harvesting of raw materials also leaves much to be desired. For example, care is not taken to preserve the quality of the raw materials during harvesting, plantain and oranges are allowed to drop to the ground and this causes bruising and loss of quality.

### iii. Post-harvest Handling

Facilities for the transportation of fruits and vegetables are not adequate in many cases. An example is the transportation of tomatoes. These fruits are transported in V shaped baskets which cause bruising and crushing of the fruits. Hydrocooling prior to transportation is not practised and in many cases fruits and vegetables over-ripe before reaching the factory. The methods employed in loading and unloading raw materials are not adequate. At the Food Distribution Corporation, for example, shovels are used to unload cocoyams, and plantains are just thrown out of the trucks. Breakages and loss of quality occur.

#### (b) Foreign exchange situation

In the manufacture of some foreign foods such as mayonnaise, salad cream, jam, bread, etc., some essential raw materials like pectin, emulsifiers, yeast, etc., have to be imported because they are not made locally. The scarcity of foreign exchange limits manufacturers in the importation of these raw materials, and the quality of their products suffers consequently. In some cases manufacturers do not budget their foreign exchange quota efficiently towards the importation of essential raw materials, equipment and spare parts.

#### (c) Packaging materials

The role of packaging materials in the maintenance of the quality of processed

food is not recognised in Ghana. Once food has been processed for preservation, it should be protected from recontamination by agents of spoilage such as insects, micro-organisms, moisture, oxygen and light. By virtue of their nature certain foods require better protection than others. For example, rigid hermetic containers are required for foods such as meat and fish products, which need heat processing under pressure; moisture and gas proof packaging materials are necessary for dehydrated foods, such as powdered milk.

There is a limited range of packaging materials available to the food processor. The glass factory at Abosso, produces bottles for only soft and alcoholic drinks and even the factory's output is far below the requirements of the breweries and distilleries. Other glass containers, such as jars for the jam and marmalade factories have to be imported. Food grade plastics are not available to food packers; instead, we have polythene and other low grade plastics in abundance. Other packaging materials such as laminated plastics, waxed paper, foils, etc., are not available on the local market. Tin plate has to be imported and it usually accounts for about 50 per cent of the cost of a canned product.

Because of the unavailability of a wide range of food grade packaging materials, it is common to find food products which have apparently undergone good processing, and deteriorate in quality because of poor packaging. For example dehydrated palm fibre and powdered pepper which have been packaged in polythene bags have been known to lose colour during storage.

### Quality Maintenance

A food manufacturer should be able to check that products from his factory are of uniform quality, that the products conform with regulations or standards existing in the country. Unfortunately many of our small manufacturers are not aware of this necessity to control the quality of their products. Some of them lack simple basic equipment such as volume measures, temperature recorders, weighing equipment and gadgets for measuring moisture. Consequently food products from such factories are more likely to vary in quality.

Even where facilities for quality control exist, poor quality products may be produced because of the absence of proper supervision.

Food manufacturing establishments should have facilities for research and development but many of our food industries are unable to afford the salaries of top grade technologists let alone set up laboratories for research and development.

### **The role of Merchants**

Because there is a general shortage of food, merchants tend to hoard processed food beyond the expected shelf life, therefore the products may lose quality before reaching the consumer. Some merchants, such as the market women, expose processed foods to unfavourable condi-

tions like the direct heat of the sun, thus shortening the shelf life of the product.

### **Consumers' Role**

Consumers should be able to complain to manufacturers about the quality of their products. Since there is no forceful consumers' association to supplement the work of the Ghana Standards Board, manufacturers are under less pressure to maintain a high standard of performance.

### **Conclusion**

Although the problems facing the food industries are many, manufacturers should be able to solve them by seeking advice from the right quarters.

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