

**THE UNITED REPUBLIC OF TANZANIA
MINISTRY OF HEALTH AND SOCIAL WELFARE**

TANZANIA FOOD AND DRUGS AUTHORITY



**BASELINE SURVEY REPORT ON FOOD MANUFACTURING PLANTS PROFILE
IN TANZANIA MAINLAND**

Prepared by;

Baseline survey Task Force.

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SECOND DRAFT

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Completion of the baseline survey for food manufacturing plants profile in Tanzania mainland and finally compiling the report is a result of contribution by many different players at different stages of the exercise. First and foremost special thanks is extended to the Director General and the entire TFDA Management for endorsing the whole idea and funding the activity. Appreciation is also extended to the entire Baseline Survey Task Force comprising of the following members; Raymond Wigenge (Chairperson), Martin Kimanya, Cosmas Setta, Colleta Sarimbo and Rajabu Mziray whose contribution was significant particularly in planning and implementation of the survey. Other members joined the task force in conducting the survey; these are namely O. Kowero, Rehema Shemhina, Didas Mutabingwa, Gwantwa Samson, Juma Bukuku, Moses Mbambe, Francis Mapunda, Dr. Bahati Midenge and Festo Ronald, their contribution is highly appreciated as they were sometimes forced to face unexpected adverse situations during the survey exercise.

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Committee on Baseline survey and Report Writing Team

FOREWORD

TFDA as a regulatory agency is implementing various strategies for the purpose of achieving its envisaged vision and mission. A food control activity is one of its core functions undertaken to protect food consumers' health. SWOT analysis conducted indicated some significant limitations in regulating the food industry. It was realised that a significant proportion of food manufacturing plants is not licensed by the TFDA. Such a situation implies that quality and safety of such products cannot be guaranteed and therefore does not provide adequate protection of consumers' health.

In 2003-2008 TFDA strategic plan, a number of activities were identified, among other things were geared towards promoting compliance to Good Manufacturing Practices (GMPs) by local food manufacturers. Since the status of food manufacturing plants was not known, it was necessary to conduct a baseline survey in Tanzania mainland so that core factors affecting the industry are identified. The outcome of the survey is the basis for discussing with relevant stakeholders on strategies for developing the food industry as improving compliance to Good Manufacturing Practices is a shared responsibility among different stakeholders. In this regard food manufacturers are legitimate partners in achieving the aforementioned objectives. Therefore, the survey findings would assist to portray a real situation on the ground and hence realistic strategies be formulated and implemented in collaboration with various stakeholders. Similarly, the survey findings form the basis for developing a database for food manufacturing which will enhance follow up to compliance by food manufacturers. TFDA in collaboration with inspectors under the Local Government will make use of the data to track manufacturers under their area of jurisdiction and enhance compliance to the Tanzania Food, Drugs and Cosmetics and regulations made there under in areas such as renew or registration of food premises and licensing of food manufacturing.

It is my expectation that the outcome of the survey will act as a catalyst in acquiring new spirit in bringing a revolution in the food industry that will make processed food more safe and competitive at local and international market.

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ABBREVIATION

HACCP	-	Hazard Analysis Critical Control Point
GMPs	-	Good Manufacturing Practices
SIDO	-	Small Industries Development Organisation
SWOT	-	Strength, Weaknesses, Opportunities and Threats
TFDA	-	Tanzania Food, Drugs and Authority
TFDCA	-	Tanzania Food, Drugs and Cosmetics Act No. 1 2003
TIRDO	-	Tanzania Industrial Research Organization
TRA	-	Tanzania Revenue Authority
TZS	-	Tanzania Standard
UNIDO	-	United Nations Industrial Development Organisation

TABLES OF CONTENTS

ACKNOWLEDGEMENT	i
FOREWORD	ii
ABBREVIATION	iii
LIST OF FIGURES	vii
EXECUTIVE SUMMARY.....	ix
1.0 Introduction	1
1.1 Objectives of the survey:.....	1
1.2 Specific Objectives	1
2.0 METHODOLOGY	3
2.1 Tools for the survey	3
2.2 Data collection	3
2.2.1 Secondary data.....	3
2.2.2. Primary data.....	3
2.3 Data analysis	3
3.0 FINDINGS AND DISCUSSION	4
3.1 Inventory of food manufacturing plants.....	4
3.1.1 Scale of operation	5
3.1.2 Categories of Food products.....	7
3.2 Status of premises Registration and Licensing	8
3.2.1 Food premises registration	8
3.2.1.1 Premises registration status by scale of operation.....	10
3.2.1.2 Food premises registration status by category of food products	10
3.2.2 Food manufacturing license.....	11
3.2.2.1 Food licensing status by scale of operation.....	12
3.2.2.2 Food licensing status by categories of food	13
3.3 GMP/ Compliance.....	14
3.3.1 Location of food premises.....	14
3.3.1.1 Location of food premises by scale of operation.....	15
3.3.1.2 Location of food premises by categories of food products.....	16
3.3.2 Building materials	17
3.3.2.1 Status of building materials by scale of operation	17
3.3.2.1 Status of building materials based on categories of food products	18
3.3.3 Source of water.....	19
3.3.3.1 Source of water by scale of food plants.....	19
3.3.3.2 Source of water by category of food plants	20
3.3.4 Sanitation and Hygiene.....	22
3.3.4.1 Waste disposal system.....	22
3.3.4.2 Adequacy of toilets.....	24
3.3.4.3 Use of protective clothing	25
3.3.4.3.1 Use of protective gear by scale of operation.....	25
3.3.4.3.2 Use of protective gear by category of food products.....	26
3.3.4.4 Cleaning schedules.....	27
3.3.4.4.1 Documented and implemented cleaning schedule by scale of operation.....	27

3.3.4.4.2 Documented and implemented cleaning schedule by category of food plants..	28
3.3.5 Quality Control	30
3.3.5.1 Acceptance criteria, Record Keeping and Qualified Personnel by scale of operation within scale of operation of food plants.	30
3.3.5.2 Quality control by categories of food plants	32
3.3.5.2.1 Acceptance or rejection criteria of food raw materials by food category.....	32
3.3.5.2.2 Application of in process quality control tests by food plants category.....	33
3.3.5.2.3 Criteria for release of finished product by food plant categories	34
3.3.5.2.4 Carrying out laboratory tests of food samples by categories	35
3.3.5.2.5: Status of records keeping by categories of food products.....	36
3.3.5.3 Qualification of personnel by Categories of food products	37
3.3.5.4 Qualification of personnel by scale of operation:	38
3.4. HACCP Compliance	39
4.0 Major problems facing food processing plants.	40
5.0 Proposed solutions to problems by processors/ manufacturers.....	44
5.1 CONCLUSION.....	46
5.2 Recommendations	47
APPENDICES	50
Appendix I: Questionnaire	50
Appendix 2: Distribution of food plants in Regions by Scale of operation	55
Appendix 3: Distribution of food plants by Food Category and Scale of operation.....	56
Appendix 4: Distribution of registered and unregistered food manufacturing premises by Regions .	57
Appendix 5: Food premises registration status by category of food products	58
Appendix 6: Food licensing status by Regions	59
Appendix 7: Food licensing status by categories of food	60
Appendix 8: Location of food plants by scales of operation.....	61
Appendix 9: Location of food plants by category of food plants.....	62
Appendix 10: Status of building materials by scale of operation.....	63
Appendix 11: Building materials by Categories of food plants	65
Appendix 12: Source of water supply by Scale of operation	66
Appendix 13: Source of water supply by category of food plants.	68
Appendix 14: Waste disposal system by category of food products.....	69
Appendix 15: Sufficiency of toilets by food category	69
Appendix 16: Provision of protective gears by scale of operation of food plants	70
Appendix 17: Provision of Protective gears by Categories of food plants	70
Appendix 18: Cleaning Schedule by category of food product	71
Appendix 19: Quality control test done by category of food products	73
Appendix 20: Acceptance and Rejection criteria by category of food plants	75

Appendix 21: Quality control on subsequent processing by category	76
Appendix 22: Criteria for release of finishd product by category.....	77
Appendix 23: Record keeping of quality control tests by category	78
Appendix 24: Qualified personnel by scale of operation.....	79
Appendix 25: Analytical results of vegetable cooking oils sampled during baseline survey.	80
Appendix 26: List of HACCP complied food manufacturing plants	81
Appendix 27: List of food manufacturing plants by Region.....	83

LIST OF FIGURES

Figure 1: Distribution of food plants by region and scale of operation	5
Figure 2: Distribution of plants by Scale of operation.....	7
Figure 3: Distribution of food products by categories and scale of operation..	8
Figure 4: Premises registration status by region.....	9
Figure 5: Food premises registration status by category of food products	11
Figure 6: Proportion of premises licensing per Region	12
Figure 7: Food licensing status by scale of operation	13
Figure 8: Food licensing status by categories of food	14
Figure 9: Location of food plants by scales of operation.	15
Figure 10: Location of food premises by category of food products	17
Figure 11: Status of building materials by scale of operation	18
Figure 13: Source of Water by scale of operation.....	20
Figure 14: Source of water supply by food category.....	21
Figure 15: Presence of waste disposal system by scale of operation of food plants.....	23
Figure 16: Presence of waste disposal system by category of food plants	23
Figure 17: Sufficiency of toilets by scale of operation of food plants.....	24
Figure 18: Sufficiency of toilets by food category	25
Figure 19: Supply of protective gear by scale of operation	26
Figure 20: Use of protective gears by categories of food plants	27
Figure 21: Presence of documented and implemented cleaning schedules by scale of operation	28
Figure 22: Presence of documented and implemented cleaning schedules by	29
Figure 23: Acceptance or rejection criteria of food raw materials by food	33
Figure 24: Application of in process quality control tests by food plants category	34
Figure 25: Criteria for release of finished product by food plant categories ..	35
Figures 26: Carrying out laboratory tests of food samples by categories ..	36
Figure 27: Status of records keeping by categories of food plants	37

LIST OF TABLES

Table1: Distribution of food plants by scale of operation 6

Table 2: Food premises Registration status by Scale of operation..... 10

Table 3: Food licensing status by scale of operations 13

Table 4: Waste disposal by Scale of Operation 22

Table 5: Sufficiency of toilets 24

Table 6: Documented and implemented cleaning schedule by scale of operation..... 28

Table 7: Quality Control tests, Record Keeping and Qualified Personnel by scale of..... 31

Table 8: Distribution of academic qualifications of experts per scale of operation of food plants 39

Table 9: Major problems expressed by interviewee 41

Table 10: Proposed solutions for the identified problems..... 45

EXECUTIVE SUMMARY

The baseline survey of food manufacturing plants profile was conducted in 21 regions of Tanzania mainland from December 2005 to March 2006. The objectives of conducting the survey was among other things; establish an inventory of food plants, assess compliance to select regulatory and GMP requirements, identify major problems affecting development of the food industry in the country and recommend measures that will enhance compliance to GMP.

The survey was conducted using investigators who administered a questionnaire to responsible personnel in those food plants. The questionnaire was designed to capture information that was later transferred into a survey data base which was a source of generating various reports that were geared towards achieving the specific objectives of the survey.

The survey identified a total of 614 food manufacturing plants. Among those 279 (45.4%), 176 (28.7%), 92(14.8%) and 67(11.1%) were micro, small, medium and large scale food plants respectively. Distribution of plants based on scale of operation and food category varied among Regions, with Dar es Salaam, Mwanza, Arusha, Iringa, Mbeya having the highest number of large and medium scale food plants. Based on the total number of food plants, the following regions had relatively higher number of Micro scale food plants; Mbeya (11.1%), Shinyanga (10.0%), Kigoma (8.6%) Singida (9.7%). With respect to medium scale food plants the following Regions ranked high, these are namely; Dar es Salaam (21.6%), Arusha (19.6%), Tanga (14.1%) and Shinyanga (12.0%). Distribution of food plants on the basis of food categories the following had relatively higher levels; Vegetable oils and fats (20.5%), bakery products (15.46%) and cereals/pulses and their products (15.12%).

Registration of premises and licensing status of food plants showed that 74.3% and 81.3 % of food manufacturing premises are not registered and licensed respectively. The levels of violations in terms of licensing varied among different scales of operations and food categories. Of the total unregistered and unlicensed premises, micro and small scale food plants in total, constituted the highest percent of 83.8% and 82.4% for unregistered and unlicensed premises respectively. This trend was also reflected within food categories having the highest number of micro and small scale.

On the aspect of selected GMP requirements, compliance by small and micro food plants was lower than for large and medium scale food plants; categories of food plants having higher number of micro and small scale plants such as vegetable oils and fats, bakeries, cereals pulses and products, showed lower performance in compliance to GMP. The criteria used to assess compliance to GMP included; location of premises, source of potable water, presence of waste disposable system, and presence of documented and implemented cleaning schedules, quality tests undertaken by the food plants, some quality control record keeping and qualified personnel

With respect to acceptance and rejection criteria of raw materials, 53.7% of the food plants didn't have such criteria, whereas only 12.1% of the food plants had their laboratory for quality control. The survey findings showed that 39.4% were keeping

quality control records. Use of qualified personnel in production and quality control of food, only 46.3% had qualified personnel.

The survey also gathered information on major problems facing food industry in the country whereby erratic supply of electricity, inadequacy of capital, unreliable supply of raw materials and market competition due to liberalization of trade were expressed by majority of the manufacturers.

The results and findings obtained from this survey shows the need for TFDA to strengthen product regulation system by improving its inspection and surveillance systems, product registration system, and provide knowledge to food processors in order to promote voluntary compliance and adoption by manufacturers quality assurance systems such as GMP or HACCP, that establishes self auditing practices, hence production of quality and safe food products. For TFDA to achieve tangible results in respect of enforcement of the legislation, provision of education and sensitization of stakeholders is important coupled with effective decentralization of food control activities at zonal offices and Local Government level. Generally TFDA should, in collaboration with stakeholders prepare a programme or strategies that are geared towards addressing existing problems that are peculiar to specific food category or scale of operation especially micro and small scale food plants.

1.0 Introduction

Tanzania Food and Drugs Authority (TFDA) is a regulatory Authority established under section 4(1) of the Tanzania Food, Drugs and Cosmetics Act No.1 of 2003. It is charged with the responsibility of protecting consumers' health against hazards associated with food, drugs, cosmetics, and medical devices. In order to achieve this important mission, a number of functions are undertaken to ensure that products circulating in the market are safe, of good quality and effective. These functions include regulation of imported and locally manufactured products, distribution, storage and sale of such products.

As mentioned above, food is one of the Industries regulated by TFDA; it is diverse in terms of varieties and scale of operations. Unfortunately the Authority didn't know all food manufacturing plants existing in the country and their status; as such some of them are operating illegally. These are mainly micro and small food processors some operating in residential areas; market surveillance of some foods failed in some quality and safety parameters. For example market survey of 30 vegetable oil and fats samples taken in 2005 indicated the following results; five (5) failed in some of the quality and or safety parameters; which about 16.7% is. Therefore one of the major challenges related to product control activities is ensuring that local manufacturers produce products, which comply with National and or International standards.

The decision by TFDA to conduct a baseline survey was therefore prompted by its desire to promote compliance to GMP. This would enhance quality and safety of food products and improve competitiveness of the food products to local and international markets. However such desire cannot be achieved if core problems affecting development of the food industry are not known and therefore realistic strategies for developing it cannot be initiated.

1.1 Objectives of the survey:

The overall objective for conducting this survey was to make an inventory of food manufacturing plants in Tanzania mainland and identify major problems affecting the industry so that TFDA in collaboration with stakeholders use the findings of the survey as a basis for formulating strategies geared towards improving quality and safety of food products and promote the industry.

1.2 Specific Objectives

The specific objectives for conducting the survey were:

- 2.1.1 To make an inventory of food manufacturing plants in Tanzania mainland,
- 2.1.2 To establish categories of food manufacturing plants in the country based on food categories (e.g. milk and milk products) and scale of operation (e.g. micro, small, medium, and large scale)
- 2.1.3 To establish status of food premise registration and licensing,
- 2.1.4 To establish status of compliance to selected Good manufacturing Practices criteria,

- 2.1.5 To establish major limitations affecting local food manufacturing facilities,
- 2.1.6 To use the survey findings as a basis for recommending strategies for improving status of food manufacturing plants in Tanzania mainland in collaboration with stakeholders.

2.0 METHODOLOGY

2.1 Tools for the survey

Before conducting the baseline survey, tools for the survey were prepared to facilitate collection of the data. A questionnaire was prepared with questions that were designed to gather information on; addresses of manufacturers, licensing and premises registration status, categories of food products produced and scale of operations. Other information required includes; status in relation to compliance with selected (GMP). Finally the questionnaire had questions which required respondents to express major problems affecting their industry and recommend possible ways of alleviating or eliminating them. The questionnaire is attached as Appendix 1

2.2 Data collection

2.2.1 Secondary data

Secondary data were obtained from various sources which included TFDA headquarters, Ministry of Industries and Trade (TBS, SIDO, Tanzania Milk Processors Association, TIRDO) and Local authorities. The information obtained included list of food processing plants that were known by such institutions but unknown to TFDA as this was necessary to enhance faster carrying out of the survey.

2.2.2. Primary data

Collection of the data was undertaken from December, 2005 – March 2006 in all twenty one (21) administrative regions of Tanzania mainland; in eight designated zones namely; Eastern, central, Western, Southern, Southern Highlands, Northern and Lake. The primary data were obtained through; interviewing and observations to verify whichever information given. This was carried out by a team of two TFDA investigators who administered the questionnaire in each zone in collaboration with local Health officers who also helped in identifying food manufacturing plants. Though earlier it was not planned to collect samples from plants visited to evaluate quality and safety of the food products, it was decided to collect some vegetable oils from micro and small scale food processing plants in the Southern Highlands and western zone to assess their quality as all were producing unrefined oils.

2.3 Data analysis

Data collected was transferred in a survey data base specially designed to capture intended information. From the data base, various reports in relation to the status of food manufacturing plants profile were generated, analysed and interpreted in line with the specific objectives of the survey.

3.0 FINDINGS AND DISCUSSION

The information gathered was based on responses of the questions contained in the questionnaire (appendix 1). The information was transferred into a survey data base that was a source of generating various reports. Despite the fact that a lot of reports could be generated from the database, our discussion will mainly focus on findings or data that is meant to address issues as per specific objectives of the survey. Reports that are generated from the data base include; inventory of food plants, premises registration and licensing status, compliance to selected criteria for GMP and major problems affecting food industry in the country and suggested solutions to the problems. The survey data base will also be used as a basis for developing a comprehensive food control data base as part of the strategy to computerize food control activities as per TFDA strategic plan for purpose of enhancing efficiency and effectiveness in regulating food.

3.1 Inventory of food manufacturing plants

The survey identified a total of 614 food manufacturing plants (Appendix 27) under twenty categorized food types. The distribution of these plants varied from region to region in terms of scale of operation and categories of food products. However, it is evident that irrespective of the scale of operation ranking of regions in decreasing number of food plants is as follows; Dar es Salaam (15.8%), Shinyanga (8.3%), Mbeya (7.5%), Mwanza (7.2%), Arusha (6%), Kagera (5%), Kilimanjaro (4.9%), Singida (4.7%), Kigoma (4.7%), Iringa (4.1%), Manyara (3.9%), Mtwara (3.9%), Mara (3.7%), Tanga (3.6%), Tabora (3.4%), Dodoma (3.4%), Ruvuma (2.6%), Rukwa (2.6%), Lindi (1.8%) and Morogoro (1.5%). The distribution of all food plants that were surveyed in each region and by scale of operation is contained in Appendix 2 and figure 1 below; whereas the distribution of food plants in the country by scale of operation is indicated in appendix 3.

Of the total of 67 large scale food plants, ranking of regions in terms of large scale plants is as follows; Dar es Salaam 31.3%, Mwanza 13.4%, Kilimanjaro, Iringa 9.0%, Arusha 7.5%, Kilimanjaro 6.0%, Mbeya 6.0%, Kagera, Mara and Morogoro each having 4.5%, Kigoma Mtwara and Tanga each having 3.0%. The rest of the regions have plants less than 2%. Dodoma, Lindi, Pwani, Shinyanga, Singida and Tabora do not have large scale plants.

Distribution of medium scale food plants is limited to thirteen regions. Of the total 92 medium scale food plants 26.1% is located in Dar es salaam. Other regions with the percent of medium scale plants is as follows; Arusha 19.6%, Tanga 14.1%, Shinyanga 12.0%, Mwanza 10.9%, Regions without medium scale food plants are namely; Kigoma, Lindi, Morogoro, Mtwara, Pwani, Rukwa, Ruvuma, Singida. The remaining regions with percent of medium scale food plants less than 5% include; Dodoma, Iringa, Kagera, Kilimanjaro, Manyara, Mara, Mbeya, and Tabora.

Regions that have many small scale plants are Dar es Salaam, Mwanza, Kilimanjaro, Arusha, Manyara and Shinyanga having between 6.8 – 23.3% of the total 176 plants.

The rest of the small plants in various Regions contribute between 1.1 – 5.1%. Out of the 279 micro scales in the country, Regions with high number of plants are Mbeya 11.1%, Shinyanga 10.0%, Singida 9.7%, Kigoma 8.6% and Kagera 7.5%.

The distribution of categories of food plants by regions is influenced by many factors such as availability of raw materials in particular areas, capital investment required, cost of production, technology required and market of the product in question. Since some problems are peculiar to a particular type of food category, having knowledge of their distribution pattern will enable TFDA to estimate the amount of work that is required to bring to the level of compliance required so as to safeguard consumers' health and promotion of the food industry in the country.

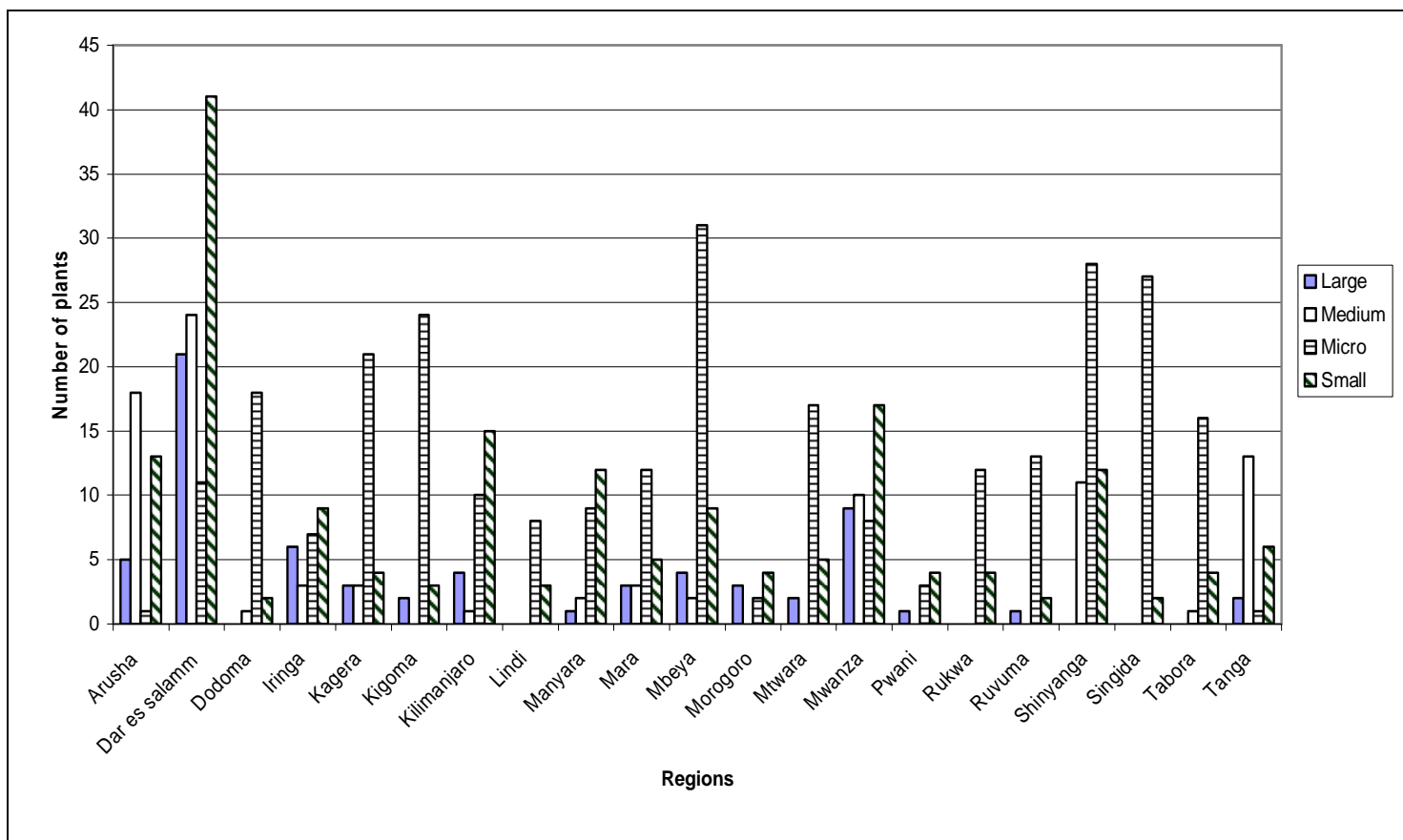


Figure 1: Distribution of food plants by region and scale of operation

3.1.1 Scale of operation

Food manufacturing plants were grouped into four categories based on either number of employees or capital investment as contained in the questionnaire (Appendix 1). The survey indicated that of the total number of food plants surveyed, micro and small scale food processing plants were predominant with 279 (45.4%) and 176(28.7%) respectively. Numbers and percentage for large and medium scale plants were 67 (10.9%) and 92 (15.0%) respectively (Table 1 and Figure 2). Similar trend was also reflected within the various food categories as micro and small food plants were

predominant (figure 3). Such trend was expected because establishing a food manufacturing plant needs an adequate capital and majority of the entrepreneurs have limited financial resources. The same logical argument applies to large food plants as few individuals have adequate capital to establish them. Other factors that influence distribution of plants by scales of operation are technical know how and availability of raw materials and market potential of the product. For example fish plants around Lake Victoria are predominantly large because of these facts. Small scale vegetable oil plants are many in Southern highlands because of the high sunflower production in this part of the country; the same reason applies for small and medium cotton seed oil industries in Lake Zone.

Taking into consideration that micro and small scale food plants are dominant, more efforts need to be directed to these two categories as they have a potential to contribute significantly to food safety problems. At the same time they can have a significant contribution in poverty alleviation and development of the country's economy. More attention is needed as in most cases, limited financial resources is associated with inability to comply with GMP requirements requiring financial input. Contrary to the above, medium and large scale food plants which amounts to 25.89% may have relatively adequate capital to meet GMP requirements to a satisfactory level.

Scale	Number of plants	Percent
Large	67	10.9
Medium	92	15.0
Small	176	28.7
Micro	279	45.4
TOTAL	614	100.0

Table1: Distribution of food plants by scale of operation

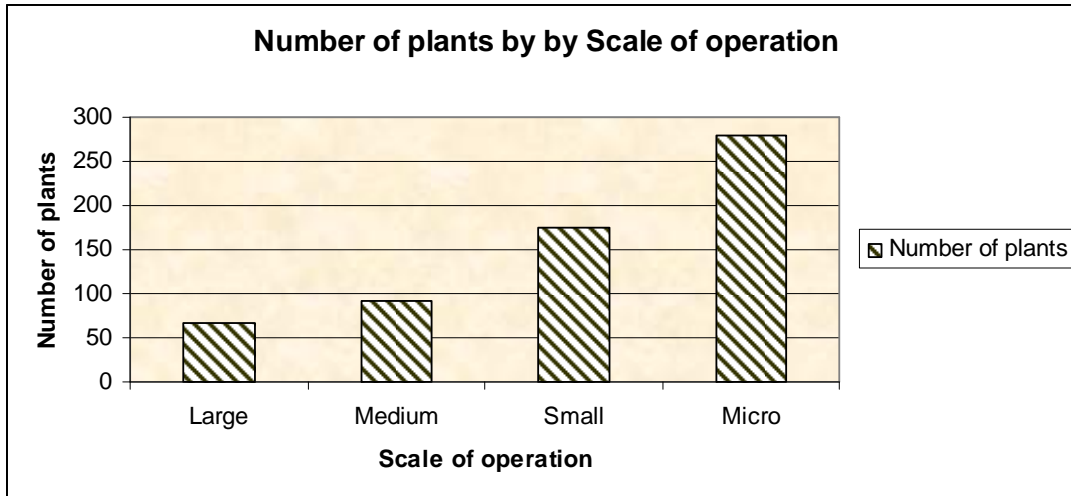


Figure 2: Distribution of plants by Scale of operation

3.1.2 Categories of Food products

Food manufacturing plants were categorized into twenty one (21) groups depending on the types of food manufactured (appendix 1). Others food category included those food plants processing different food categories therefore could not be identified by any category. This category is characteristic of micro and small scale food plants.

The survey indicated that (Appendix 3) food categories having few plants are ready to drink beverages 4 (0.7%), confectioneries 5 (0.8%). There was no Spices dressings and condiments manufacturing plants. Food categories having higher number of plants were Vegetable oils and fats 122 (19.9%), bakeries 92 (15.0%), Cereals, pulses and products 90 (14.7%). The number of other food plants fell within the above ranges. The distribution of these plants in regions is as shown in Appendix 3 and figure 3. A category of spices, dressings and condiment didn't has any food plant.

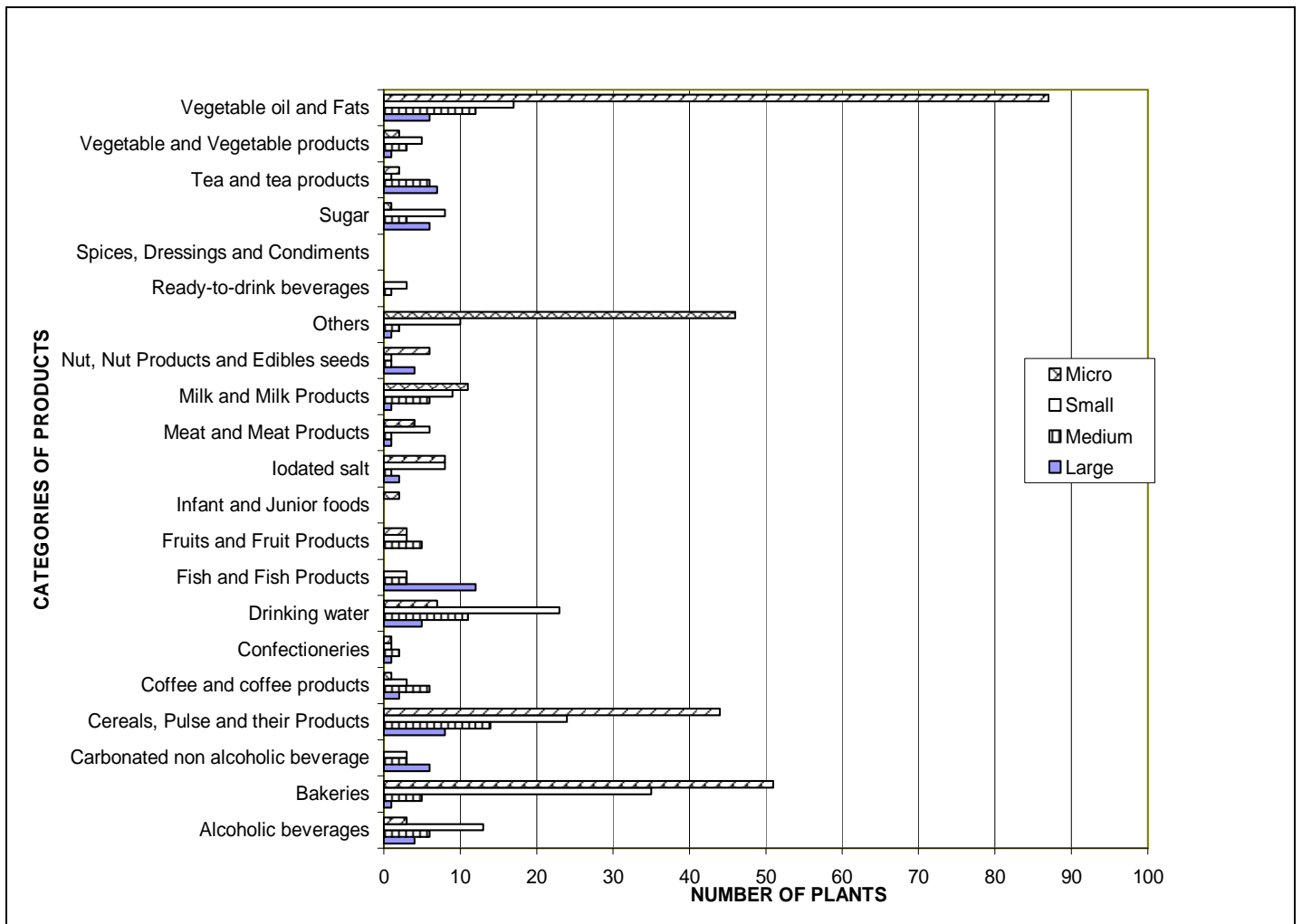


Figure 3: Distribution of food products by categories and scale of operation

3.2 Status of premises Registration and Licensing

3.2.1 Food premises registration

Food manufacturing premises are registered after complying with specified criteria that are meant to provide assurance that the premises will not contribute to a production of substandard or unfit food. Therefore premises registration is a pre-requisite before granting a food manufacturing license.

The findings indicated that 157 out of a 614 premises identified were registered, this number corresponds to about 25.6%. This means about three quarters of the food manufacturing plants premises are unregistered and therefore food is being processed in premises with unknown suitability for the intended purpose. Such high proportion of unregistered premises implies that consumers may not be adequately protected from food borne hazards. The proportion of unregistered premises differed from one region to another. Seven regions had 100% unregistered premises; these are namely; Kigoma, Manyara, Morogoro, Pwani,

Rukwa, Singida and Tabora. Regions with percent of unregistered premises between 90% and 100% were Dodoma, Lindi, and Shinyanga. Regions with percent of unregistered premises below 50% were Arusha (29.73%) and Dar es Salaam (34%). Therefore Arusha and Dar es Salaam had the lowest percent of unregistered premises. Registration status of other regions fell within the two extremes. The number of registered premises region wise is as shown in figure 4 below and Appendix 4.

The reasons for high unregistered premises in the above mentioned regions is probably due to high number of micro and small plants in the regions not complying to the premises registration requirements, lack of awareness among manufacturers and law enforcers and limited motivation to food inspectors under local authorities due to competing responsibilities assigned to them by local and central Government. Another factor which contributes to such situation is probably that inspectors under local Governments do not register such premises as they do not meet minimum requirements and closing such premises subject them to enormous political and or administrative pressures from local Authorities.

TFDA should therefore put much emphasis on educating, law enforcers and manufacturers to enhance registration of food premises. Also increase frequency of conducting audit inspection in regions to stimulate registration of unregistered premises and strengthen relationship with local Authorities.

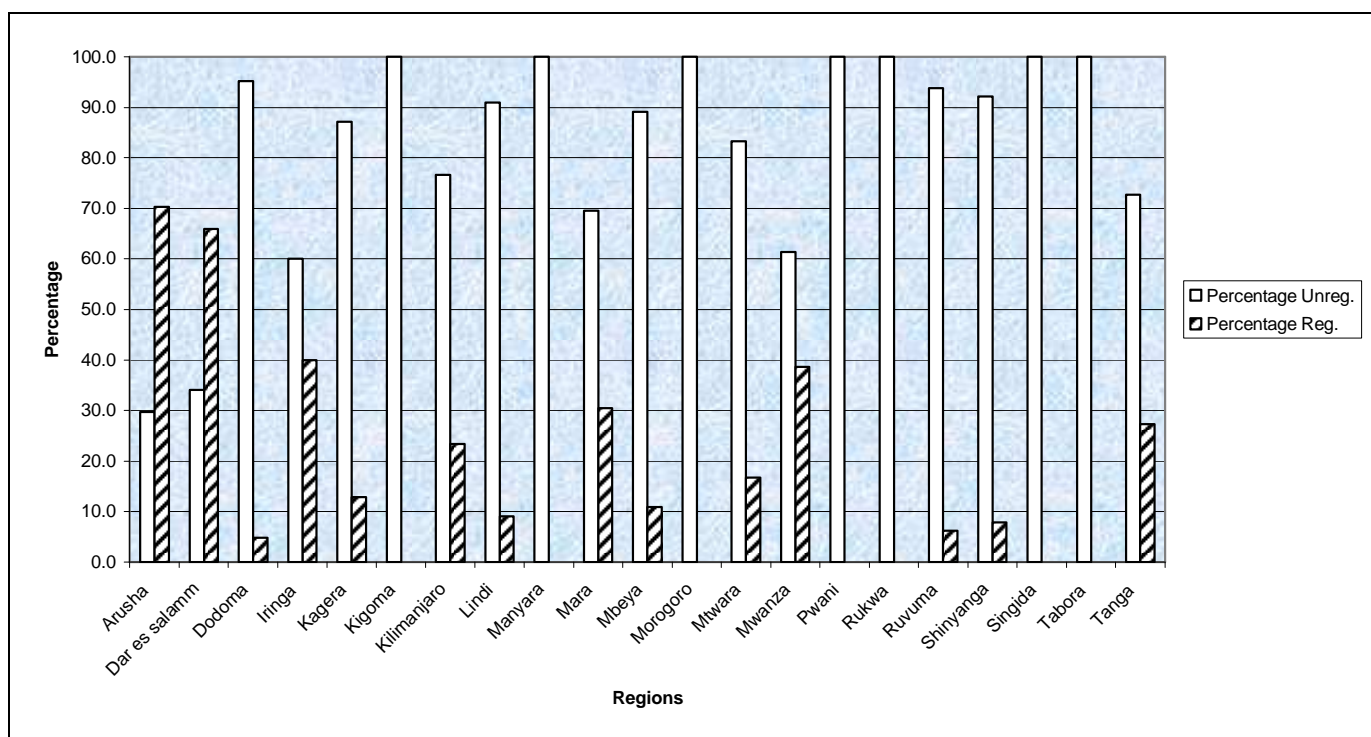


Figure 4: Premises registration status by region

3.2.1.1 Premises registration status by scale of operation

Table 2 below show that of the 457 unregistered premises the contribution of each category is as follows; micro 271, small 112, medium 44 and large scale food plants 30. This information shows that large number of micro and small scale food plants is unregulated. table 2 below indicates the same trend within each scale of operation, the percent of unregistered is as follows; micro scale 97.13%, small 63.13, medium 47.83%, and large scale food plants 44.78%.

Low levels of unregistered medium and large food plants is probably attributed to the fact they are mainly located in industrial and or estates where there are easily reached by food inspectors.

Scale	Total	unregistered	% unregistered	registered	% registered
Large	67	30	44.78	37	55.22
Medium	92	44	47.83	48	52.17
Small	176	112	63.13	64	36.36
Micro	279	271	97.13	8	2.87
TOTAL	614	457	74.43	157	25.57

Table 2: Food premises Registration status by Scale of operation

Based on the above findings, TFDA need to attach appropriate weight to small and micro scale food plants so that compliance to registration requirements is achieved and premises are registered. This could be achieved through collaboration with Local Authorities, SIDO and other stakeholders such as UNIDO.

3.2.1.2 Food premises registration status by category of food products

Appendix 5 and Figure 5 below show the trend of premises registration status within each category of food product. Food categories having relatively high compliance rate are as follows; carbonated non alcoholic beverages 83.33%, Alcoholic beverages 65.38%, Confectioneries 60.00%. The rest of food categories have compliance of equal or below 50%. Food categories having the lowest compliance rate are; sugar 5.56%, vegetable oil and fat 7.38% and others category 10.17%. The rest of the food categories lie between the two extremes. However, this trend does not depict a realistic picture for food categories having small number of food plants such as infant and junior foods having two food plants. Low compliance rate to some food categories is due to high number of micro and small in those categories.

High percentage of unregistered food plants in some categories is probably due to the fact that majority of them have large proportion of Small and Micro scale, therefore the reasons pointed out above for these food plants are also applicable. For large scale plants the number of unregistered plants was found to certain food categories such as tea, coffee and sugar industries. These have well established product boards, and therefore they probably feel more responsible to them than to TFDA.

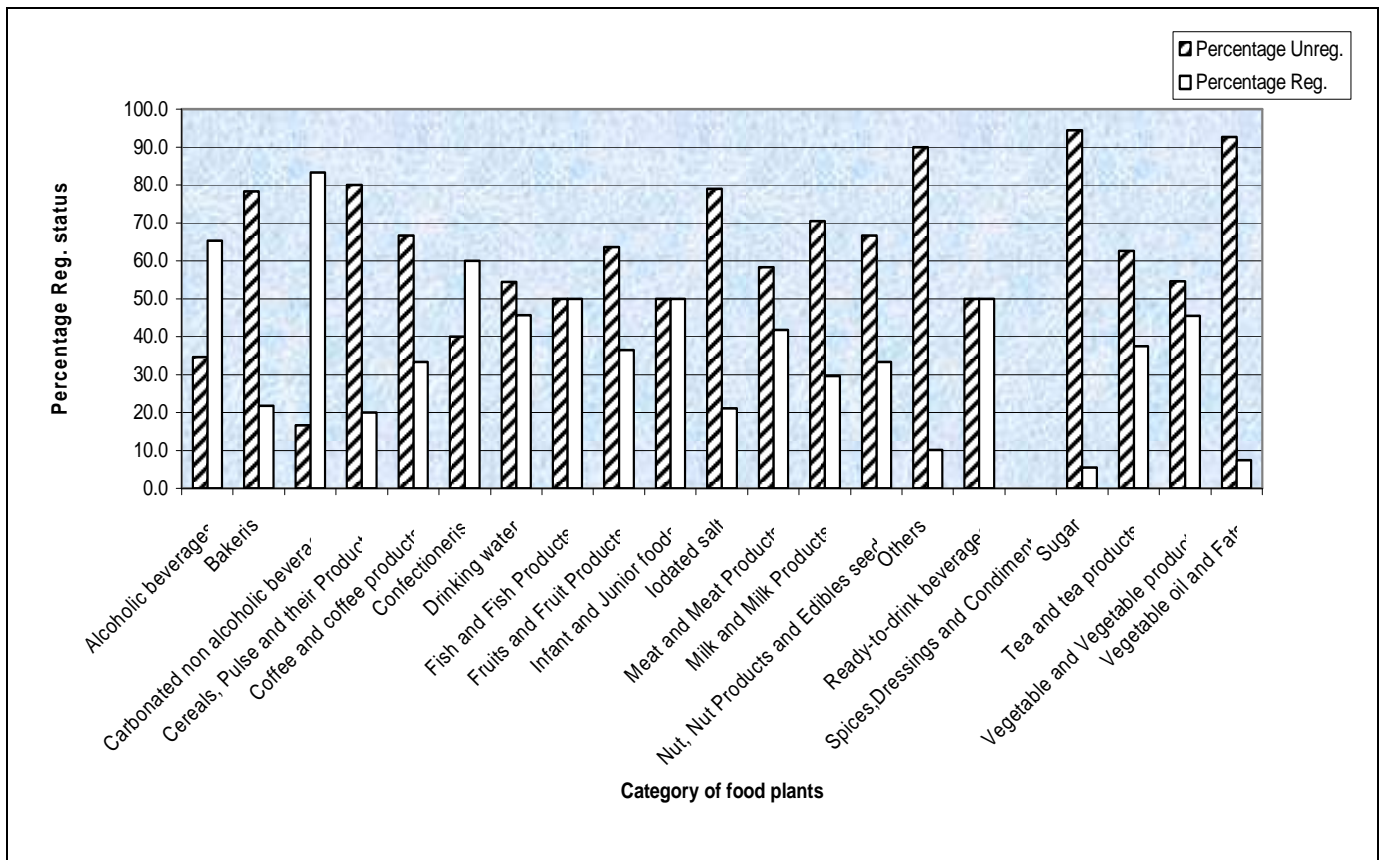


Figure 5: Food premises registration status by category of food products

Within each category of food products, categories having percent of unregistered products from and above 90% are; sugar (94.44%) and vegetable oils and fat 92.62%. Those percent less than 90% and above 80% are Cereals, pulses and products (80.00%) and products falling under the category of others. Food categories that fell below 80% but equal or above 70% are as follows; Milk and milk products (73.08%) and iodated salt (78.95%). Food categories having the lowest percent of unregistered food premises are carbonated non alcoholic beverages (16.67%) and alcoholic beverages (34.62%). The rest of the food categories were between the two extremes.

Low compliance rate by some food categories is partly contributed by high number of small and micro scale food plants and some food industry having well established commodity boards therefore didn't have awareness on the need to comply with other legislation.

3.2.2 Food manufacturing license

In respect of food manufacturing license, only 115 out of 614 which is equivalent to (18.73%) are licensed by TFDA. This means that 81.3% of food manufacturing plants are not licensed. The number of licensed plants Region wise is as shown in Appendix 6 and figure 6 below.

The percent of unlicensed food plants varied from one region to another. Seven regions have no licensed food premises; these are namely Kigoma, Lindi, Manyara, Morogoro, Pwani, Rukwa and Tabora. Similarly, regions with the lowest proportion of unlicensed premises are Arusha (45.95%) and Dar es salaam (52.56%). The rest of the

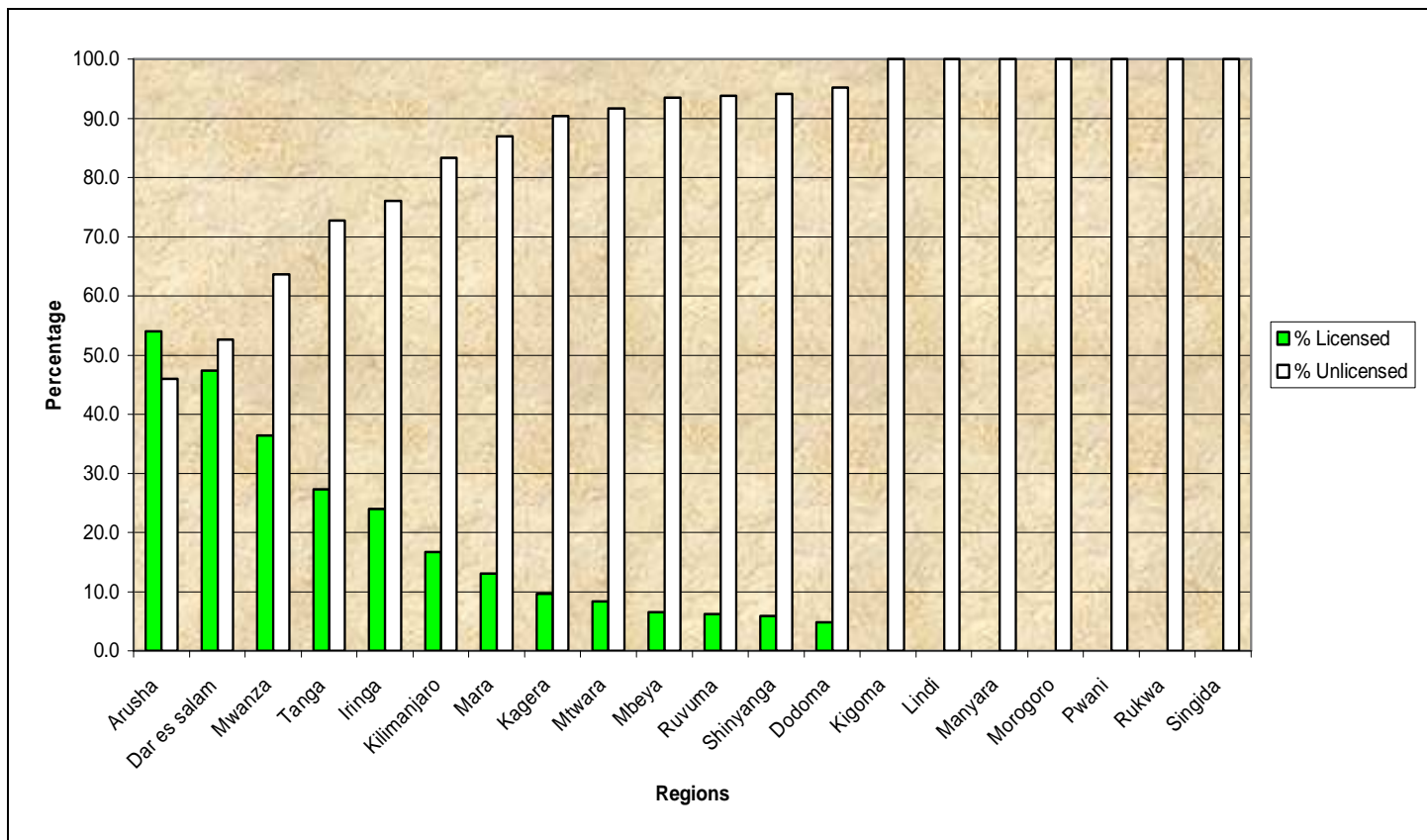


Figure 6: Proportion of premises licensing per Region

Regions have proportions between these two extremes. The reasons for high percentage of unlicensed food plants in the regions are probably similar to those for registration of food premises pointed out above.

3.2.2.1 Food licensing status by scale of operation

In terms of scale of operation, the number of unlicensed premises decreased from micro scale plants to large scale food plants as follows micro 274 (44.62%), small 136 (22.15%), medium 54 (8.80%) and large 33 (5.7%). The high percent of unlicensed food categories are similar to those of unregistered premises. The licensing status of food plant within each scale of operation is as indicated in table 3 and figure 7 below.

Scale	Total	Licensed	Unlicensed
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		No. of Plants	% licensed for each scale	No. of Plants	% unlicensed for each scale
Large	67	32	47.76	35	52.24
Medium	92	38	41.30	54	58.70
Small	176	40	22.73	136	77.27
Micro	279	5	1.79	274	98.21
Total	614	115	18.73	499	81.27

Table 3: Food licensing status by scale of operations

Within each scale of operation micro scale food plants had the highest percent of unlicensed premises (98.21%) followed by small scale (77.27%), medium (58.70%) and large scale (52.24%). Reasons for such trend have been explained above.

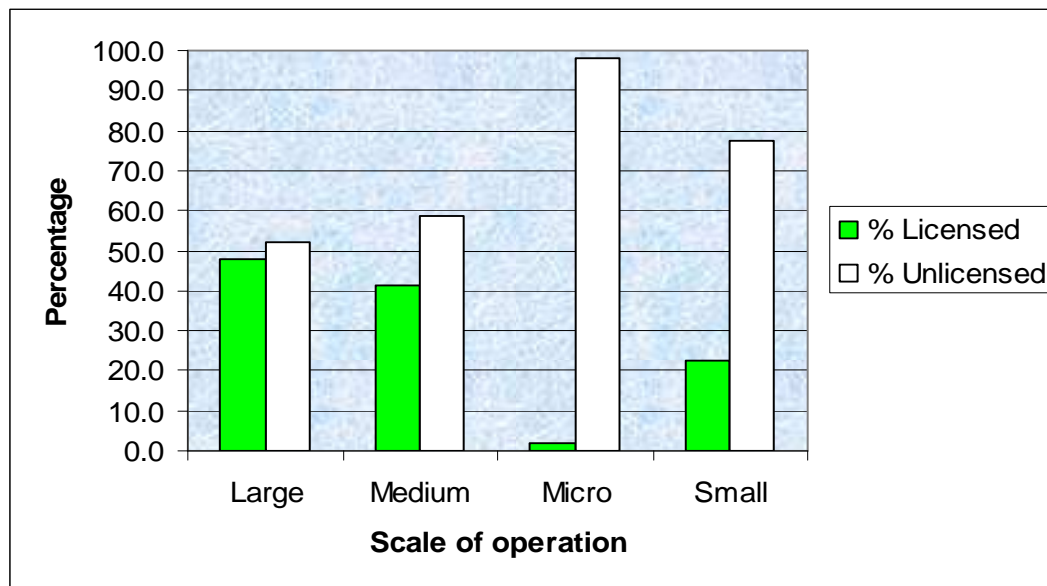


Figure 7: Food licensing status by scale of operation

3.2.2.2 Food licensing status by categories of food

The distribution of licensed and unlicensed food plants in terms of category is shown in Appendix 7 and figure 8 below.

Within each food category, percent of unlicensed premises differed; with those having the higher number of micro and small scale having the highest level of unlicensed premises. Food categories with the lowest compliance in terms of unlicensed premises within each category are; sugar (100%), others food category 94.92%), vegetable oils (93.44%), cereals pulses and legumes (87.78%). Infant and junior food though had 100% unlicensed premises, they are only two in number.

There is a positive correlation between results obtained for licensing and registration status; this is due to the fact that applications for registration of food premises and licensing are normally processed simultaneously, therefore factors that influence licensing are similar with those that affect registration of premises.

This trend shows that more effort is needed to address problems in those areas with highest levels of unlicensed premises within categories of food and scale of operations.

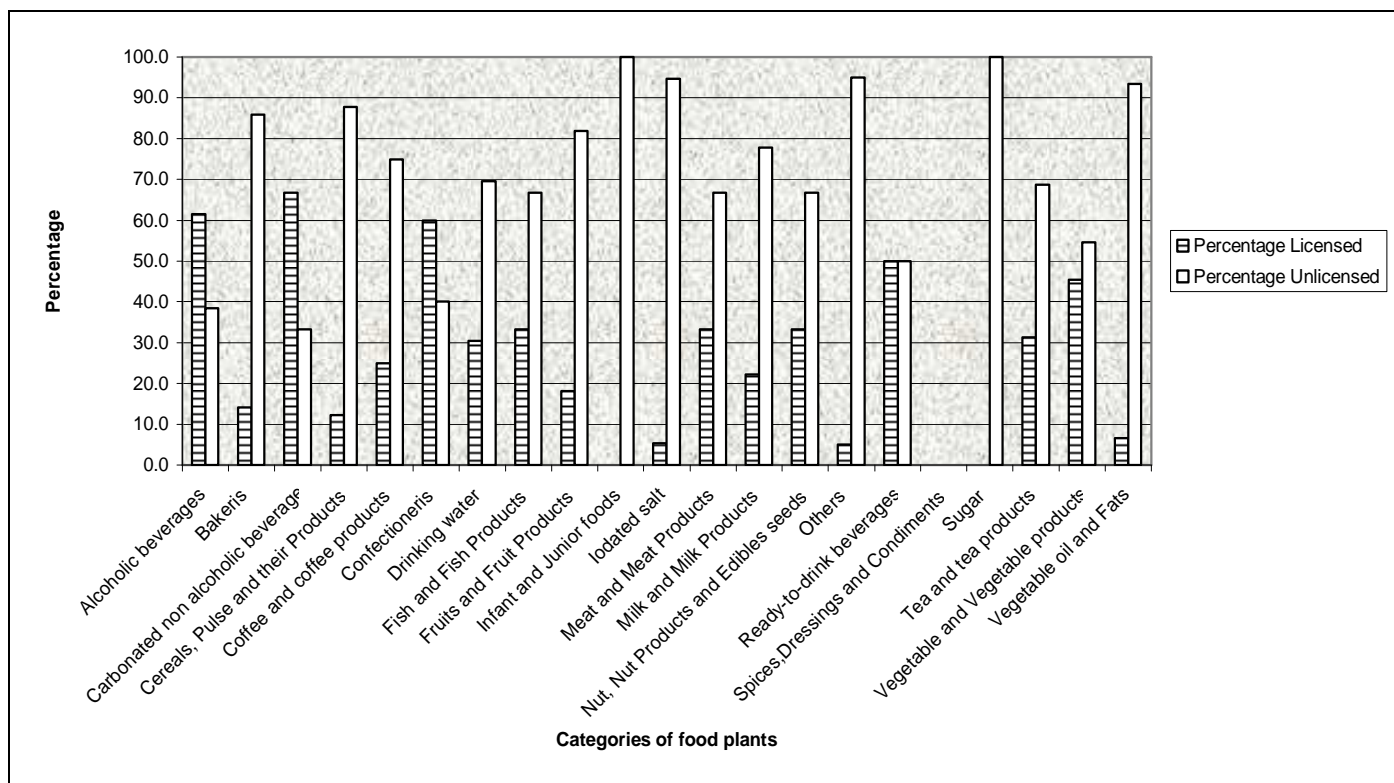


Figure 8: Food licensing status by categories of food

3.3 GMP/ Compliance

Assessment of GMP compliance based on selected criteria as indicated in the questionnaire used in collecting information. Such criteria included, location of food manufacturing plants, nature of building materials of the plants, source of water, presence of documented and implemented cleaning schedules, adequate toilets in relation to the number of staff. Other factors considered include, use of protective gears, waste disposal system, analytical services for quality and safety parameters relevant to the product, presence of qualified personnel required for supervision of the product being produced and record keeping. Compliance to these criteria gives indication of compliance to GMP.

3.3.1 Location of food premises

Location of food manufacturing plant can have influence on the quality and safety of food produced as a result of contamination originating from the surroundings.

Therefore correct selection of the location of the food manufacturing plant is very important before building a factory. For example, some food products such as milk easily pick up the odour of the surrounding. This is why special areas are normally designated for foods manufacturing as such locations are normally provided with the necessary infrastructures, which enhance production of safe and quality food. However, some may be located in unsuitable locations for the intended purpose. For example production of food in residential or backyard may not provide a favourable environment for safe food production as risks associated with such environment is high due to potential cross contamination of raw or processed food.

3.3.1.1 Location of food premises by scale of operation

The survey findings showed that of the total number of 67 large scale food plants 60 (89.5%) are located in industrial area, 6 (9.0%) in estates and 1(1.5) in residential area. None is located in backyard. For the total number of 92 medium scale food plants 75 (81.5%) are located in industrial area, 11 (12%) are in estates, 6 (6.5%) in residential area and non in backyard. Out of the total number of 176 small scale food plants their location is as follows; 81(46.0%), 38 (21.6%), 6 (3.4%), 51(29.0%) corresponding to, industrial, estate, backyard and residential respectively. With respect to micro food plants their locations are as follows 63 (22.60%), 24 (8.60%), 36(12.90%) 156(55.90%) corresponding to industrial, estate, backyard and residential areas respectively. The results with respect to locations of food plants versus scale of operation are as indicated in Appendix 8 and Figure 9 below

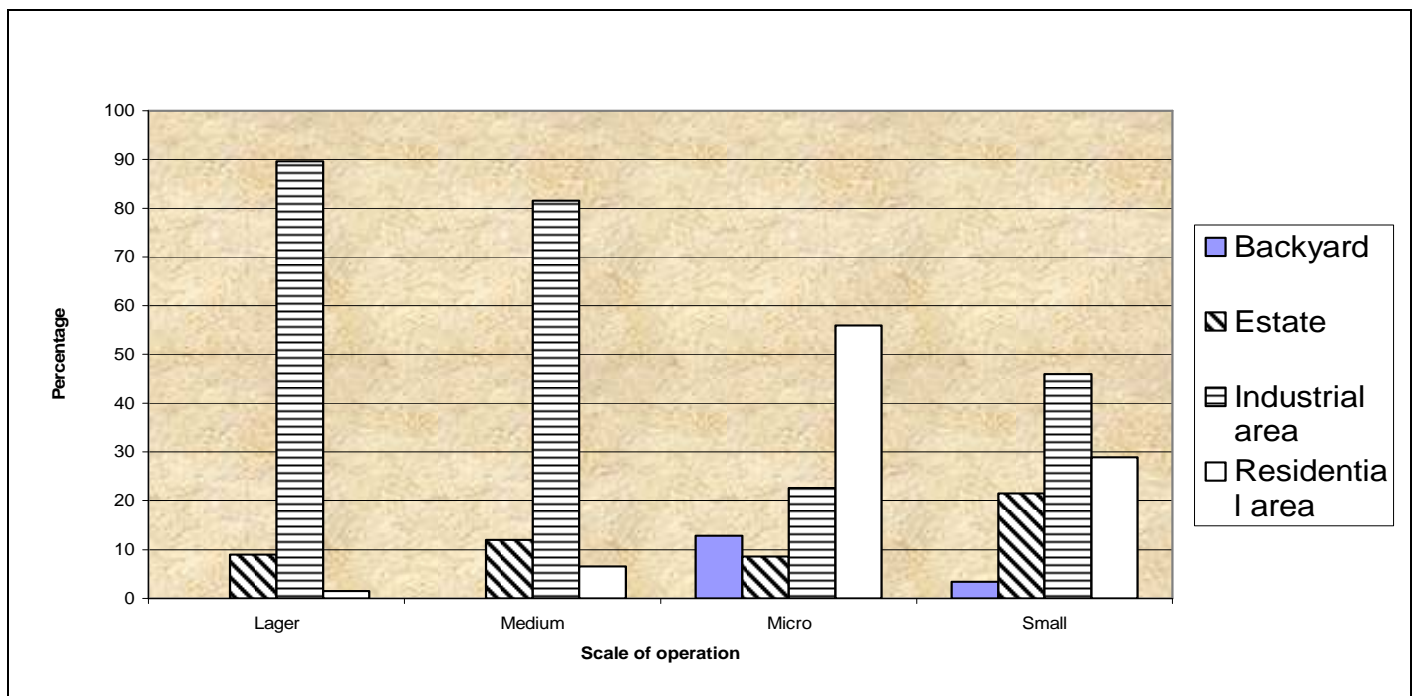


Figure 9: Location of food plants by scales of operation.

Based on the results presented in Figure 9 above; most of micro and small scale plants don't comply with location criteria as they are predominantly located in residential areas. This tendency of having high number of food plants located in residential areas could be attributed to inability of owners of these categories to acquire adequate capital to build premises in industrial areas due to high costs. Also the small scale food plants could easily be accommodated in residential areas. Small scale food plants depict a similar picture as the micro scale plants with respect to location criteria, except that majority of them are located in industrial area and in estates as shown in figure 9 above. Only few numbers of plants are located in backyard areas, these are mainly contributed by micro and to a limited extend small scale food plants. Factors that may be influencing location of Small scale food plants do not differ significantly with micro scale plants as there is no sharp demarcation between the two. However a significant proportion small scale is observed in estates due to presence of SIDO estates all over the country which accommodates such plants.

Based on the Appendix 8 and figure 9 above, unlike micro and small scale plants, majority of the medium and large scale plants are mainly located in industrial areas, this situation could be attributed to their ability to acquire adequate capital to build food premises in such areas.

Based on the survey findings a significant proportion of the food manufacturing plants especially micro and small scales are located in residential and backyard areas. This trend must be reversed as it does not provide assurance on quality and safety of food produced. More SIDO estates could be established that provides the necessary infrastructure for processing of foods. It is easier to provide services such as technical support, establishment of laboratories that could used by many food processors in product quality control.

3.3.1.2 Location of food premises by categories of food products

Assessment of location of food manufacturing plants in general (Appendix 9) have revealed that 45.44% of food plants are located in industrial area, 34.85% are located in residential area, and 12.87% in estates and 6.84% are located in backyard areas. Based on categories of food products (Figure 10 below) plants that appears to be mostly located in industrial area are confectioneries (100%), Ready-to-drink beverages (100%) Fish and fish products (94.44%) carbonated non alcoholic beverages (91.67%) and coffee and coffee products (75%). Residential area has significant number of bakeries (68.48%) fruits and fruits products (45.45%) and cereals pulses and their products (42.22%). This behaviour may be due to low capital investment as micro and small scale manufacturing plants are predominant in these categories. Categories of infant and junior foods, bakeries, others and milk and milk products appears to be located in Backyard areas. Estates areas have high percentage of iodated salts (68.42%), sugar (66.67%) and tea and tea products industries (50%) this may be attributed by availability of raw materials that are produced in respective areas.

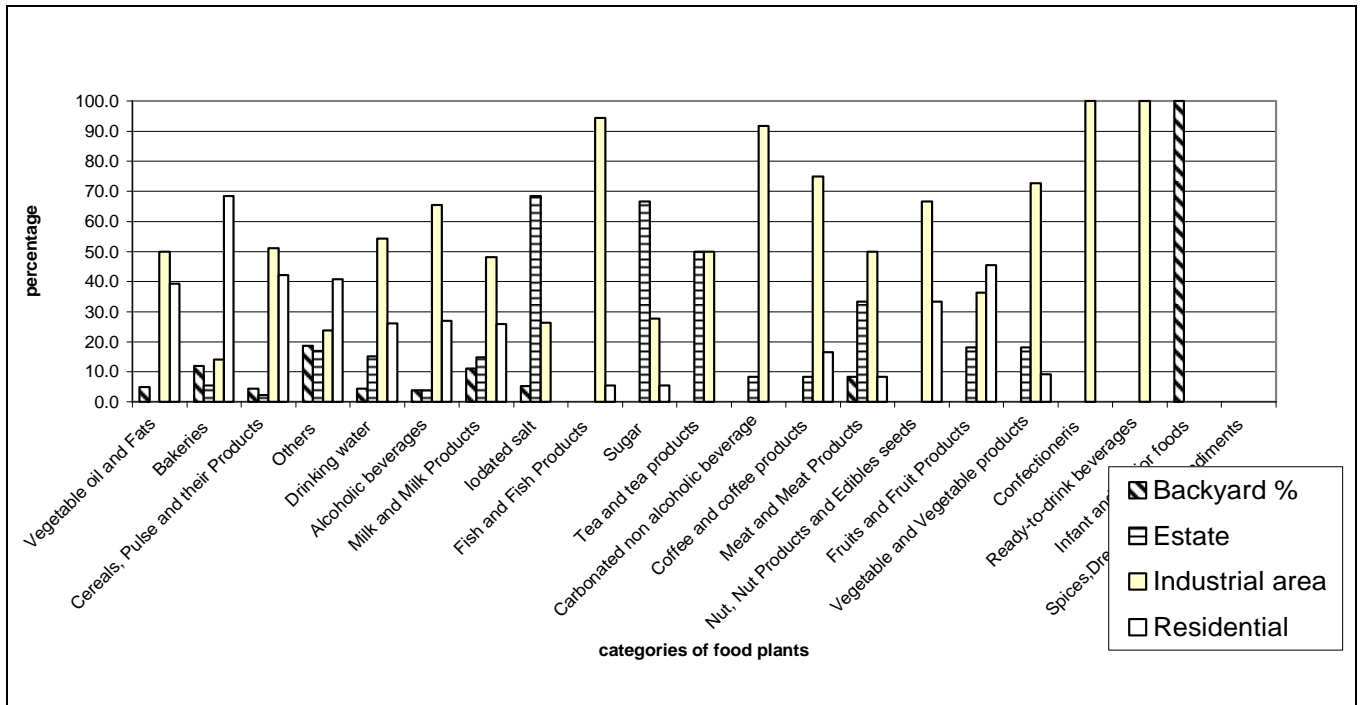


Figure 10: Location of food premises by category of food products

3.3.2 Building materials

Building materials used for construction are classified as permanent or temporary. The two categories may influence the quality and safety of the products produced in those premises. This is partly associated with maintenance of hygiene and good state of repair of the buildings. Therefore, knowledge of the materials used in food premises would be useful in deciding their suitability taking into consideration the nature of the product and scale of operation.

3.3.2.1 Status of building materials by scale of operation

Survey findings established status of materials used for construction basing on the scale of operations. Appendix 10 and figure 11 below show that out of the total 614 food manufacturing plants 537 (87.46%) have buildings constructed of permanent materials whereas 12.54% do not have. However, all larger Scale plants complied with this criterion while the compliance by micro scale food plants is 74.55%. Compliance by the rest of the categories is above 90%.

Based on the findings, it is evident that material of construction is not a problem to the majority of the food plants. However, complying with this requirement alone may not be meaningful if buildings are not maintained as deterioration of the buildings may reach a state that have a negative effects to the product quality and safety.

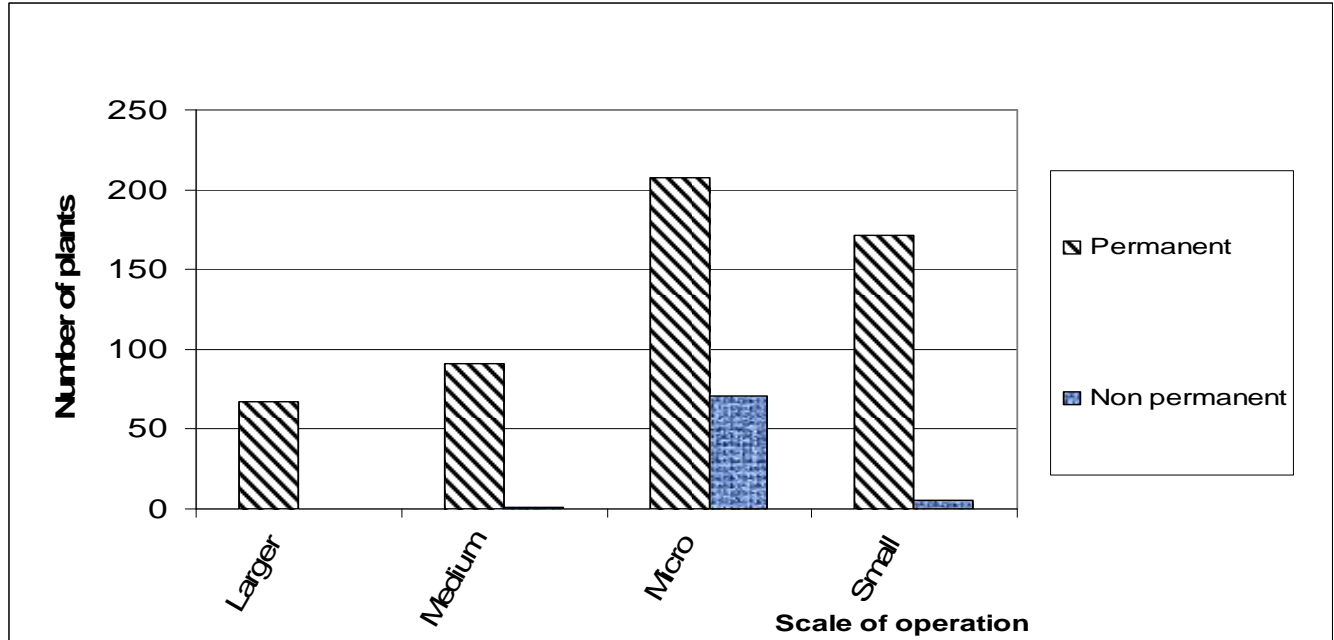


Figure 11: Status of building materials by scale of operation

3.3.2.1 Status of building materials based on categories of food products

Appendix 11 and Figure 12 below show status of building materials based on category of food products. Findings revealed that within each food category, premises built of permanent materials were proportionally higher than those built of temporary materials. Seven categories namely, drinking water, fish and fish products, sugar, carbonated non alcoholic beverages, ready to drink beverages, infant and junior foods, coffee and coffee products have all plants built of permanent materials. Salt plants have almost equal numbers of plants built of permanent and temporary materials.

The reason for some food plants using temporary building materials could be due to the seasonality of the business or the nature of the product may not be feasible to use permanent building materials for example ponds used to concentrate saline solutions along oceans during salt production.

TFDA could establish conditions and type of food products that may be produced in such premises without compromising quality and safety of the product produced.

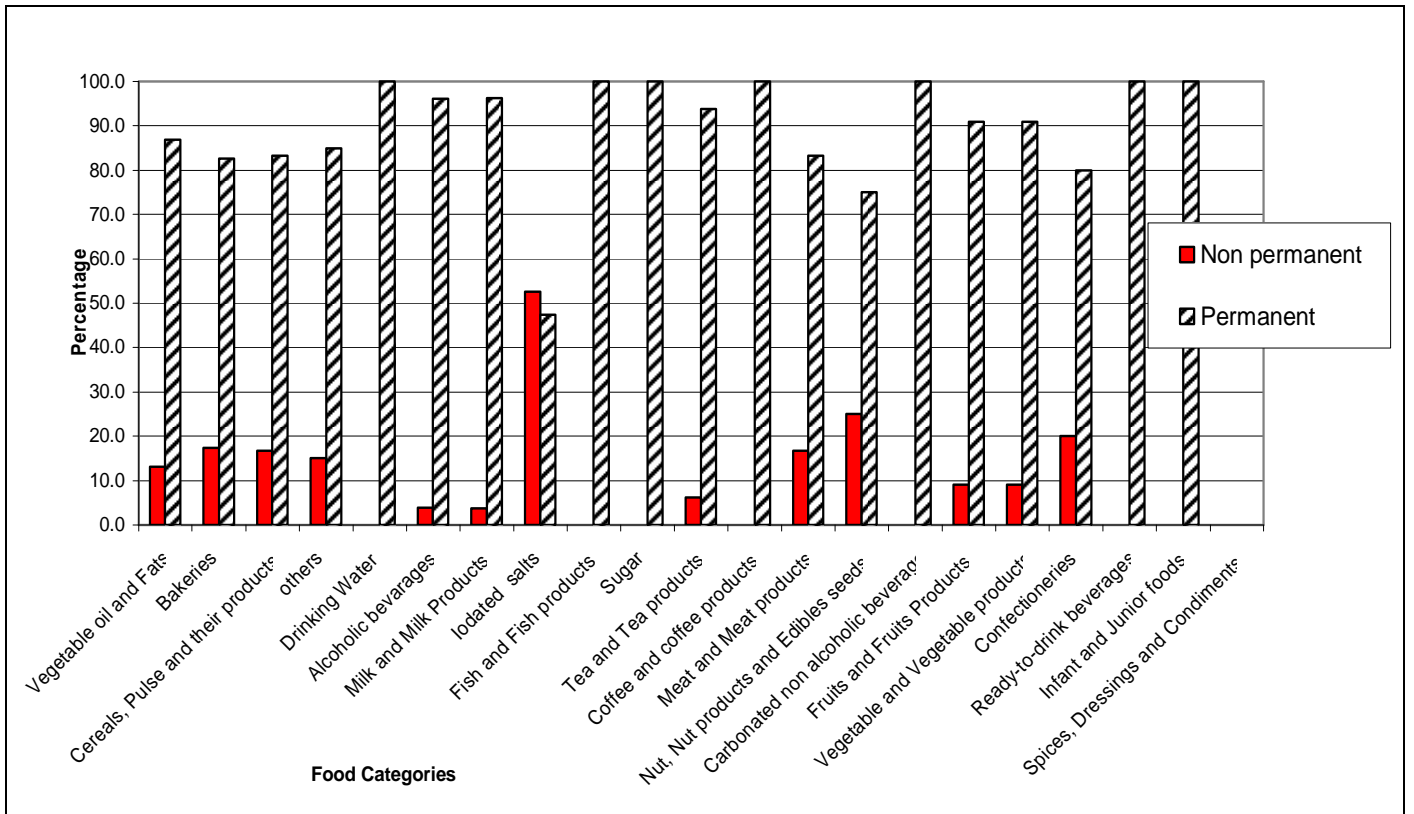


Figure 12: Building materials by category of food plants

3.3.3 Source of water

Source of potable water is an important aspect for all food manufacturing plants in order to ensure quality and safety of food products and achieve good sanitation in food manufacturing. The various sources of water used by manufacturing plants are bore holes, both public and borehole, public supply and other sources such as rivers, lakes, Appendix 12 shows that most of the plants 332 (54.1%) appears to depend on public water supply as their major source of water, 143 (23.3%) of the plants uses bore hole/wells, 143 (13.5%) uses other sources of water, 56 (9.1%) uses both public and bore holes.

3.3.3.1 Source of water by scale of food plants

Figure 13 below shows that within each scale of operation, the distribution of sources of water supply showed little variation for large scale food plants as it ranged from 20.9% for other sources of water supply to 28.3% for bore holes. This even distribution could be attributed to inadequate and unreliable public water supply coupled with adequate finance to acquire the various sources. Medium scale plants uses all sources of water ranging from 14.1% for other sources to 40.2% for public supply. Reasons contributing to this trend are similar to those shown by large scale food plants. For small scale the range is from 55.7% and 9.1% for public and both public and borehole respectively. For micro scale plants the range was from 64.2% (Public supply) to 1.4% (both public and bore holes). Micro and small scale plants use to a large extent public supply and least for both public and bore halls. This trend is

probably attributed to inadequate capital to diversify sources of water supply and low costs associated with use of public supply.

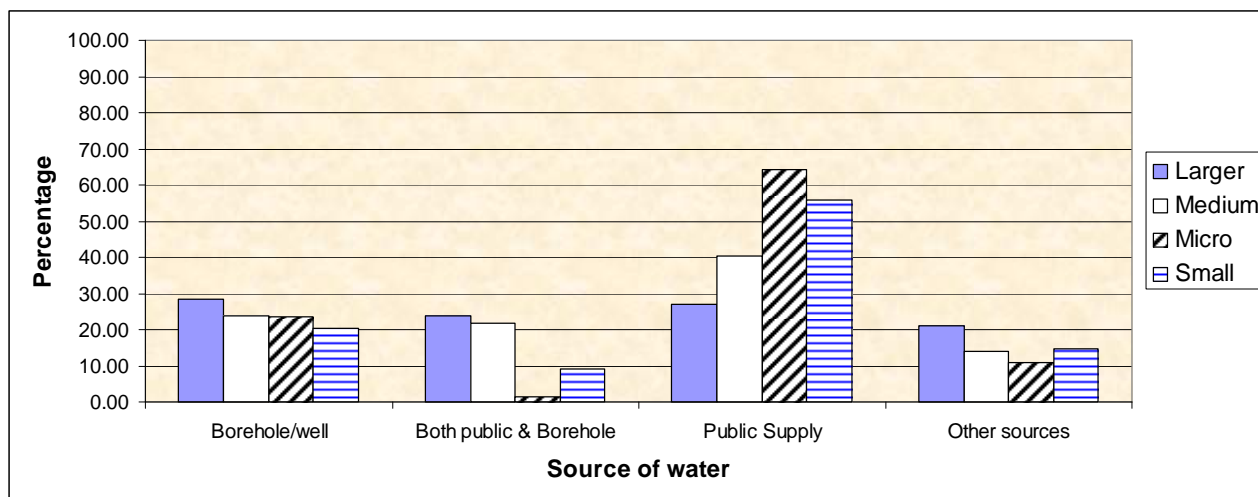


Figure 13: Source of Water by scale of operation

3.3.3.2 Source of water by category of food plants

Assessment of the source of water used by various food plants (Appendix 13 and figure 14) indicated that borehole is used by majority of the plants except carbonated beverages, confectioneries and infant and junior food. Of the total number of food categories which uses bore holes are as follows; cereals, pulses and products accounts for 30.1 %, followed by vegetable oils and fats (15.4%), Others category (9.8%), drinking water (8.4%), bakeries (7.7%) and alcoholic beverages (4.9). The rest of food plants utilize boreholes at levels below 3.6%.

With respect to use of public supply, vegetable oils and fats are leading in using this source of water at 25.0% this could be attributed to the presence of a large number of vegetable oils and fat plants. Other food categories which are major users of public water supply are namely, bakeries (20.2%), Cereals, pulses and products (11.1%), others category (12.0%), Milk and milk products (5.1%), Drinking water (4.2%), carbonated non alcoholic beverages (2.4.%). The rest of the plants utilize public supply to a lesser extent but in combination with various sources.

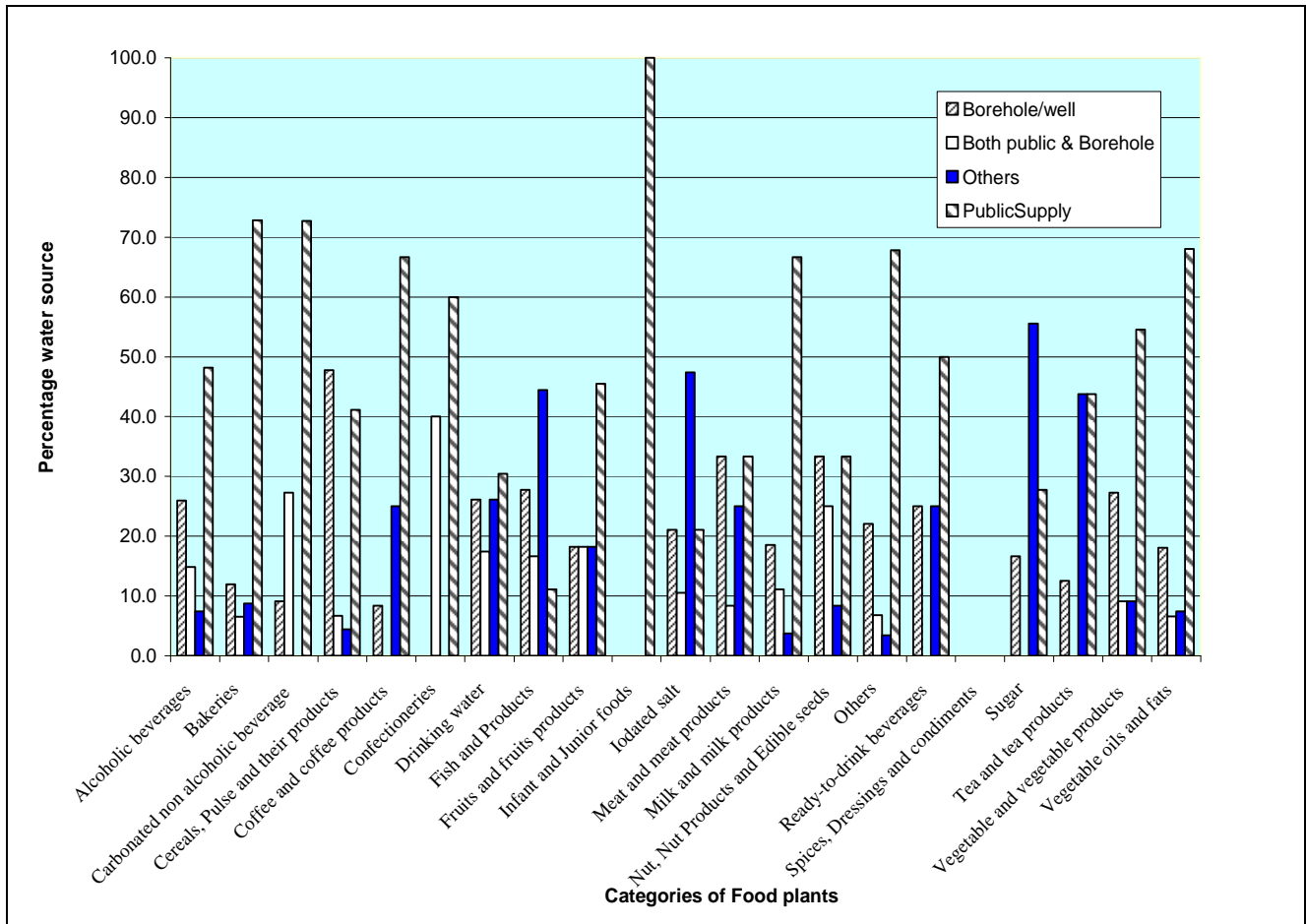


Figure 14: Source of water supply by food category

Majority of the categories of food plants use both borehole and public supply. Of the 20 categories of the food plants 16 categories use both public and boreholes. This is attributed to the fact that water supply is both inadequate and unreliable so some food plants use both sources to ensure reliable supply of water. The only categories which do not use the two water sources are; coffee and products, confectioneries, infant and junior foods, ready to Drink food products, sugar and Tea.

The amount of water used differs from one food category to another. Some products such as milk and carbonated beverages require large amount of water. Whereas other products such milling, bakeries require little amount of water. Generally adequate water is required to meet various operations such as cleaning or water used as an ingredient. Also quality of the water used is important as some products require that water comply with some specifications in order to produce quality and safe product. However, the situation in our country is that water is inadequate and sometimes its quality is questionable. Therefore securing various water sources and treatment before being used for processing is highly recommended.

3.3.4 Sanitation and Hygiene

Sanitation and hygiene is an important aspect with respect to ensuring that products produced are exposed to minimum risks in relation to physical, chemical and microbial contamination. Therefore any attempt to make a food product safe must comply with Good Hygienic Practices necessary for preventing or minimizing contamination to acceptable levels. The questionnaire contained questions that were meant to assess status in relation to the following parameters namely; presence of; a waste disposal system, sufficient toilets in relation to the number of staff, protective gears for the employees and cleaning schedule.

3.3.4.1 Waste disposal system

Presence of well established disposal system is important to minimize chances of physical, chemical and microbial contamination of raw materials, food being processed, finished products and equipment used for processing.

Based on the survey, Table 4 and Figure 15 of the total 614 food plants, with exception of micro scale food plants the rest had compliance within each category of food products of at least 85.3% in having in place waste disposal system. Again large and medium scale food plants performed well in this criterion. However, irrespective of this higher percentage, it is not clear whether the system operates effectively to achieve what is expected and therefore the potential for cross contamination is kept to the minimum.

Scale	Not in place		In place		Total number of food plants
	Number of plants	%	Number of plants	%	
Large	1	1.5	66	98.5	67
Medium	3	3.3	89	96.7	92
Micro	66	23.7	213	76.3	279
Small	20	11.4	156	88.6	176
	90	14.7	524	85.3	614

Table 4: Waste disposal by Scale of Operation

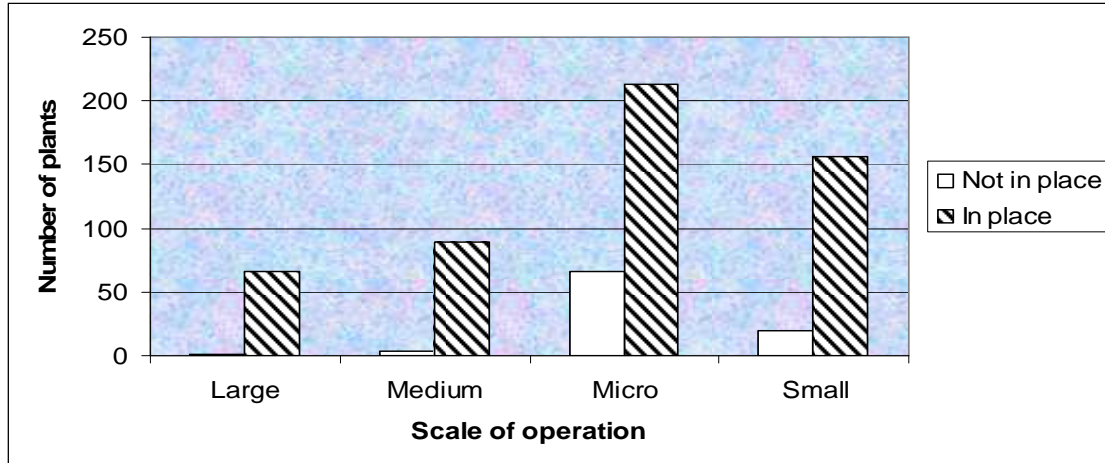


Figure 15: Presence of waste disposal system by scale of operation of food plants

Assessment of presence of waste disposal system within each food category (Appendix 14 and Figure 16 below) indicated that more than 80% of the food plants had a system in place for waste disposal except vegetable oils and fats; and iodated oil which had 72.1% and 42.1% respectively. The low percentage for iodated salt could be partly attributed to the fact that the nature of the process does not involve wastes as raw material is saline solution.

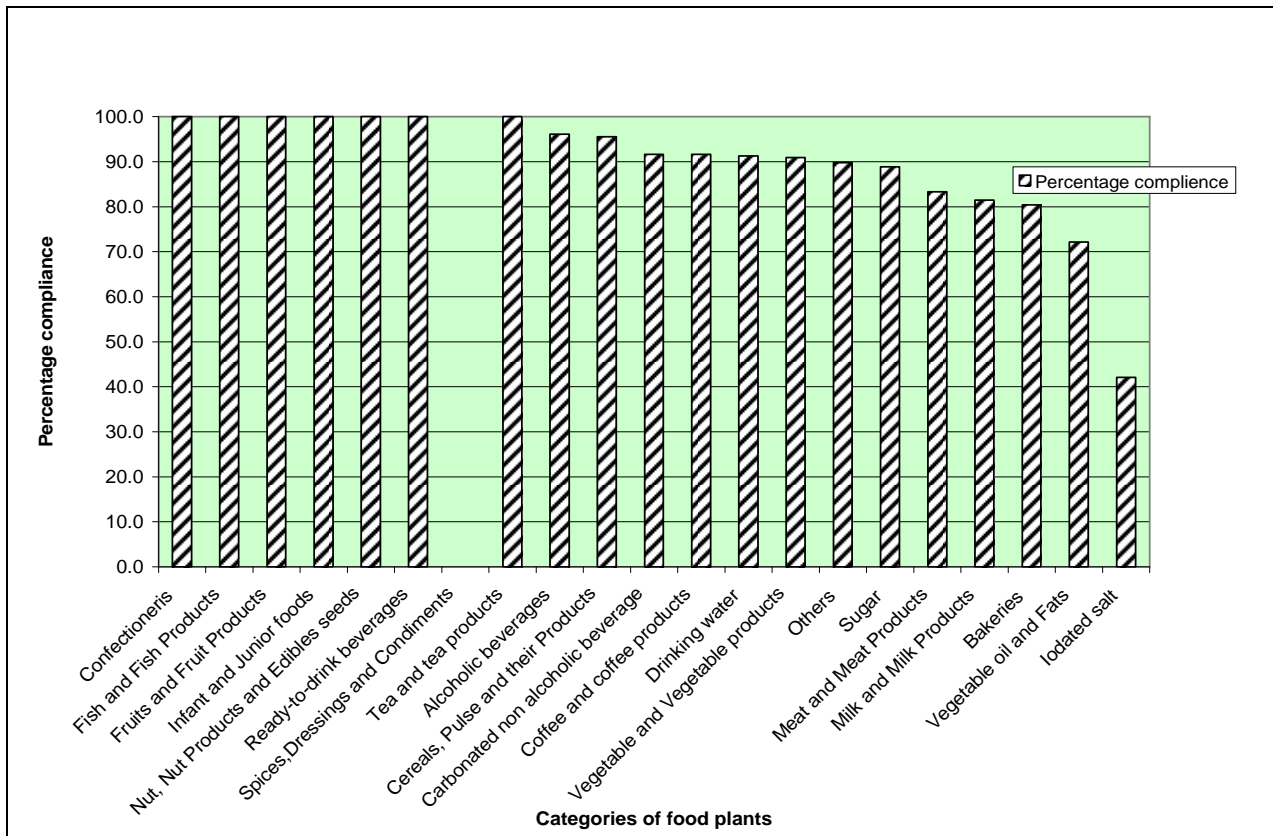


Figure 16: Presence of waste disposal system by category of food plants

3.3.4.2 Adequacy of toilets

Presence of adequate number and clean toilets can contribute significantly to production of safe food as microbial contamination of the food could be high if there are inadequate and unsanitary toilets.

The survey indicated that a total of 565 (92%) food plants had sufficient toilets in relation to the number of employees; within a scale of operation minimum compliance to this criterion was 87.5%. This trend was also reflected within each food categories as the minimum percentage is roughly 63.2% for iodated salt. Appendix 15, Table 5, Figures 17 and 18 below show the trend in relation to this criterion. Nevertheless, this high proportion of food plants complying with this requirement may not be meaningful if cleanliness is not maintained and hygienic practices are adhered that will prevent or minimize contamination of food. Generally cleanliness of the toilets is not maintained in good sanitary condition, this requires that manufacturers be educated on the importance of having adequate number of toilets maintained in a clean condition.

Scale	Inadequate	% Inadequacy	Adequate	% Adequacy	Total
Large	2	3.0	65	97.0	67
Medium	0	0.0	92	100.0	92
Micro	40	14.3	239	85.7	279
Small	7	4.0	169	96.0	176

Table 5: Sufficiency of toilets

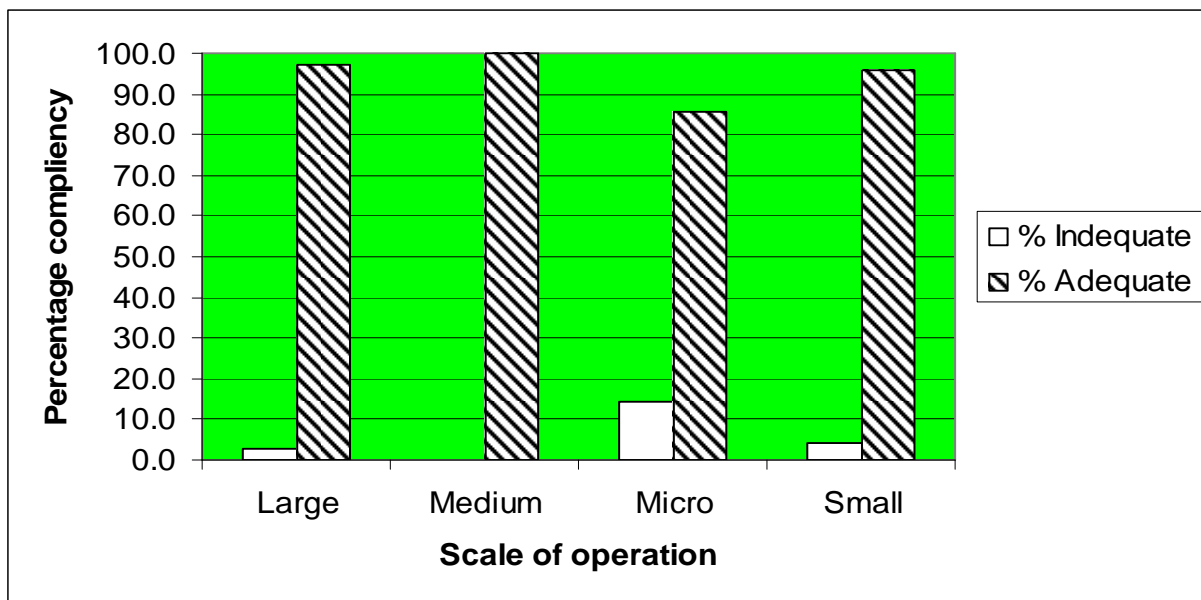


Figure 17: Sufficiency of toilets by scale of operation of food plants

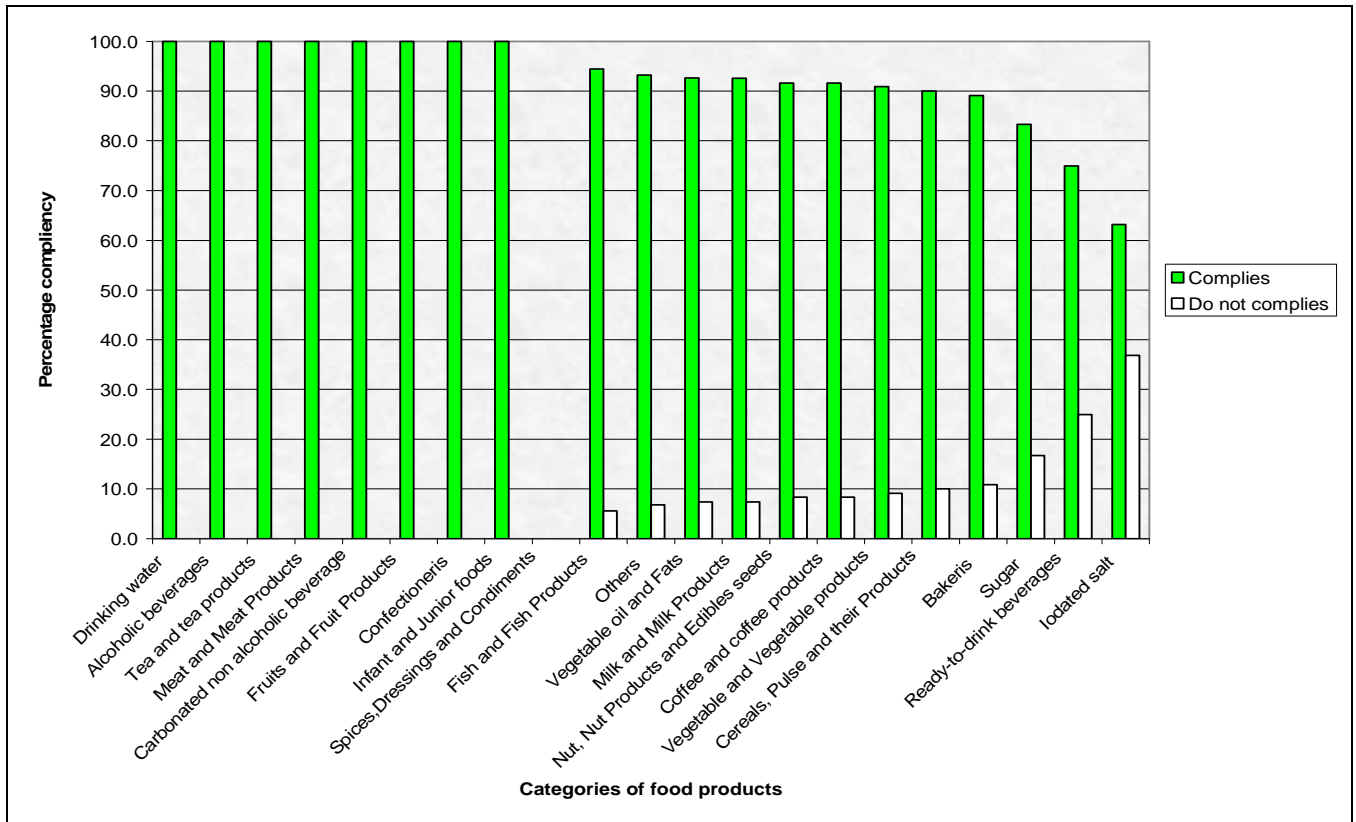


Figure 18: Sufficiency of toilets by food category

3.3.4.3 Use of protective clothing

Protective clothing is important in food processing as it minimizes chances of food contamination. From the findings a total of 356 (57.8%) food plants provided protective gears for the employees.

3.3.4.3.1 Use of protective gear by scale of operation

The Survey revealed that within each scale of operation, large and medium scale had on average about 89.6% and 82.6% respectively compliance to this criterion. Small and micro scale food plants had on average, compliance of about 66.5% and 36.9% respectively as indicated in Appendix 16 and figure 19 below.

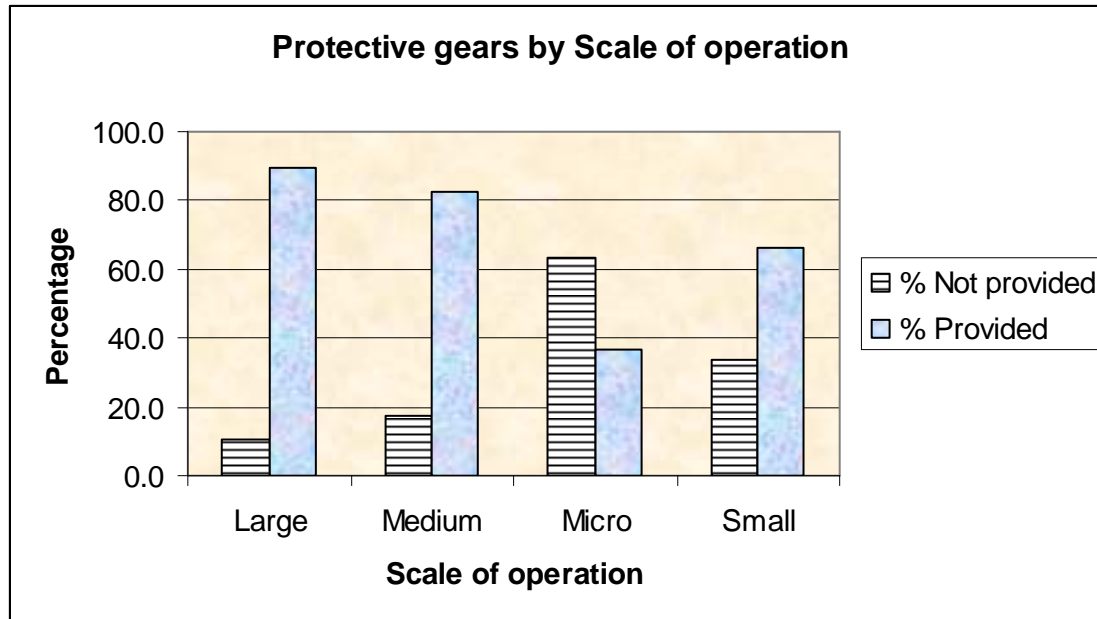


Figure 19: Supply of protective gear by scale of operation

3.3.4.3.2 Use of protective gear by category of food products

Appendix 17 and Figure 20 below, show that there was a big variability with respect to this criterion across the food categories ranging from 21.1% for iodated salt to 100% for carbonated non alcoholic beverages, confectioneries and ready to drink beverages. Other food categories with percent less than 50% using protective gears were; cereals and pulses (47.8%), Sugar (38.9%), Vegetable oils and fats (31.1%). However, in order to benefit from the use of protective gears, they must be maintained in a clean condition so that they don't become a source of contamination.

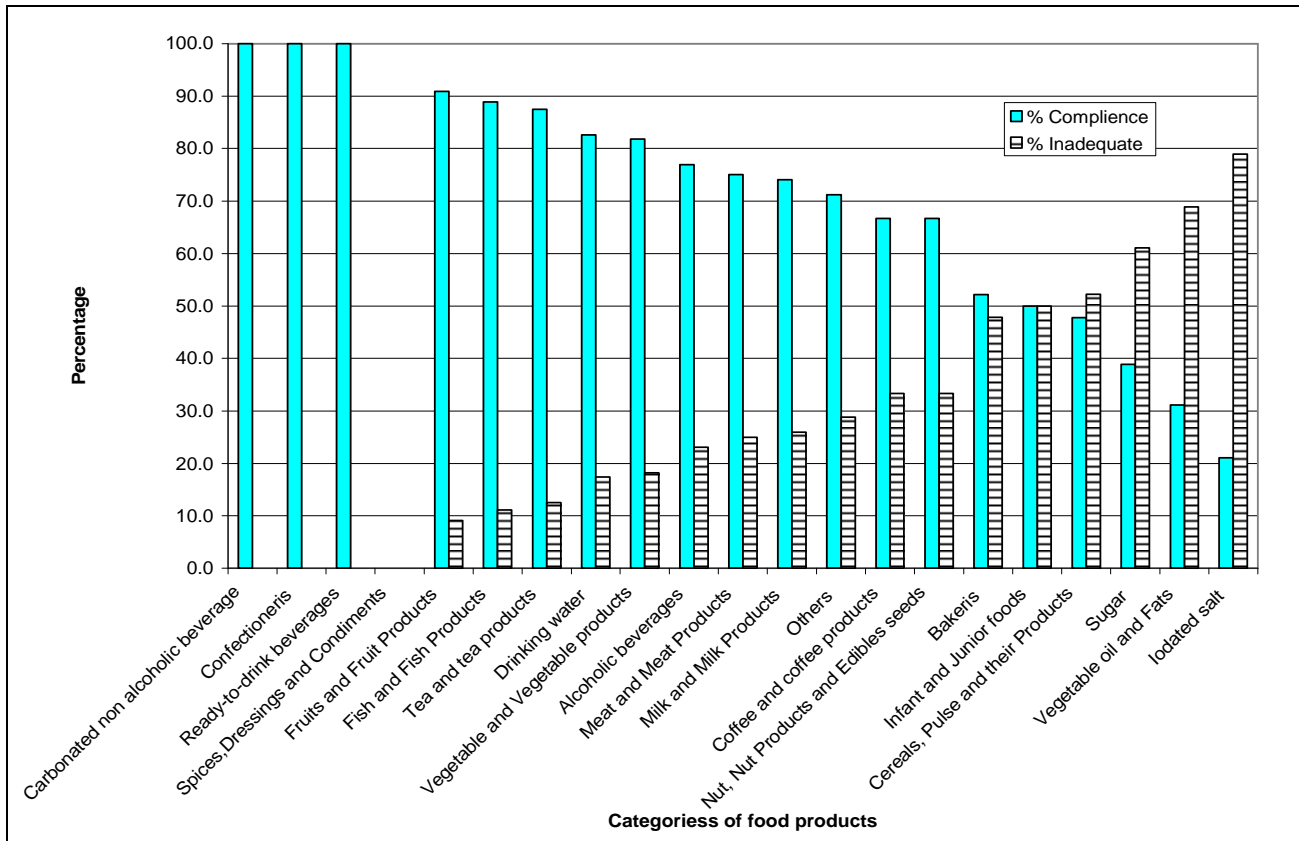


Figure 20: Use of protective gears by categories of food plants

Since about 42.2% of the food plants didn't provide protective gears for the employees, this implies that chances of food contamination may be high.

3.3.4.4 Cleaning schedules

Food process operations involve generation of wastes, therefore if they are not handled and disposed of in a proper manner; there will be a high probability of contaminating raw materials, products being processed, final products and equipment.

Survey findings indicate that 55.8% didn't have documented and implemented cleaning schedules. Absence of cleaning schedule to the majority of the food plants means that there is no commitment on the part of the plant management to ensure high level of cleanliness in their food premises. However, majority of those who didn't have such schedules claimed to be maintaining cleaning operations.

3.3.4.4.1 Documented and implemented cleaning schedule by scale of operation

Table 6 and Figure 21 indicate that within each scale of operation, more than 85% for large and 75% food plants respectively had in place implemented cleaning schedules. However, the situation was different for micro scale plants where about

80% didn't comply. Small scale food plants had equal proportion of food plants with and without documented and implemented cleaning schedules.

Scale	Not Provided	% Not provided	Provided	% Provided	Total
Large	9	13.4	58	86.6	67
Medium	25	27.2	67	72.8	92
Micro	221	79.2	58	20.8	279
Small	88	50.0	88	50.0	176
Total	343		271	230.2	614

Table 6: Documented and implemented cleaning schedule by scale of operation

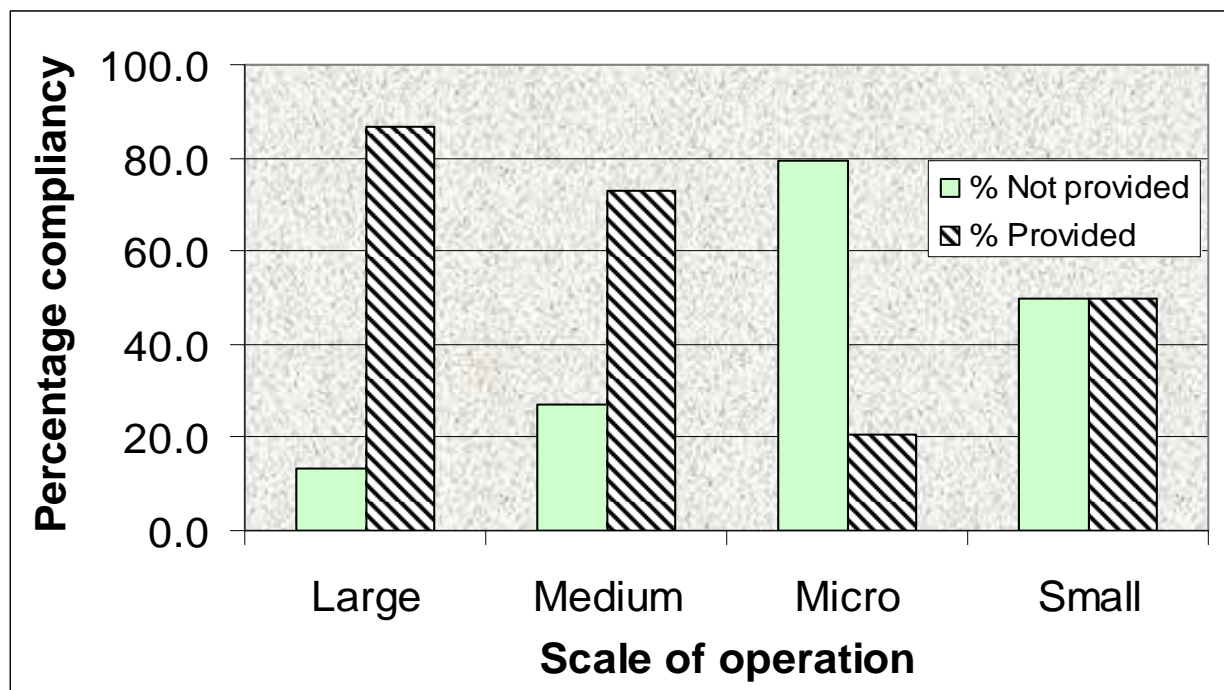


Figure 21: Presence of documented and implemented cleaning schedules by scale of operation

3.3.4.4.2 Documented and implemented cleaning schedule by category of food plants.

Appendix 18 and Figure 22 below show that categories with 100% plants implemented cleaning schedules include carbonated non alcoholic beverages and confectioneries. Food categories having percent between 90% and less than 100% were as follows; Fish, Tea and Fruit and fruit products. Those having compliance

between 70% and 80% are namely; Alcoholic and ready to drink beverages. The rest of food categories had compliance to the criterion between 50% and 70% except vegetable oils and fats, other food category, bakeries, iodated salts, cereals, pulses and vegetable oils and fats which had compliance below 50%.

The reasons for having high percent for some categories of food plants having documented and implemented cleaning schedules is that some have already instituted quality assurance systems such as Hazard Analysis and Critical Control Point (HACCP) as in Fish industry; response to market requirements of importing countries, Other factor is probably due to requirements by international companies that have licensed local manufacturers as in carbonated non alcoholic beverages.

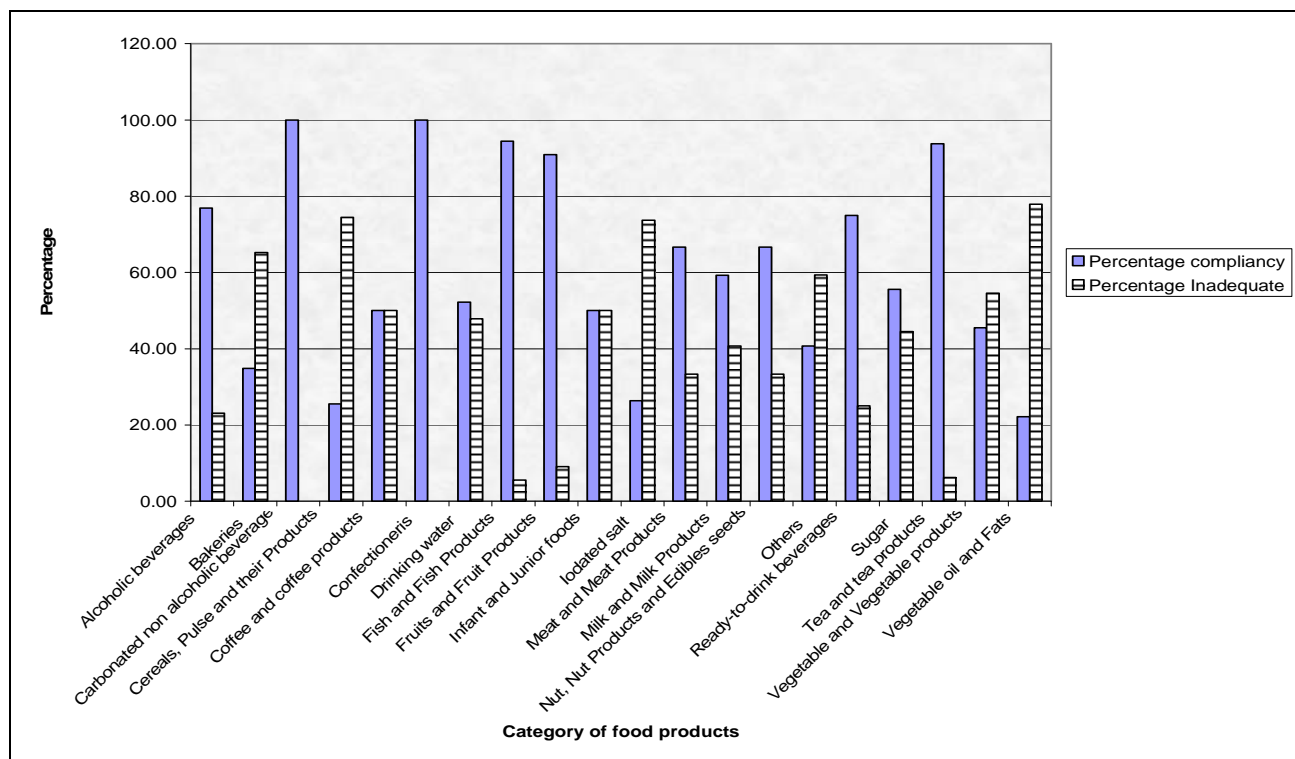


Figure 22: Presence of documented and implemented cleaning schedules by categories of food plants.

The reason for majority of food plants performing below 50% could be attributed to the fact that majority are micro and small scale as such compliance to Good Hygienic Practices (GHPs) is still low due to low awareness among manufacturers.

Based on the results presented above, majority of the food plants have system in place of waste disposal, sufficient toilets, but have unsatisfactory compliance in requirements for having and implementing cleaning schedules. This indicates that compliance to those other criteria may not bring the anticipated effect.

3.3.5 Quality Control

Quality control is one of the important aspects that must be instituted in a factory in order to ensure that product quality and safety is consistently maintained in all batches. Presence of quality control provides an assurance that food quality and safety issues are being given the required attention. Similarly, record keeping provides a basis for monitoring various operations so that necessary interventions can be taken to rectify deviations. As explained earlier, there were some selected criteria that were identified for giving an indication on compliance to GMP. Some of the parameters used were acceptance or rejection criteria, quality control tests undertaken, presence of qualified person and record keeping.

3.3.5.1 Acceptance criteria, Record Keeping and Qualified Personnel by scale of operation within scale of operation of food plants.

From the results indicated in Table 7 below shows that 53.9% of the food plants didn't have acceptance or rejection criteria for raw materials. Within each scale of operation, compliance rate to this criterion varied as follows; micro scale food plants 209 out of 279(74.9%), small scale 80 out of 176(45.5%), medium scale 31 out of 92 (33.7%) and large scale 11 out of the total 67 (16.4%).

This indicates that micro and small scale to the large extend do not ascertain quality of the raw materials for their suitability for use in processing relevant food products, therefore may or may not be suitable for the intended purpose and therefore cannot guarantee quality and safety of the finished products.

With respect to record keeping, 60.9% of the food manufacturers didn't keep records that are important for decision making process. This could be partly due to the fact that about 53.74% of the food processing doesn't have qualified personnel who could supervise production process and quality control. On aspect of carrying out quality control tests by manufacturers, about 60% don't carry out tests completely. The remaining percent either carry out using their own laboratory or subcontracts them or do both. Generally the unsatisfactory performance by majority of food plants in the criteria stated above gives an indication that chances of producing low quality or substandard products is high.

Scale of production	Acceptance and rejection criteria		Quality control test done				Records keeping		Qualified personnel	
	Yes	No	A	B	C	D	Yes	No	Yes	No
Large	56	11	13	21	23	10	62	5	57	10
Medium	61	31	19	26	24	23	67	25	65	27
Small	96	80	49	20	24	83	86	90	92	84
Micro	70	209	12	7	1	259	27	252	70	209
SUB TOTAL	283	331	93	74	72	375	242	372	284	330
%	46.10	53.90	15.15	12.05	11.73	61.07	39.41	60.59	46.26	53.74

Table 7: Quality Control tests, Record Keeping and Qualified Personnel by scale of operation

Where A = Quality control test is contracted out
 B = Quality control test is done by the plant internal laboratory
 C = Quality control test are done by both A & B above
 D = Quality control test are not done at all

Most of micro and small scale plants don't comply with some selected GMP minimum requirements including, carrying out of quality and safety control tests, quality control, record keeping, criteria for acceptance or rejection of raw material, quality control tests carried on subsequent processing and qualified personnel in quality control and processing.

The failure to comply with GMP requirements might be attributed to inadequacy of capital to meet costs that are necessary to comply with quality control requirements and lack of knowledge on GMP requirements. Currently there has been a government initiative which goes in line with strategies for poverty alleviation; in his context a good number of micro scale processors are trained by some institutions to produce quality food products.

Contrary to this, larger percent of plants under category of medium and large scale of operation do comply with criteria for carrying out quality control which include criteria for acceptance or rejection of raw materials, carrying out of quality control tests on subsequent processing and having qualified personnel.

The reported compliance might be attributed to increased awareness among medium and large scale food manufacturers on the importance of adhering to GMP requirements, market demand and financial capability to meet costs for instituting quality assurance systems. Also they are able to employ qualified personnel to supervise day to day operations of the business aiming at manufacturing safe and quality product in order to meet both domestic and international trade requirements.

3.3.5.2 Quality control by categories of food plants

Quality control for acceptance and rejection criteria for raw material, in process quality control test, release of finished products and record keeping in food manufacturing plants are prerequisite requirements in GMP that have to be followed in production of high quality products. Figures; 23, 24, 25, 26 and 27 below illustrate how various categories of food plants adhere to these criteria.

3.3.5.2.1 Acceptance or rejection criteria of food raw materials by food category

Appendix 20 shows that within categories of food, plants that do have in place acceptance and rejection criteria for raw materials at a highest level are Tea and tea products 93.8%, Carbonated Non Alcoholic Beverage 91.7%, Alcoholic Beverage 84%, Coffee 75%, Fish 72% of which most of them are Large and medium scales. This situation might be attributed to acquisition of knowledge and awareness by medium and large scale food manufacturers on the importance of adhering to GMP requirements as one among the tools that determine manufacturing of safe and quality products.

Food plant categories with the lowest compliance rate to this criterion were; infant and junior foods 0%, sugar 22.2%, vegetable oils and fat 26.2%, Cereals and pulses 35.6% and bakeries 37.0%. The rest performed between the two extremes. Figure 23 shows proportions within each food plant category having acceptance or rejection criteria.

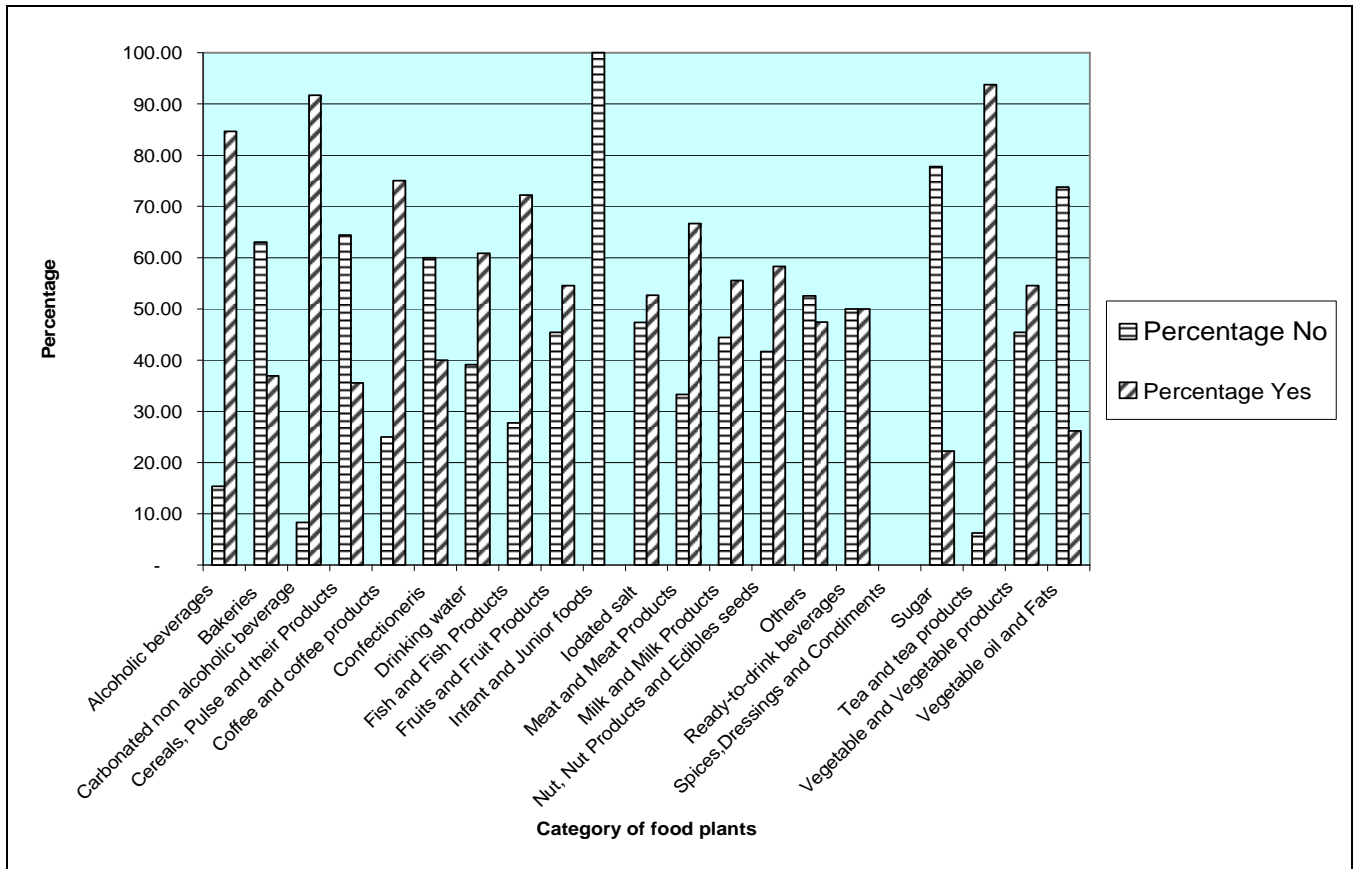


Figure 23: Acceptance or rejection criteria of food raw materials by food category.

3.3.5.2.2 Application of in process quality control tests by food plants category

Within each food category, Foods having at least 80% of its plants carrying out in process quality control tests are Tea and Tea products, carbonated non alcoholic beverages and alcoholic beverages. Those with proportion ranging between 60% and less than 80% are namely; Fish and fish products, Nut and nut products, milk and milk products and drinking water. Plant categories with the lowest level (below 20%) in application of in process quality control were; infant and junior food, vegetable oils and fat, Bakeries and other category of foods. Appendix 21 and Figure 24 below show performance of various food categories with respect to this criterion.

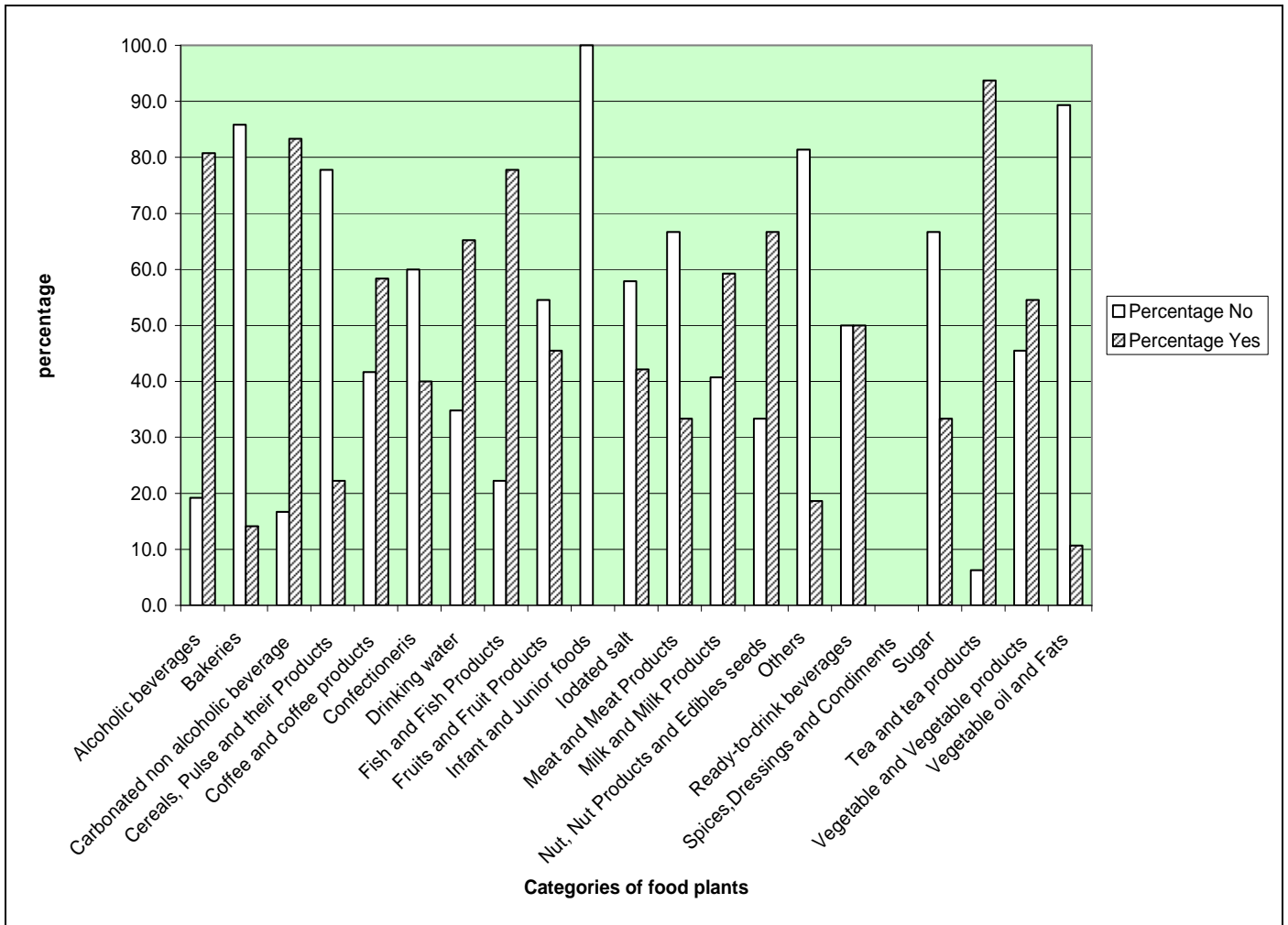


Figure 24: Application of in process quality control tests by food plants category

3.3.5.2.3 Criteria for release of finished product by food plant categories

Application of criteria for release of finished products is a means of ensuring that only safe food products are allowed to circulate in the market for human consumption.

Appendix 22 and Figure 25 show that generally 55% of food manufacturing plants don't comply with this criterion. Within each food category, food plants with percent at least 80% compliance in the criteria for release of final products were; Tea and Tea products, carbonated non alcoholic beverages, alcoholic beverages. Food plants with percent below 80% and at least 60% were; coffee and coffee products fish and fish products and meat products. Food products with compliance rate below 50% were; cereals and pulses, confectioneries, drinking water, infant and junior food. Others are sugar and vegetable oils and fats.

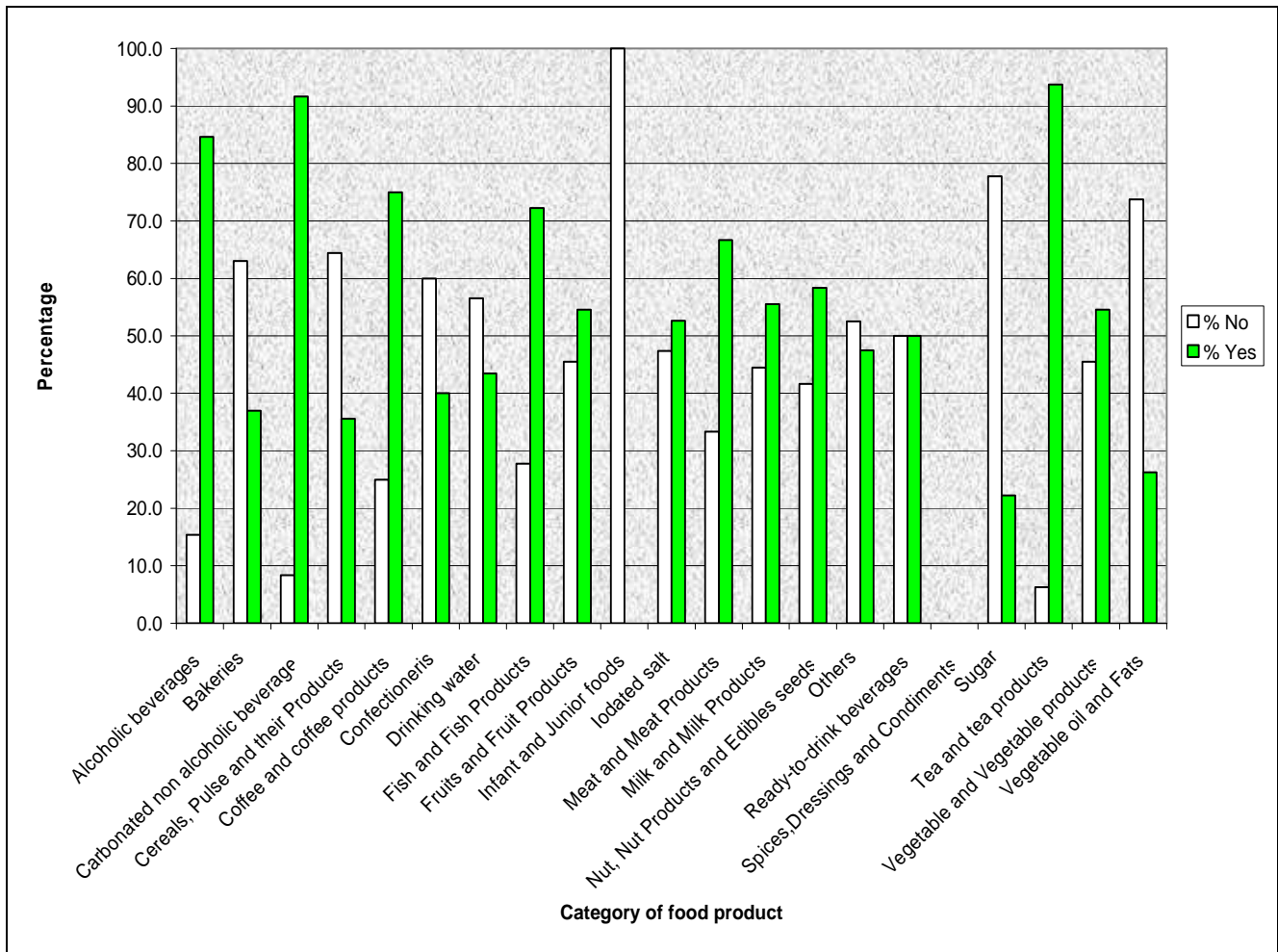
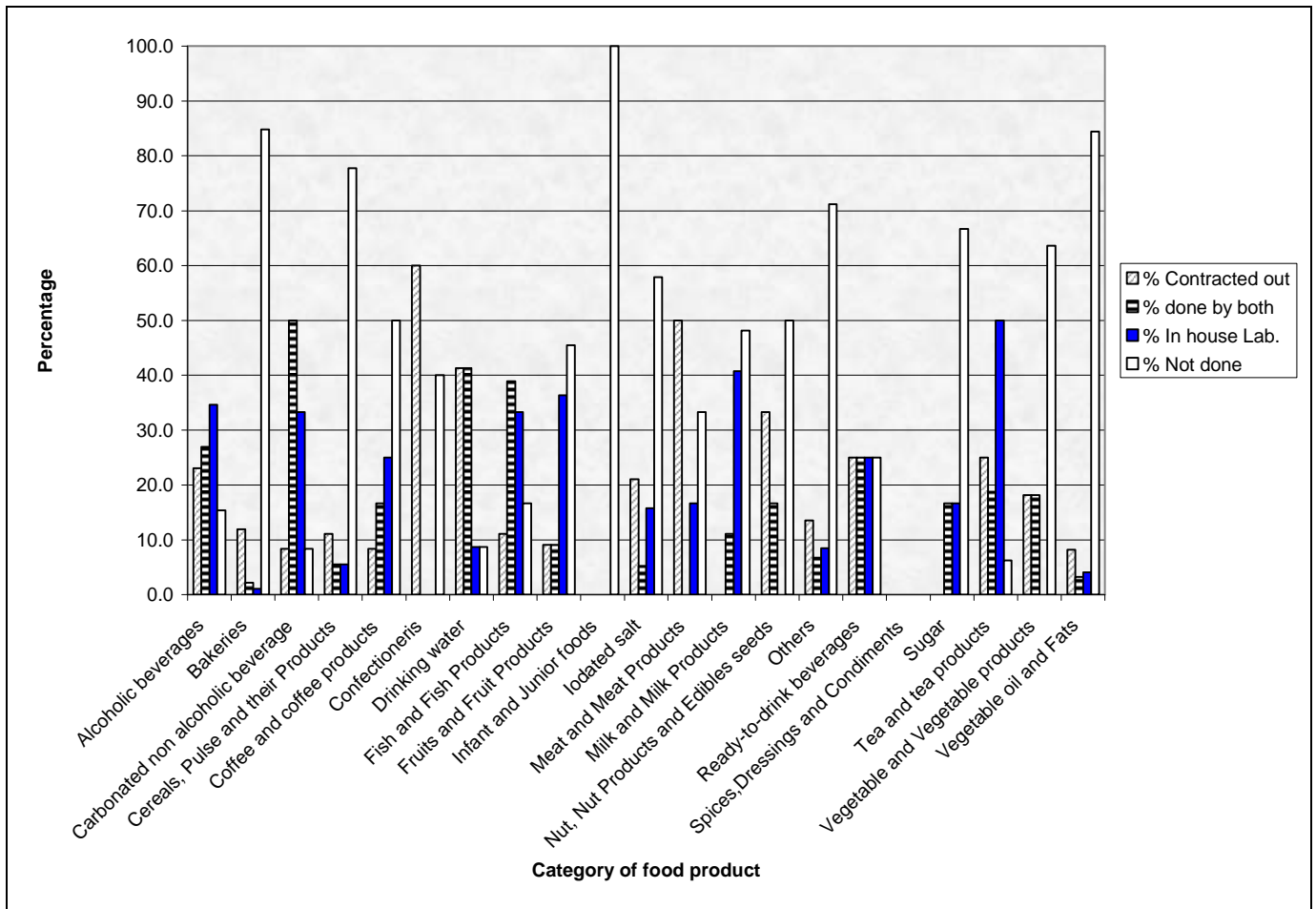


Figure 25: Criteria for release of finished product by food plant categories

3.3.5.2.4 Carrying out laboratory tests of food samples by categories

Carrying out laboratory tests is important to ascertain compliance to the specifications. Appendix 21 and Figure 26 below show status of food plants which do one or more of the following, contracting out analysis, doing within their food plants and do not carry out or contacts laboratory analysis. The survey indicated that 15.1% of food plants contracts out analysis of food, whereas 11.7 % both contracts out and carries analysis within their laboratories. On the other end 12.1% of the food plants carry their own laboratory tests. The majority of the food plants (61.1%) do not analyze food products which imply that such quality and safety of the product cannot be ascertained.

Within each food each category the same trend was observed as compliance by food plants having large number of micro and small scale food plants such as bakery products and vegetable oils and fat was low.



Figures 26: Carrying out laboratory tests of food samples by categories

3.3.5.2.5: Status of records keeping by categories of food products

Record keeping is an integral part of any quality assurance system. Through interpretation of data originating from records important interventions can be carried out in order to achieve product safety.

Appendix 20 and Figure 27 below Similar trend was observed as food plants having well established quality control systems such as alcoholic beverages, carbonated non alcoholic beverages, coffee and coffee products, Tea and Tea products, Fish and fish products have also a well established record keeping system. On the other hand food plant categories having a high number of small and micro scale food plants had a low compliance to this requirement.

Based on the results above, a significant proportion of food plants don't have records. This implies that decision making and interventions may not be based on critical analysis of prevailing circumstances. Traceability of products in case there are food safety problems may be difficult.

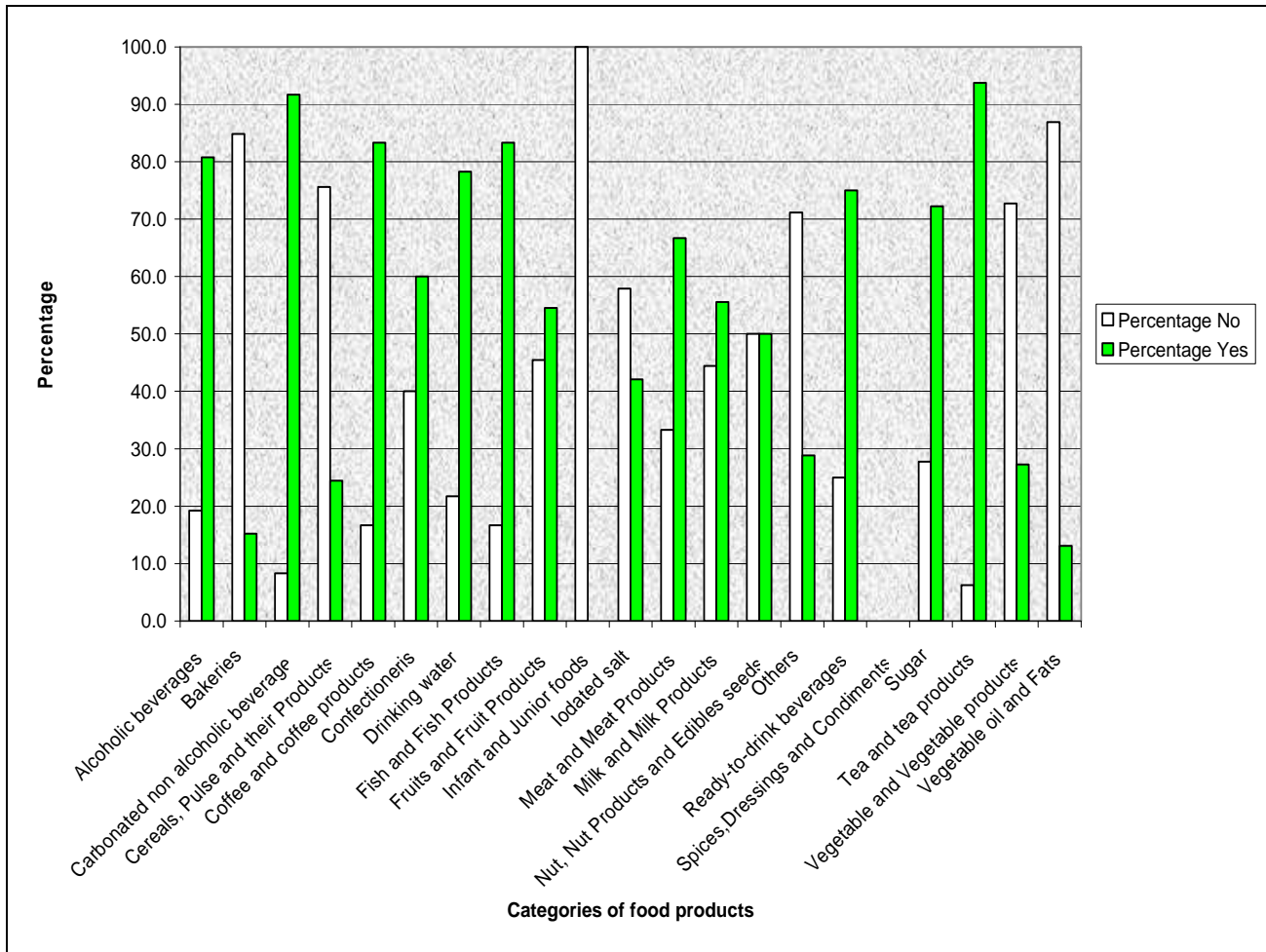


Figure 27: Status of records keeping by categories

3.3.5.3 Qualification of personnel by Categories of food products

The survey revealed that levels of academic qualification ranged from standard seven to Master degree. The distribution of these academic levels varied as influenced by scale of operation and different categories of foods.

The baseline survey revealed that graduate and diploma holder dominated the Alcoholic beverage industries. Bakeries were dominated by standard seven with experience, form IV, certificate holder and few graduates for large food plants.

BSC holder dominates carbonated non alcoholic beverage plants. This might be attributed by imposed standards by International Companies like Coca cola and Pepsi cola from which local manufacturers operate under licenses.

Cereals Pulses and their products are dominated by standard seven personnel with experience, form IV, form VI and certificate by attendance in SIDO programmes and few diploma holders.

Iodated salts plants are dominated by standard seven personnel having the following qualifications; standard seven with experience, certificate by attendance in SIDO training programmes. Sugar plants are dominated by standard seven with experience in micro scale plants and few BSc Chemical and Process Engineers in large scale plants.

Vegetable oils and fats are mostly operated by standard seven with experience, certificate by attendance in SIDO programmes, and form IV for micro scale and few graduates for large scale plants. These categories have problems associated with quality of the product because most of the micro scale producers use poor and outdated technology during processing. At the same time they don't have any training on processing principles, hence they produce substandard vegetable oils.

Categories of food plants which seems to have unqualified personnel and which need interventions are bakeries, cereals and pulses , iodated salt , vegetable oil and fats and other food categories.

Other categories of food plants are dominated by certificate of attendance provided under SIDO programmes, standard seven and form IV with experience.

3.3.5.4 Qualification of personnel by scale of operation:

Survey findings shows that 58 large scale food manufacturers have employees of academic qualification ranging from diploma to MSc. level which is about 86.5% of the total number of 67 large scale food plants. This indicates that they are adequately staffed with qualified personnel. Fifty five (55) Medium scale food plants have employees with academic qualification rangig from diploma to a degree level which is about 59.8% of the total number of 92 medium food plants. However, 16 plants have also employed certificate holders increasing the number to 71 which is about 77.2%. This implies that large and medium scale food plants have relatively adequate qualified personnel. This could be attributed by the fact that large and medium scale food manufacturers have adequate financial capability to employ qualified personnel to supervise production and quality control.

A total of 53 small scale food plants have employed staff of academic qualification ranging from diploma to MSc level, this is about 30.1% of the total number of 176 small scale food plants. However, the category has 40 plants which have employed certificate holders. Together with those with diploma and degree levels they add to a number of 93 which accounts for 52.8% of the total number of 176 small scale food plants. For micro scale food plants, of the total number of 279 only 13 plants equivalent to 4.6% had employees of academic qualification ranging from diploma to degree level. However, adding 79 plants having certificate holders makes the total number to be 92 which is about 33% only.

Basing on the above observation, generally small and micro scale food plants have not employed qualified personnel to a satisfactory level. This implies that production and quality control operations within these categories are not adequately supervised and implemented therefore quality and safety of the food products produced cannot be guaranteed. In order to reverse the trend, requirement for qualified personnel needs to be enforced effectively in order to ebhance production of quality and safe food.

All levels of education with respect to each scale of operation are as shown in Table 8 and details are illustrated in appendix 24.

Education Level	Large Scale	Medium Scale	Small Scale	Micro Scale	Number of plants	%
Msc Level	8	6	1	2	17	2.8
BSc. Level	38	35	26	4	103	16.8
Diploma Level	12	14	26	7	59	9.6
Certificate level	1	16	40	79	136	22.1
Form IV and Form VI With experience	7	10	27	65	109	17.8
Std VII with Experience	1	11	56	122	190	30.9
	67	92	176	279	614	100

Table 8: Distribution of academic qualifications of experts per scale of operation of food plants

From the above results it is obvious that roughly 20% of food plants falling under all categories are supervised by experts having BSc. and MSc. Degrees in the relevant field, whereas as personnel with diploma supervises about 10% of food processing plants. The rest of the food plants which accounts to about 70%, have employed personnel of the following academic qualifications; standard seven and form four with experience and certificate level. Micro and small scale plants have to a large extent employed these categories of personnel. This situation may have a contribution to low quality food products; for example out of 14 vegetable oils samples taken from micro and small scale food plants during the survey were subjected to laboratory analysis. Results indicated that 13 samples (92.8%) failed (Appendix 25). This problem could be partly attributed to lack technical personnel who are responsible for implementing quality control programmes.

3.4. HACCP Compliance

Few food manufacturing plants have adopted HACCP quality assurance system. Currently HACCP is synonymous with food safety, as it is a preventive system aimed at food safety assurance, It can be applied at any segment of the food chain and applied irrespective of the complexity or simplicity of the food processing or handling operation. It is a tool to assess hazards and establish control systems that focus on prevention rather than relying mainly on end product testing and inspection

Assessment based on these criteria during the baseline survey has revealed a total of 31 (5%) food manufacturing plants (Appendix 26) were implementing HACCP system. The majority of the plants have instituted this system mainly due to market requirements. For example fish and fish products processing plants as required by the European Union where they sell their products. Other categories with few plants having HACCP system are milk and milk products, and tea and tea products.

4.0 Major problems facing food processing plants.

The survey questionnaire had a question which required a respondent to explain any problems that were facing them. This question was geared towards taking stock of the major problems acting as a barrier in the development of the food industry. Answers given varied among individual plants, categories of food types and scales of operation. However it was evident that certain types of problems were peculiar to specific food category or scale of operation. Furthermore, there were some problems that were affecting the whole industry in general. On overall basis major problems facing food industries in Tanzania were identified and are summarized in Table 9 below.

Since the question was an open ended one, the magnitude of the problem was expressed based on frequency of respondents indicating the same problem. Table 9 below shows ranking of the problems as expressed by respondents.

Generally problems expressed by respondents have effect on overall performance of the food plants in terms of establishment and their maintenance, capacity utilization, production of quality safe and competitive products.

S/N	Problems expressed by respondents	Number of respondents for each category				Total
		Large	Medium	Micro	Small	
1.	Inadequate capital to; purchase processing equipment, raw materials, packaging materials, construct premises and to hire qualified personnel	6	15	118	43	182
2.	Erratic and unreliable supply of electricity with high tariffs	28	36	47	56	167
3.	Unreliable supply of raw materials	16	29	62	38	145
4.	Market problems due to high competition or lack of confidence in certain products and unattractive packaging materials	9	16	74	36	135
5.	Water shortage	8	9	8	25	50
6.	Lack of technical know how	2	6	24	13	45
7.	Poor infrastructure(road and drainage system)	9	12	3	12	35
8.	Poor and outdated technology used.	1	1	21	9	32
9.	Many taxes	2	7	6	9	24
11.	Delayed issuance of registration certificate for premises and food manufacturing licenses by TFDA	5	3	0	7	15
12.	Overlap of function among Government institutions	5	2	3	3	13
13.	Lack of information on legal requirements for registration and licensing	3	2	2	4	11
14.	Packaging substandard products using packaging materials of reputable manufacturers	0	2	6	3	11
15.	Unavailability of analytical services, high analytical costs and unaccredited laboratories	3	0	4	4	11
16.	Inadequate industrial estates	0	0	8	3	11
17.	Unavailability of Training institutions for training of processing specific products	1	1	5	1	8
18.	Taxation on importation of raw materials	0	4		2	5
19.	Stringent conditions to access of credit facilities and high interest rates	0	1	3		4
20.	Stringent legal requirements which cannot be complied by micro and small scale food processors	0	0	1	1	2
21.	Frequent Changes of customer demands	0	0	1		1
22.	High cost of productions (fuel and lubricants)	0	1			1
23.	Liberalization of trade	0	1			1

Table 9: Major problems expressed by interviewee

The above outlined problems were experienced by all scales of operations. However problems such as inadequacy of capital, erratic supply of electricity with high tariffs, unreliable supply of raw materials and market problems of processed foods are problems expressed by majority of responds of all scales of operation. These have bearing on the overall performance of the food plants in terms of quantity, quality and competitiveness of their products in the market. The magnitude of the effects differed from one scale to other, small and micro scale being the most affected as expressed by their inability to comply GMP requirements that have financial implication such as construction of suitable premises, equipment and other facilities, employing qualified personnel and laboratory for quality control etc. Other problems expressed by manufacturers with similar impact are as follows; water shortage, lack of technical know how, poor road infrastructure, poor and outdated technology used by Small and medium scale food processors. Other problems included; many taxes, delayed issuance of registration certificate of premises and licensing.

Lack of technical know how, capital, unavailability of reliable market of their products and erratic supply of electric power with high tariffs were seem to be common to both micro and small scale plants, as compared to other scales.

Contrary to this, results indicated that medium and large scale plants concerns besides other problems were; on overlapping of functions among government institutions, many taxes charged by the government, delayed issuance of registration certificate for premises and food manufacturing licenses by TFDA.

Further more it was noticed that some problems were experienced by all scales of operations, these included, erratic supply of electric power with high tariffs, shortage of water supply and unreliable supply of raw materials. Other problems such as stringent legal requirement, stringent conditions to access credit facilities, frequent change of customer demands, lack of information on legal requirement for registration and licensing, unavailability of analytical services, unavailability of unaccredited laboratory, training institutions for processing of specific products and poor and outdated technology were not major problems for most categories .

Problems were also grouped based on food categories of manufacturing/processing plants as indicated in table 11 below.

It was observed that inadequate capital, erratic supply of electricity with high tariffs, unreliable supply of raw materials, Market problems due to high competition, lack of confidence in certain products, unattractive packaging and labeling material, were sited as major problems affecting almost all categories of food plants. Whereas high production cost in terms of fuel and lubricant, trade liberalization, frequent change of customers demand stringent legal requirement, stringent conditions to access credit facilities with high interest rates and inadequate industrial estates were found to have least impact on most of the food categories. The rest of the problems are distributed in different proportions among food categories.

Generally major problems facing both scales of operations and food categories and particularly micro and small scale plants seem to be associated with lack of adequate

capital to finance various activities geared towards complying with GMP; erratic supply of electricity which affects production volume, quality and safety where perishable goods are produced, unreliable supply of raw materials which may be caused by seasonality of farm produce as industrial raw material and affects both capacity utilization of plants and to some extent quality of the product that might be attributed by non competitiveness in supply of such raw materials; market problems and lack of technical know how.

5.0 Proposed solutions to problems by processors/ manufacturers.

During the survey a number of solutions to the aforementioned major problems facing food industry in Tanzania were proposed by processors/ manufacturers. The frequency for each proposal is summarized in table 10 indicated below:

SN	Solutions	Large	Medium	Micro	Small	Total
1.	Government ensure reliable supply of electricity and reduce tariffs	25	26	41	52	144
2.	Manufacturers be educated on how to produce high quality and safe products and requirements of the legislation.	3	10	92	34	139
3.	Harmonization of different legislation to minimize overlap and duplication of function among government departments and institutions.	12	15	39	20	86
4.	Constant and timely supply of packaging materials.	2	7	38	14	61
5.	Governments facilitate easy acquisition of soft loans from financial institutions by manufacturers/processors.	3	3	24	6	39
6.	Government provide suitable environment that will stimulate increased production of food raw materials by improving extension services, subsidize agricultural inputs and research on food crops.	4	7	19	4	34
7.	Government introduce a curriculum that covers aspects of food processing technology in areas such as Bakery, dairy, milling etc at certificate levels using existing training institutions.	0	0	24	8	32
8.	Government should look on a possibility of reducing or removing taxation in food processing raw materials.	5	6	5	8	24
9.	Government look for ways of reducing number of taxes to local food manufacturers to enable them manage competition	1	5	11	5	22
10.	Government ensures availability of potable water to food processors/manufacturers.	1	5	3	13	22

SN	Solutions	Large	Medium	Micro	Small	Total
11.	Government should improve infrastructures to allow easy transportation of raw materials and finished products particularly to manufacturers/processors located in rural areas.	5	6	4	5	20
12.	Government should look for a possibility of extending laboratory services to areas where they can be easily accessed by food processors/manufacturers at reasonable costs.	1	6	6	8	19
13.	The Government should restrict importation of food products which can be locally manufactured.		5	8	3	16
14.	TFDA improve/speed up process of registration and licensing.	3	4	2	2	11
15.	SIDO should look for a possibility of establishing industrial estates to accommodate small and micro food processors.	0	0	7	3	10
16.	TFDA should disseminate information and education to food processors/manufactured concerning registration and licensing of food processors.	3	1	1	3	8
17.	TFDA should give a preferential treatment to micro and small scale food processors in terms of compliance to legal requirements.	1	0	4	0	5
18.	TFDA should strengthen its, inspection and surveillance system to uncover counterfeit products.	2	1	0	2	5
19.	Laboratories in Tanzania should strive to be accredited so that analytical results are recognized internationally.	0	0	1	2	3
20.	Manufacturers appoint agents or open sales offices in regions to bar dishonest agents adulterating their products.	0	0	2	1	3
21.	SIDO should facilitate/conduct research on market demand	0	2	0	1	3

Table 10: Proposed solutions for the identified problems

The recommendations given by food manufacturers are valid and if attended could resolve most of the problems facing the industry and hence enhance their development.

On the part of the Government it has a role of creating conducive environment for the industry to prosper. These include development of the necessary infrastructures necessary for enhancing performance such as availability of road network, reliable supply of electricity, assisting manufacturers in accessing credit facilities especially Small and micro scale food processors, promoting more food production to ensure adequate supply of quality raw materials.

Regulatory agencies need to provide education to food manufacturers on application of quality assurance systems such as Hazard Analysis and Critical Control Points so that they institute quality assurance systems that assure production of quality and safe products.

Harmonization of different legislation aimed at eliminating overlap and duplication of functions among Governmental departments and institutions will streamline services provided to manufacturers and reduce cost burden to them. Another area which needs the attention of the Government is eliminating or alleviating the problem of availability of raw materials through improving extension services, subsidized agricultural inputs and research in food crops so that better and quality industrial raw materials are produced. Similarly the Government needs to ensure availability of packaging materials as they contribute significantly to product quality and its marketability. SIDO should ensure constant and timely supply of packaging material to micro and small scale plants to improve the current packaging material which significantly impairs their market competitiveness and keeping quality of packaged foods.

The industry itself should understand that for them to survive they must make effort towards producing quality and safe food by instituting quality assurance systems such as Hazard Analysis and Critical Control Point. This will not only protect food consumers' health but also improve competitiveness of the product in the local and international markets.

CONCLUSION

The baseline survey has revealed the following findings

1. There are at least 614 food manufacturing plants in Tanzania mainland. The number of micro and small scale food plants being higher than medium and large scale. Similarly twenty categories food types were identified, with varying proportions of number of micro, small medium and large scale plants. The proportions of plants based on scale of operation were as follows, large (10.9%), medium (15.0%), small (28.7%) and micro scale food plants 45.4(%). The distribution of food plants among different regions varied, however, irrespective of scale of operation Dar es Salaam, Shinyanga, Mbeya, Mwanza, Arusha are among regions with the highest number of food plants.

2. Majority of food processing plants have their premises unregistered and food businesses unlicensed by TFDA. This implies that quality and safety of products from unlicensed prepackaged foods circulating in the market is not guaranteed.
3. Compliance by food manufacturers to GMP is unsatisfactory for micro and small scale food processors such that there is no assurance on quality and safety of food produced by these categories
4. Food manufacturing plants are experiencing a number of problems which have a negative impact on the performance of food industries. The major problems include; inadequate capital, unreliable supply of raw materials, marketing problems for finished products. Unavailability of training institutions for training in technology of specific products, water shortage, delayed issuance of registration certificate and unavailability and erratic supply of electricity with high tariffs. Others are Lack of technical know how, many taxes and taxation on importation of raw materials, Lack of information on legal requirements, overlap of function among Government institutions and stringent conditions to access of credit facilities with high interest rates
5. Unfavourable business environment such as unreliable supply of electricity and high tariffs, many taxes imposed to food manufacturers, lack of technical know how, and capital to run and maintain food plants have exerted a very negative effect to the development of the food industry
6. Most Food manufacturing plants especially micro and small are far from complying with GMP and HACCP therefore to ensure promotion of food industry particularly small and micro scale food plants,

5.2 Recommendations

Based on the outcome of the baseline survey and taking into consideration the magnitude of the problems currently facing the food industry, realizing the need to make intervention, It is being recommended that;

1. TFDA open new zonal and strengthen the existing zonal offices in terms of human resources and working tools such as inspection and sampling tools, computers, internet services, Mini Laboratory services and transport facilities to make services such as premises registration and licensing services easily accessible to customers within respective locations.
2. TFDA establish and strengthen link with local authorities so that enforcement of the law becomes more effective.
3. TFDA ensure availability of all documents such the Tanzania Food, Drugs and Cosmetics Act and regulations, guidelines, application forms, receipt books at district level to improve efficiency in the delivery of services and enhance compliance to legal requirements.

4. Regulations and guidelines for implementation of the legislation should take into account capacity of micro and small scale food processors hence give them preferential treatment in terms of requirements to enhance their development without compromising quality and safety of food produced. Such special treatment should focus on:
 - Premises registration and licensing requirements, It is recommended that required qualification or Training of the process supervising personnel be decided by TFDA depending on the nature or risks associated with the specific product.
 - Identify critical parameters for analysis of food products in order to make analytical costs affordable.
5. TFDA in collaboration with small scale processors and other stakeholders prepare strategies for developing micro and small scale food processors as they have a very big potential in causing food borne illnesses and developing the economy. Similarly develop a good relationship with relevant institutions dealing with Micro and Small scale food processors such as SIDO and UNIDO to have concerted effort in developing the sector.
6. TFDA in collaboration with other stakeholders prepare training programmes for local food processors on GMP /HACCP and legislation in general so as to facilitate production of safe and quality food products and hence promote public health and food industry through institution of mandatory HACCP application starting with risky products.
7. TFDA streamline processes for registration of food, premises and licensing by reviewing relevant regulations and guidelines and decentralize some of these and similar services. Decentralization should give powers to directorate and Zonal levels, so that processing and issuance of premises and Licenses be done at Directorate/ Zonal offices by using TFDA relevant regulations and Guidelines. TFDA management to get monthly reports of the number and categories of certificate issued.
8. Local Authorities should be given the list of unregistered premises and unlicensed food premises, including defects that were found in food plants located in their respective areas of jurisdiction so that follow up for rectifications are made and operations legalized as per TFDCA. The list should channeled through zonal offices, Regional and Local Authorities.
9. TFDA should prepare a programme for improving food manufacturing industry in the country taking into account the magnitude of problems observed to every scale of operation or subsector. Such programme or strategies should be done by involving manufacturers and other stakeholders.

10. TFDA in collaboration with other institution like SIDO could present special request to the Government institutions responsible for taxation to look on possibility of giving exemption for raw and packaging materials for micro/small scale processors to enhance their growth and make their products more competitive in the market through product quality and safety.
11. Large scale manufacturers or other manufacturers should appoint reputable sales agent for their products sold in up country in order to minimize chances of unscrupulous business men packaging substandard products using reputable manufacturers packaging materials.
- 12 TFDA encourages formation of food processors associations so that they develop Code of Practices that will be binding to members and that encourage compliance with food legislation. Such associations will form a bridge between members and TFDA.
13. Stakeholders are sensitized on the importance of instituting quality assurance systems that enhances internal audit systems which promote voluntary compliance that will reduce inspection cost on the part of the TFDA.

APPENDICES

Appendix I: Questionnaire

Preamble: This questionnaire is intended to gather information that will be used to assess status of food manufacturing plants in Tanzania mainland. Information gathered will be treated with high confidentiality and used solely in formulation of strategies for improvement of food industry. It is therefore expected that you will treat this exercise very positively in the spirit of building a bright future for the country's food industry.

1. (a) Name of the food plant

Address:.....

Owner.....

(b) Physical address of the food plant

Plot No.....

Block

Street/Village/Town/Municipality/City.....
.....

Tel. No..... Cell:.....

Fax: :.....E-mail

(c) Premises registration status

Registered Reg. No. Not registered

(d) Food manufacturing license:

Licensed License No. Not licensed

2. (a) Type of food product(s) produced

.....

(b) Category of food plant

Others specify

(Indicate number from attached list)

(c) Scale of operation (based on Number of employees or capital Investment)

- Micro (1 -4 employees or up to 5million)
- Small (5 – 49 employees or over 5 - 200 million)
- Medium (50 – 100 employee or over 200 - 800 million)
- Large (Over 100 employee or more than 800 million)

3. Compliance with selected Good Manufacturing Practice (GMP) criteria

(a) Location/sitting

- Industrial area
- Backyard
- Residential area
- Others (specify).....

(b) Is the building of permanent material?

- Yes No

(c) Sources of potable water

- Public supply
- Bore hole/well
- Both public and bore hole supplies
- Others (specify).....

d) Status of sanitation and staff hygiene:

(i) Is waste disposal system in place?

- Yes No

(ii) Are there sufficient toilets in relation to the number of staff? (One toilet serves 25 people)

- Yes No

(iii) Are toilets separated for both sexes?

Yes No

(iv) Do workers use protective gears?

Yes No

(v) Is cleaning schedule provided and used?

Yes No

(e) (i) Is there any criteria for acceptance or rejection of raw materials?

Yes No

If the answer is yes what are the quality and safety tests/observations Performed/ done ?

.....
.....

(ii) Do you carryout any other quality control tests on subsequent processing?

Yes No

If yes, mention the tests performed

.....
.....

(iii) Do you have any criteria for release of finished product(s)?

Yes No

Note: Tick (√) where applicable

If yes, mention the criteria

.....
.....
.....

(iv) Are the quality control tests performed by your laboratory, contracted out or both ?

out You're Laboratory Contracted
 Done by both

(f) Record keeping practice (Documentation)

(i) Do you keep any quality control records?

Yes No

(ii) What are quality control records kept (e.g. Raw material, in-process, finished product etc)?

.....
.....
.....

(g) Do you have qualified personnel in Quality Control and processing of the products? Yes No

If yes, what are the qualification of the personnel?

.....

4. What are the major problems which face your Industry? (use separate sheet if necessary)

.....

Note: Tick (✓) where applicable

-
5. In your opinion, what do you think could be done to resolve such problems? (use separate sheet if necessary)
-
-

CATEGORIES OF FOOD PLANTS

1. Milk and Milk products
 2. Meat and Meat products
 3. Fish and Fish products
 4. Fruits and Fruit products
 5. Vegetable and Vegetable products
 6. Cereals, Pulses and their products
 7. Alcoholic beverages
 8. Carbonated non alcoholic beverages
 9. Vegetable oil and Fats
 - 10 Nut, Nut products and Edibles seeds
 - 11 Spices, Dressings and Condiments
 12. Infant and Junior foods
 13. Sugar
 14. Confectioneries
 15. Iodated salt
 16. Coffee and coffee products
 17. Tea and tea products
 18. Drinking water
 19. Ready-to-drink beverages
 20. Bakeries
 21. Others
-

Appendix 2: Distribution of food plants in Regions by Scale of operation

Region	Total	Large	Percentage	Medium	Percentage	Micro	Percentage	Small	Percentage
Arusha	37	5	7.5	18	19.6	1	0.4	13	7.4
Dar es Salaam	97	21	31.3	24	26.1	11	3.9	41	23.3
Dodoma	21	0	0.0	1	1.1	18	6.5	2	1.1
Iringa	25	6	9.0	3	3.3	7	2.5	9	5.1
Kagera	31	3	4.5	3	3.3	21	7.5	4	2.3
Kigoma	29	2	3.0		0.0	24	8.6	3	1.7
Kilimanjaro	30	4	6.0	1	1.1	10	3.6	15	8.5
Lindi	11	0	0.0	0	0.0	8	2.9	3	1.7
Manyara	24	1	1.5	2	2.2	9	3.2	12	6.8
Mara	23	3	4.5	3	3.3	12	4.3	5	2.8
Mbeya	46	4	6.0	2	2.2	31	11.1	9	5.1
Morogoro	9	3	4.5	0	0.0	2	0.7	4	2.3
Mtwara	24	2	3.0	0	0.0	17	6.1	5	2.8
Mwanza	44	9	13.4	10	10.9	8	2.9	17	9.7
Pwani	8	1	1.5	0	0.0	3	1.1	4	2.3
Rukwa	16	0	0.0	0	0.0	12	4.3	4	2.3
Ruvuma	16	1	1.5	0	0.0	13	4.7	2	1.1
Shinyanga	51	0	0.0	11	12.0	28	10.0	12	6.8
Singida	29	0	0.0	0	0.0	27	9.7	2	1.1
Tabora	21	0	0.0	1	1.1	16	5.7	4	2.3
Tanga	22	2	3.0	13	14.1	1	0.4	6	3.4
	614	67	100.0	92	100.0	279	100.0	176	100.0

Appendix 3: Distribution of food plants by Food Category and Scale of Operation

CATEGORIES	Large	Medium	Small	Micro	TOTAL	%
Alcoholic beverages	4	6	13	3	26	4.2
Bakeries	1	5	35	51	92	15.0
Carbonated non alcoholic beverage	6	3	3	0	12	2.0
Cereals, Pulse and their Products	8	14	24	44	90	14.7
Coffee and coffee products	2	6	3	1	12	2.0
Confectioneries	1	2	1	1	5	0.8
Drinking water	5	11	23	7	46	7.5
Fish and Fish Products	12	3	3	0	18	2.9
Fruits and Fruit Products	0	5	3	3	11	1.8
Infant and Junior foods	0	0	0	2	2	0.3
Iodated salt	2	1	8	8	19	3.1
Meat and Meat Products	1	1	6	4	12	2.0
Milk and Milk Products	1	6	9	11	27	4.2
Nut, Nut Products and Edibles seeds	4	1	1	6	12	2.0
Others	1	2	10	46	59	9.6
Ready-to-drink beverages	0	1	3	0	4	0.7
Spices, Dressings and Condiments	0	0	0	0	0	0.0
Sugar	6	3	8	1	18	2.9
Tea and tea products	7	6	1	2	16	2.6
Vegetable and Vegetable products	1	3	5	2	11	1.8
Vegetable oil and Fats	6	12	17	87	122	19.9
TOTAL	67	92	176	279	614	100

**Appendix 4: Distribution of registered and unregistered food
Manufacturing premises by Regions**

Region	Not Registered		Registered		Total
	Number of plants	%	Number of plants	%	
Arusha	11	2.4	26	16.6	37
Dar es salamm	33	7.2	64	40.8	97
Dodoma	20	4.4	1	0.6	21
Iringa	15	3.3	10	6.4	25
Kagera	27	5.9	4	2.5	31
Kigoma	29	6.3	0	0.0	29
Kilimanjaro	23	5.0	7	4.5	30
Lindi	10	2.2	1	0.6	11
Manyara	24	5.3	0	0.0	24
Mara	16	3.5	7	4.5	23
Mbeya	41	9.0	5	3.2	46
Morogoro	9	2.0	0	0.0	9
Mtwara	20	4.4	4	2.5	24
Mwanza	27	5.9	17	10.8	44
Pwani	8	1.8	0	0.0	8
Rukwa	16	3.5	0	0.0	16
Ruvuma	15	3.3	1	0.6	16
Shinyanga	47	10.3	4	2.5	51
Singida	29	6.3	0	0.0	29
Tabora	21	4.6	0	0.0	21
Tanga	16	3.5	6	3.8	22
Total	457	100.0	157	100.0	614

Appendix 5: Food premises registration status by category of food products

CATEGORIES	Total	unregistered	% unregistered for food each category	registered	% registered
Alcoholic beverages	26	9	34.62	17	65.38
Bakeries	92	72	78.26	20	21.74
Carbonated non alcoholic beverage	12	2	16.67	10	83.33
Cereals, Pulse and their Products	90	72	80.00	18	20.00
Coffee and coffee products	12	8	66.67	4	33.33
Confectioneries	5	2	40.00	3	60.00
Drinking water	46	25	54.35	21	45.65
Fish and Fish Products	18	9	50.00	9	50.00
Fruits and Fruit Products	11	7	63.64	4	36.36
Infant and Junior foods	2	1	50.00	1	50.00
Iodated salt	19	15	78.95	4	21.05
Meat and Meat Products	12	7	58.33	5	41.67
Milk and Milk Products	26	19	73.08	7	26.92
Nut, Nut Products and Edibles seeds	12	8	66.67	4	33.33
Others	59	53	89.83	6	10.17
Ready-to-drink beverages	4	2	50.00	2	50.00
Spices, Dressings and Condiments	0	0	0.00	0	0
Sugar	18	17	94.44	1	5.56
Tea and tea products	16	10	62.50	6	37.50
Vegetable and Vegetable products	11	6	54.55	5	45.45
Vegetable oil and Fats	122	113	92.62	9	7.38
TOTAL	614	457	74.43	157	25.57

Appendix 6: Food licensing status by Regions

Region	No. of food plants per region	Licensed		Not licensed	
		No. of plants	% for each region	No. of plants	% for each region
Arusha	37	20	54.05	17	45.95
Dar es salam	97	46	47.42	51	52.58
Dodoma	21	1	4.76	20	95.24
Iringa	25	6	24.00	19	76.00
Kagera	31	3	9.68	28	90.32
Kigoma	29	0	0.00	29	100.00
Kilimanjaro	30	5	16.67	25	83.33
Lindi	11	0	0.00	11	100.00
Manyara	24	0	0.00	24	100.00
Mara	23	3	13.04	20	86.96
Mbeya	46	3	6.52	43	93.48
Morogoro	9	0	0.00	9	100.00
Mtwara	24	2	8.33	22	91.67
Mwanza	44	16	36.36	28	63.64
Pwani	8	0	0.00	8	100.00
Rukwa	16	0	0.00	16	100.00
Ruvuma	16	1	6.25	15	93.75
Shinyanga	51	3	5.88	48	94.12
Singida	29	0	0.00	29	100.00
Tabora	21	0	0.00	21	100.00
Tanga	22	6	27.27	16	72.73
Total	614	115	18.73	499	81.27

Appendix 7: Food licensing status by categories of food

CATEGORIES	Total	Licensed	% licensed	Not licensed	% unlicensed
Alcoholic beverages	26	16	61.54	10	38.46
Bakeries	92	13	14.13	79	85.87
Carbonated non alcoholic beverage	12	8	66.67	4	33.33
Cereals, Pulse and their Products	90	11	12.22	79	87.78
Coffee and coffee products	12	3	25.00	9	75.00
Confectioneries	5	3	60.00	2	40.00
Drinking water	46	14	30.43	32	69.57
Fish and Fish Products	18	6	33.33	12	66.67
Fruits and Fruit Products	11	2	18.18	9	81.82
Infant and Junior foods	2	0	0.00	2	100.00
Iodated salt	19	1	5.26	18	94.74
Meat and Meat Products	12	4	33.33	8	66.67
Milk and Milk Products	26	6	23.08	20	76.92
Nut, Nut Products and Edibles seeds	12	4	33.33	8	66.67
Others	59	3	5.08	56	94.92
Ready-to-drink beverages	4	2	50.00	2	50.00
Spices, Dressings and Condiments	1	1	100.00	0	0.00
Sugar	18	0	0.00	18	100.00
Tea and tea products	16	5	31.25	11	68.75
Vegetable and Vegetable products	11	5	45.45	6	54.55
Vegetable oil and Fats	122	8	6.56	114	93.44
Total	614	115	18.73	499	81.27

Appendix 8: Location of food plants by scales of operation.

Location	Large		Medium		Micro		Small	
	Number	%	Number	%	Number	%	Number	%
Backyard	0	0.0	0	0.0	36	12.9	6	3.4
Estate	6	9.0	11	12.0	24	8.6	38	21.6
Industrial area	60	89.5	75	81.5	63	22.6	81	46.0
Residential area	1	1.5	6	6.5	156	55.9	51	29.0
Total	67	100.0	92	100.0	279	100.0	176	100.0

Appendix 9: Location of food plants by category of food plants

CATEGORIES	Backyard	% Backyard	Estate	% Estate area	Industrial area	% Industrial area	Residential area	% Residential area	Total
Vegetable oil and Fats	6	4.92	7	0.00	61	50.00	48	39.34	122
Bakeries	11	11.96	5	5.43	13	14.13	63	68.48	92
Cereals, Pulse and their Products	4	4.44	2	2.22	46	51.11	38	42.22	90
Others	11	18.64	10	16.95	14	23.73	24	40.68	59
Drinking water	2	4.35	7	15.22	25	54.35	12	26.09	46
Alcoholic beverages	1	3.85	1	3.85	17	65.38	7	26.92	26
Milk and Milk Products	3	11.11	4	14.81	13	48.15	7	25.93	27
Iodated salt	1	5.26	13	68.42	5	26.32	0	0.00	19
Fish and Fish Products	0	0.00	0	0.00	17	94.44	1	5.56	18
Sugar	0	0.00	12	66.67	5	27.78	1	5.56	18
Tea and tea products	0	0.00	8	50.00	8	50.00	0	0.00	16
Carbonated non alcoholic beverage	0	0.00	1	8.33	11	91.67	0	0.00	12
Coffee and coffee products	0	0.00	1	8.33	9	75.00	2	16.67	12
Meat and Meat Products	1	8.33	4	33.33	6	50.00	1	8.33	12
Nut, Nut Products and Edibles seeds	0	0.00	0	0.00	8	66.67	4	33.33	12
Fruits and Fruit Products	0	0.00	2	18.18	4	36.36	5	45.45	11
Vegetable and Vegetable products	0	0.00	2	18.18	8	72.73	1	9.09	11
Confectioneris	0	0.00	0	0.00	5	100.00	0	0.00	5
Ready-to-drink beverages	0	0.00	0	0.00	4	100.00	0	0.00	4
Infant and Junior foods	2	100.00	0	0.00	0	0.00	0	0.00	2
Spices,Dressings and Condiments	0	0.00	0	0.00	0	0.00	0	0.00	0
TOTAL	42	6.84	79	12.87	279	45.44	214	34.85	614

Appendix 10: Status of building materials by scale of operation

Scale	Total	Building materials			
		Permanent	%	Temporary	%
Larger	67	67	100.00	0	0
Medium	92	91	98.91	1	1.09
Micro	279	208	74.55	71	25.45
Small	176	171	97.16	5	2.84
TOTAL	614	537	87.46	77	12.54

Appendix 11: Building materials by Categories of food plants

Categories of food Plants	Non permanent Building Materials		Permanent building materials		Total Number of plants
	Number of plants	Percentage	Number of Plants	Percentage	
Vegetable oil and Fats	16	13.1	106	86.9	122
Bakeries	16	17.4	76	82.6	92
Cereals, Pulse and their products	15	16.7	75	83.3	90
Others	9	15.0	51	85.0	60
Drinking Water	0	0.0	46	100.0	46
Alcoholic beverages	1	3.8	25	96.2	26
Milk and Milk Products	1	3.8	26	96.2	27
Iodated salts	10	52.6	9	47.4	19
Fish and Fish products	0	0.0	18	100.0	18
Sugar	0	0.0	18	100.0	18
Tea and Tea products	1	6.3	15	93.8	16
Coffee and coffee products	0	0.0	12	100.0	12
Meat and Meat products	2	16.7	10	83.3	12
Nut, Nut products and Edibles seeds	3	25.0	9	75.0	12

Carbonated non alcoholic beverage	0	0.0	11	100.0	11
Fruits and Fruits Products	1	9.1	10	90.9	11
Vegetable and Vegetable products	1	9.1	10	90.9	11
Confectioneries	1	20.0	4	80.0	5
Ready-to-drink beverages	0	0.0	4	100.0	4
Infant and Junior foods	0	0.0	2	100.0	2
Spices, Dressings and Condiments	0	0.0	0	0.0	0

Appendix 12: Source of water supply by Scale of operation

Source of water	Larger		Medium		Micro		Small		Total	%
	Number	%	Number	%	Number	%	Number	%		
Borehole/well	19	28.3	22	24.0	66	23.6	36	20.4	143	23.3
Both public & Borehole	16	23.9	20	21.7	4	1.4	16	9.1	56	9.1
Public Supply	18	26.9	37	40.2	179	64.2	98	55.7	332	54.1
Other sources	14	20.9	13	14.1	30	10.8	26	14.8	83	13.5
Total	67		92	100.0	279	100.0		100.0	614	

		100.0								100
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Appendix 13: Source of water supply by category of food plants.

Category	Borehole / well		Both public & Borehole		Others		Public Supply		Total
	Number	%	Number	%	Number	%	Number	%	
Alcoholic beverages	7	4.9	4	7.1	2	2.4	13	3.9	26
Bakeries	11	7.7	6	10.7	8	9.6	67	20.2	92
Carbonated non alcoholic beverage	0	0.0	3	5.4	0	0.0	8	2.4	11
Cereals, Pulse and their products	43	30.1	6	10.7	4	4.8	37	11.1	90
Coffee and coffee products	1	0.7	0	0.0	3	3.6	8	2.4	12
Confectioneries	0	0.0	2	3.6	0	0.0	3	0.9	5
Drinking Water	12	8.4	8	14.3	12	14.5	14	4.2	46
Fish and Fish products	5	3.5	3	5.4	8	9.6	2	0.6	18
Fruits and Fruits Products	2	1.4	2	3.6	2	2.4	5	1.5	11
Infant and Junior foods	0	0.0	0	0.0	0	0.0	2	0.6	2
Iodated salts	4	2.8	2	3.6	9	10.8	4	1.2	19
Meat and Meat products	4	2.8	1	1.8	3	3.6	4	1.2	12
Milk and Milk Products	5	3.5	3	5.4	1	1.2	17	5.1	26
Nut, Nut products and Edibles seeds	4	2.8	3	5.4	1	1.2	4	1.2	12
Others	14	9.8	4	7.1	2	2.4	40	12.0	60
Ready-to-drink beverages	1	0.7	0	0.0	1	1.2	2	0.6	4
Spices, Dressings and Condiments	0	0.0	0	0.0	0	0.0	0	0.0	0
Sugar	3	2.1	0	0.0	10	12.0	5	1.5	18
Tea and Tea products	2	1.4	0	0.0	7	8.4	7	2.1	16
Vegetable and Vegetable products	3	2.1	1	1.8	1	1.2	6	1.8	11
Vegetable oil and Fats	22	15.4	8	14.3	9	10.8	83	25.0	122
Total	143	100.0	56	100.0	83	100.0	332	100.0	614

Appendix 14: Waste disposal system by category of food products

CATEGORIES	Total	Not in place	In place	Percentage compliance
Confectioneries	5	0	5	100.0
Fish and Fish Products	18	0	18	100.0
Fruits and Fruit Products	11	0	11	100.0
Infant and Junior foods	2	0	2	100.0
Nut, Nut Products and Edibles seeds	12	0	12	100.0
Ready-to-drink beverages	4	0	4	100.0
Spices, Dressings and Condiments	0	0	0	0.0
Tea and tea products	16	0	16	100.0
Alcoholic beverages	26	1	25	96.2
Cereals, Pulse and their Products	90	4	86	95.6
Carbonated non alcoholic beverage	12	1	11	91.7
Coffee and coffee products	12	1	11	91.7
Drinking water	46	4	42	91.3
Vegetable and Vegetable products	11	1	10	90.9
Others	59	6	53	89.8
Sugar	18	2	16	88.9
Meat and Meat Products	12	2	10	83.3
Milk and Milk Products	27	5	22	80.8
Bakeries	92	18	74	80.4
Vegetable oil and Fats	122	34	88	72.1
Iodated salt	19	11	8	42.1

Appendix 15: Sufficiency of toilets by food category

CATEGORIES	Total	Inadequate	Adequate	Percent Compliance	Percent non compliance
Drinking water	46	0	46	100.0	0.0
Alcoholic beverages	26	0	26	100.0	0.0
Tea and tea products	16	0	16	100.0	0.0
Meat and Meat Products	12	0	12	100.0	0.0
Carbonated non alcoholic beverage	12	0	12	100.0	0.0
Fruits and Fruit Products	11	0	11	100.0	0.0
Confectioneris	5	0	5	100.0	0.0
Infant and Junior	2	0	2	100.0	0.0

foods					
Spices,Dressings and Condiments	0	0	0	0.0	0.0
Fish and Fish Products	18	1	17	94.4	5.6
Others	59	4	55	93.2	6.8
Vegetable oil and Fats	122	9	113	92.6	7.4
Milk and Milk Products	27	2	25	92.6	7.7
Nut, Nut Products and Edibles seeds	12	1	11	91.7	8.3
Coffee and coffee products	12	1	11	91.7	8.3
Vegetable and Vegetable products	11	1	10	90.9	9.1
Cereals, Pulse and their Products	90	9	81	90.0	10.0
Bakeries	92	10	82	89.1	10.9
Sugar	18	3	15	83.3	16.7
Ready-to-drink beverages	4	1	3	75.0	25.0
Iodated salt	19	7	12	63.2	36.8

Appendix 16: Provision of protective gears by scale of operation of food plants

Scale	Protective gears not provided		Protective gears provided		Total
	Number of food plants	%	Number of food plants	%	
Large	7	10.4	60	89.6	67
Medium	16	17.4	76	82.6	92
Micro	176	63.1	103	36.9	279
Small	59	33.5	117	66.5	176

Appendix 17: Provision of Protective gears by Categories of food plants

CATEGORIES	Total	No	Yes	% Compliance	% non compliance
Carbonated non alcoholic beverage	12		12	100.0	0.0

Confectioneries	5		5	100.0	0.0
Ready-to-drink beverages	4		4	100.0	0.0
Spices, Dressings and Condiments	0	0	0	0.0	0.0
Fruits and Fruit Products	11	1	10	90.9	9.1
Fish and Fish Products	18	2	16	88.9	11.1
Tea and tea products	16	2	14	87.5	12.5
Drinking water	46	8	38	82.6	17.4
Vegetable and Vegetable products	11	2	9	81.8	18.2
Alcoholic beverages	26	6	20	76.9	23.1
Meat and Meat Products	12	3	9	75.0	25.0
Milk and Milk Products	27	7	20	74.1	25.9
Others	59	17	42	71.2	28.8
Coffee and coffee products	12	4	8	66.7	33.3
Nut, Nut Products and Edibles seeds	12	4	8	66.7	33.3
Bakeries	92	44	48	52.2	47.8
Infant and Junior foods	2	1	1	50.0	50.0
Cereals, Pulse and their Products	90	47	43	47.8	52.2
Sugar	18	11	7	38.9	61.1
Vegetable oil and Fats	122	84	38	31.1	68.9
Iodated salt	19	15	4	21.1	78.9

Appendix 18: Cleaning Schedule by category of food product

CATEGORIES	Not provided	Provided	Percent compliance	Percent non compliance	Total
Alcoholic beverages	6	20	76.92	23.08	26
Bakeries	60	32	34.78	65.22	92
Carbonated non alcoholic beverage	0	12	100.00	0.00	12
Cereals, Pulse and their Products	67	23	25.56	74.44	90
Coffee and coffee products	6	6	50.00	50.00	12
Confectioneris		5	100.00	0.00	5
Drinking water	22	24	52.17	47.83	46

Fish and Fish Products	1	17	94.44	5.56	18
Fruits and Fruit Products	1	10	90.91	9.09	11
Infant and Junior foods	1	1	50.00	50.00	2
Iodated salt	14	5	26.32	73.68	19
Meat and Meat Products	4	8	66.67	33.33	12
Milk and Milk Products	11	16	59.26	40.74	27
Nut, Nut Products and Edibles seeds	4	8	66.67	33.33	12
Others	35	24	40.68	59.32	59
Ready-to-drink beverages	1	3	75.00	25.00	4
Sugar	8	10	55.56	44.44	18
Tea and tea products	1	15	93.75	6.25	16
Vegetable and Vegetable products	6	5	45.45	54.55	11
Vegetable oil and Fats	95	27	22.13	77.87	122

Appendix 19: Quality control test done by category of food products

CATEGORIES	Contracted out	% Contracted out	Done by both	% done by both	In house laboratory	% In house Lab.	Not done at all	% Not done	Total
Alcoholic beverages	6	23.1	7	26.9	9	34.6	4	15.4	26
Bakeries	11	12.0	2	2.2	1	1.1	78	84.8	92
Carbonated non alcoholic beverage	1	8.3	6	50.0	4	33.3	1	8.3	12
Cereals, Pulse and their Products	10	11.1	5	5.6	5	5.6	70	77.8	90
Coffee and coffee products	1	8.3	2	16.7	3	25.0	6	50.0	12
Confectioneries	3	60.0	0	0.0	0	0.0	2	40.0	5
Drinking water	19	41.3	19	41.3	4	8.7	4	8.7	46
Fish and Fish Products	2	11.1	7	38.9	6	33.3	3	16.7	18
Fruits and Fruit Products	1	9.1	1	9.1	4	36.4	5	45.5	11
Infant and Junior foods	0	0.0	0	0.0	0	0.0	2	100.0	2
Iodated salt	4	21.1	1	5.3	3	15.8	11	57.9	19
Meat and Meat Products	6	50.0	0	0.0	2	16.7	4	33.3	12
Milk and Milk Products	0	0.0	3	11.1	11	40.7	13	48.1	27
Nut, Nut Products and Edibles seeds	4	33.3	2	16.7	0	0.0	6	50.0	12
Others	8	13.6	4	6.8	5	8.5	42	71.2	59
Ready-to-drink beverages	1	25.0	1	25.0	1	25.0	1	25.0	4

CATEGORIES	Contracted out	% Contracted out	Done by both	% done by both	In house laboratory	% In house Lab.	Not done at all	% Not done	Total
Spices, Dressings and Condiments	0	0.0	0	0.0	0	0.0	0	0.0	0
Sugar	0	0.0	3	16.7	3	16.7	12	66.7	18
Tea and tea products	4	25.0	3	18.8	8	50.0	1	6.3	16
Vegetable and Vegetable products	2	18.2	2	18.2	0	0.0	7	63.6	11
Vegetable oil and Fats	10	8.2	4	3.3	5	4.1	103	84.4	122
Total	93	15.1	72	11.7	74	12.1	375	61.1	614

Appendix 20: Acceptance and Rejection criteria by category of food plants

CATEGORIES	No	Percent No	Yes	Percent Yes	Total
Alcoholic beverages	4	15.38	22	84.6	26
Bakeries	58	63.04	34	37.0	92
Carbonated non alcoholic beverage	1	8.33	11	91.7	12
Cereals, Pulse and their Products	58	64.44	32	35.6	90
Coffee and coffee products	3	25.00	9	75.0	12
Confectioneris	3	60.00	2	40.0	5
Drinking water	18	39.13	28	60.9	46
Fish and Fish Products	5	27.78	13	72.2	18
Fruits and Fruit Products	5	45.45	6	54.5	11
Infant and Junior foods	2	100.00	0	0.0	2
Iodated salt	9	47.37	10	52.6	19
Meat and Meat Products	4	33.33	8	66.7	12
Milk and Milk Products	12	44.44	15	55.6	27
Nut, Nut Products and Edibles seeds	5	41.67	7	58.3	12
Others	31	52.54	28	47.5	59
Ready-to-drink beverages	2	50.0	2	50.0	4
Spices,Dressings and Condiments	0	-	0	0.0	0
Sugar	14	77.78	4	22.2	18
Tea and tea products	1	6.25	15	93.8	16
Vegetable and Vegetable products	5	45.45	6	54.5	11
Vegetable oil and Fats	90	73.77	32	26.2	122
Total	330	53.7	284	46.3	614

Appendix 21: Quality control on subsequent processing by category

CATEGORIES	Number of plants without	% No	Number of plants with	% Yes	Total
Alcoholic beverages	5	19.2	21	80.8	26
Bakeries	79	85.9	13	14.1	92
Carbonated non alcoholic beverage	2	16.7	10	83.3	12
Cereals, Pulse and their Products	70	77.8	20	22.2	90
Coffee and coffee products	5	41.7	7	58.3	12
Confectioneries	3	60.0	2	40.0	5
Drinking water	16	34.8	30	65.2	46
Fish and Fish Products	4	22.2	14	77.8	18
Fruits and Fruit Products	6	54.5	5	45.5	11
Infant and Junior foods	2	100.0	0	0.0	2
Iodated salt	11	57.9	8	42.1	19
Meat and Meat Products	8	66.7	4	33.3	12
Milk and Milk Products	11	40.7	16	59.3	27
Nut, Nut Products and Edibles seeds	4	33.3	8	66.7	12
Others	48	81.4	11	18.6	59
Ready-to-drink beverages	2	50.0	2	50.0	4
Spices, Dressings and Condiments	0	0.0	0	0.0	0
Sugar	12	66.7	6	33.3	18
Tea and tea products	1	6.3	15	93.8	16
Vegetable and Vegetable products	5	45.5	6	54.5	11
Vegetable oil and Fats	109	89.3	13	10.7	122
	403	65.6	211	34.4	614

Appendix 22: Criteria for release of finished product by category

CATEGORIES	No	% No	Yes	% Yes	Total
Alcoholic beverages	4	15.4	22	84.6	26
Bakeries	58	63.0	34	37.0	92
Carbonated non alcoholic beverage	1	8.3	11	91.7	12
Cereals, Pulse and their Products	58	64.4	32	35.6	90
Coffee and coffee products	3	25.0	9	75.0	12
Confectioneries	3	60.0	2	40.0	5
Drinking water	26	56.5	20	43.5	46
Fish and Fish Products	5	27.8	13	72.2	18
Fruits and Fruit Products	5	45.5	6	54.5	11
Infant and Junior foods	2	100.0	0	0.0	2
Iodated salt	9	47.4	10	52.6	19
Meat and Meat Products	4	33.3	8	66.7	12
Milk and Milk Products	12	44.4	15	55.6	27
Nut, Nut Products and Edibles seeds	5	41.7	7	58.3	12
Others	31	52.5	28	47.5	59
Ready-to-drink beverages	2	50.0	2	50.0	4
Spices, Dressings and Condiments	0	0.0	0	0.0	0
Sugar	14	77.8	4	22.2	18
Tea and tea products	1	6.3	15	93.8	16
Vegetable and Vegetable products	5	45.5	6	54.5	11
Vegetable oil and Fats	90	73.8	32	26.2	122
	338	55.0	276	45.0	614

Appendix 23: Record keeping of quality control tests by category

CATEGORIES	No	Percentage No	Yes	Percentage Yes	Total
Alcoholic beverages	5	19.2	21	80.8	26
Bakeries	78	84.8	14	15.2	92
Carbonated non alcoholic beverage	1	8.3	11	91.7	12
Cereals, Pulse and their Products	68	75.6	22	24.4	90
Coffee and coffee products	2	16.7	10	83.3	12
Confectioneris	2	40.0	3	60.0	5
Drinking water	10	21.7	36	78.3	46
Fish and Fish Products	3	16.7	15	83.3	18
Fruits and Fruit Products	5	45.5	6	54.5	11
Infant and Junior foods	2	100.0	0	0.0	2
Iodated salt	11	57.9	8	42.1	19
Meat and Meat Products	4	33.3	8	66.7	12
Milk and Milk Products	12	44.4	15	55.6	27
Nut, Nut Products and Edibles seeds	6	50.0	6	50.0	12
Others	42	71.2	17	28.8	59
Ready-to-drink beverages	1	25.0	3	75.0	4
Spices,Dressings and Condiments	0	0.0	0	0.0	0
Sugar	5	27.8	13	72.2	18
Tea and tea products	1	6.3	15	93.8	16
Vegetable and Vegetable products	8	72.7	3	27.3	11
Vegetable oil and Fats	106	86.9	16	13.1	122
	372	60.6	242	39.4	614

Appendix 24: Qualified personnel by scale of operation

QUALIFICATION	Total	Large	Medium	Micro	Small
Msc in Chemical process Engineering	4	3	1	0	0
Msc in Chemistry	2	1	1	0	0
Msc in Food Science or technology	5	1	2	1	1
Msc in Technology of specific food products	6	3	2	1	0
BSC Chemistry	3	1	2	0	0
BSC in Chemical and Process Engineering	23	11	6	1	5
BSC in Food Science or technology	56	16	21	3	16
BSC in technology of specific food products	11	6	2	0	3
Other Graduate with experiences	10	4	4	0	2
Certificate in Laboratory Technology	6	0	3	0	3
Certificate of attendance	1	0	0	1	0
Certificate of attendance	4	0	0	4	0
Certificate of attendance of food product processing	89	1	2	67	19
Certificate of specific food products	35	0	11	7	17
certificate of specific food products	1	0	0	0	1
Diploma in chemical Processing	2	0	2	0	0
Diploma in Chemistry	1	0	0	0	1
Diploma in Food Technology or Food Science	11	2	1	1	7
Diploma in Laboratory Technology	4	3	0	0	1

QUALIFICATION	Total	Large	Medium	Micro	Small
Diploma in Technology of specific products	41	7	11	6	17
Standard VII with experience	190	1	11	122	56
Form VI with experience	27	3	5	15	4
Form IV with experience	82	4	5	50	23

Appendix 25: Analytical results of vegetable cooking oils sampled during baseline survey.

No.	Name of a food Sample	Manufacturer code name	Parameter analysed	Results
1	Sunflower cooking oil	A	<i>Peroxide Value</i>	Pass
			<i>Free Fat Acid</i>	Pass
2	Sunflower cooking oil	B	<i>Peroxide Value</i>	Pass
			<i>Free Fat Acid</i>	Fail
3	Sunflower cooking oil	C	<i>Peroxide Value</i>	Fail
			<i>Free Fat Acid</i>	Fail
4	Sunflower cooking oil	D	<i>Peroxide Value</i>	Fail
			<i>Free Fat Acid</i>	Fail
5	Sunflower cooking oil	E	<i>Peroxide Value</i>	Pass
			<i>Free Fat Acid</i>	Fail
6	Sunflower cooking oil	F	<i>Peroxide Value</i>	Fail
			<i>Free Fat Acid</i>	Fail
7	Sunflower cooking oil	G	<i>Peroxide Value</i>	Fail
			<i>Free Fat Acid</i>	Fail
8	Palm oil (Mawese)	H	<i>Peroxide Value</i>	Pass
			<i>Free Fat Acid</i>	Fail

9	Sunflower cooking oil	I	<i>Peroxide Value</i>	Fail
			<i>Free Fat Acid</i>	Pass
10.	Sunflower cooking oil	J	<i>Peroxide Value</i>	Pass
			<i>Free Fat Acid</i>	Fail
11	Sunflower cooking oil	K	<i>Peroxide Value</i>	Fail
			<i>Free Fat Acid</i>	Fail
12	Sunflower cooking oil	L	<i>Peroxide Value</i>	Fail
			<i>Free Fat Acid</i>	Pass
13	Wheat flower (Chapa Ngoro)	M	- <i>Moisture content</i> - <i>Aflatoxin</i>	-Pass -Pass
14	Sunflower cooking oil	N	- <i>Free fat acid</i> - <i>Peroxide value</i> - <i>Insoluble impurities</i>	-Fail -Fail -Pass

Summary of results

Total number of sample picked and analysed	14
Number of samples failed in tested parameters	13
Percent non compliance	92.8%

Appendix 26: List of HACCP complied food manufacturing plants

S/N	Region	Plant Name	Categories	Location
1.	Dar es salam	Shamez Enterprises Ltd	Fish and Fish Products	Industrial area
2.	Dar es salam	Asmara trading ltd	Fish and Fish Products	Industrial area
3.	Dar es salam	Alphakrust Ltd	Fish and Fish Products	Industrial area
4.	Dar es salam	Bahari Foods Ltd	Fish and Fish Products	Industrial area
5.	Dar es salam	Enito de la man ltd	Fish and Fish Products	Industrial area
6.	Iringa	CEFA Njombe milk factory	Milk and Milk Products	Residential area
7.	Iringa	Asas Dairies	Milk and Milk Products	Industrial area

8.	Iringa	Luponde tea estate	Tea and tea products	Estate
9.	Iringa	Kibena Tea ltd	Tea and tea products	Industrial area
10.	Iringa	Kibwele tea Factory	Tea and tea products	Industrial area
11.	Iringa	TATEPA	Tea and tea products	Industrial area
12.	Iringa	Kilima factory	Tea and tea products	Industrial area
13.	Iringa	Lugoda Factory	Tea and tea products	Industrial area
14.	Iringa	Itona Tea factory	Tea and tea products	Industrial area
15.	Kagera	Kagera Tea Co. Ltd	Tea and tea products	Estate
16.	Kagera	Vicfish Ltd	Fish and Fish Products	Industrial area
17.	Kagera	Kagera Fish Company Ltd	Fish and Fish Products	Industrial area
18.	Lindi	Tan Pesca Ltd	Fish and Fish Products	Residential area
19.	Mara	Prime catch exports Limited	Fish and Fish Products	Industrial area
20.	Mara	Musoma Fish processors Ltd	Fish and Fish Products	Industrial area
21.	Mbeya	Katumba Tea Factory	Tea and tea products	Industrial area
22.	Mwanza	Omega Fish Ltd	Fish and Fish Products	Industrial area
23.	Mwanza	Tanzania Fish Processors Ltd	Fish and Fish Products	Industrial area
24.	Mwanza	Tanperch Ltd	Fish and Fish Products	Industrial area
25.	Mwanza	Nile Perch Fisheries Ltd	Fish and Fish Products	Industrial area
26.	Mwanza	Vicfish Ltd	Fish and Fish Products	Industrial area
27.	Mwanza	Mwanza Fishing Industries Ltd	Fish and Fish Products	Industrial area
28.	Pwani	TANPESCA Ltd	Fish and Fish Products	Industrial area

29.	Tanga	Sea Product Tanga	Fish and Fish Products	Industrial area
30.	Tanga	Dindira Tea Factory	Tea and tea products	Estate
31.	Tanga	International Food packcers Ltd	Tea and tea products	Industrial area

Appendix 27: List of food manufacturing plants by Region

Region	district	Plant Name	Owner	Scale
Arusha	Arumeru	Gomba Estate Ltd	Micky Chambari	Large
Arusha	Arusha Munispality	sanlita Products Ltd	Hassan M. Esmail & Julita Travas	Small
Arusha	Arusha Munispality	Presidents Choice		Medium
Arusha	Arusha Munispality	Polyform Tanzania Ltd		Medium
Arusha	Arusha Munispality	Sunkist Bakery Ltd	Limited Company	Medium
Arusha	Arusha Munispality	THE PATISSERIE	S.C Punja	Small
Arusha	Arusha Munispality	Darsh Industries Ltd	Mr. Bhadresh Pandit	Medium
Arusha	Arusha Munispality	Jumbo Mills (T) Ltd	Gullam Hussein Salahe	Large
Arusha	Arusha Munispality	Jumbo Mills Bakery	Gullam husein	Small
Arusha	Arusha Munispality	Quality Food Products		Medium
Arusha	Arusha Munispality	Prestige Industries Ltd	Vaghela Family	Medium
Arusha	Arusha Munispality	Meat King Ltd		Small
Arusha	Arumeru	Serengeti Fresh Ltd	Dr. A Frisby	Medium
Arusha	Arusha Munispality	SBC TanzaniaLTD	SBC TANZANIA LTD	Large
Arusha	Arusha Munispality	Sumkist bakery ltd		Small
Arusha	Arusha Munispality	Sumkist bakery ltd		Small
Arusha	Arusha Munispality	Internation Dairy product	Hatim Khanbhai	Medium
Arusha	Arusha Munispality	Brookside Dairy (TZ) LTD	Brookside Dairy Kenya	Medium
Arusha	Arusha Munispality	Mouny Meru Millers LTD	Mr Arvind Mittal	Large
Arusha	Arusha Munispality	International Health Food Assiciation	Trustees of IHFA	Small

Arusha	Arusha Munispality	Happy Sausages Ltd	A.G. Mollel, M. wahime	Medium
Arusha	Arusha Munispality	Arusha Meat Co. Ltd	Arusha Municipal Council	Medium
Arusha	Arusha Munispality	Banana Investiments Ltd	Adolf R. Olomi	Medium
Arusha	Arusha Munispality	halais Pro-Chemie Industries Ltd	Rafik Halai	Medium
Arusha	Arusha Munispality	Jarry's SPA products	Shaikar Imran Jariwalla	Small
Arusha	Arusha Munispality	Mcmoodys	Mohamood Remtulla	Micro
Arusha	Arusha Munispality	Dolly's Pattiseries	Qarrar Shiraz Somji	Small
Arusha	Arusha Munispality	TBL Arusha Plant	Tanzania Breweries Limited	Large
Arusha	Arusha Munispality	Nyirefami Limited	Mr. Robert Nyirendaen	Medium
Arusha	Arusha Munispality	Manolta Modern Bakery	Ameir Said	Small
Arusha	Arusha Munispality	Megatrade Investment Ltd	Francis Reuben Kimaro	Small
Arusha	Arusha Munispality	Akiyda Tanzania Ltd	Akiyda Tanzania Ltd	Small
Arusha	Arusha Munispality	New boogaloo Ltd	Andrew J. dale	Medium
Arusha	Arusha Munispality	maize mill co. ltd	National milling cooperation	Medium
Arusha	Arusha Munispality	Saifi Soda Fountain		Medium
Arusha	Arusha Munispality	G FP Co. Limited	Cleopa J. Ayo	Small
Arusha	Arusha Munispality	Ken Millers Limited	0	Medium
Dar es salam	Ilala	Azam Bakeries	Said Salim Bakhresa	Medium
Dar es salam	Ilala	Special investment milling machine	Fredy Rashid	Micro
Dar es salam	Ilala	Jumbo Confectionery Ltd	Abid Husseiin Aziz	Medium
Dar es salam	Ilala	Bakhressa Food Products	Said salim Bakhresa	Large
Dar es salam	Ilala	Kipawa flour Mills	Said Salim Bakhresa	Large
Dar es salam	Ilala	Tropical food LTD		Small
Dar es salam	Temeke	Sea salt Ltd	Purebond Ltd	Small

Dar es salam	Ilala	Britana Biscuits ltd	Manesh Purshottam Dawda	Large
Dar es salam	Ilala	Dodoma super sembe	Matei Minja	Micro
Dar es salam	Ilala	Summer bakery & Confectionery	Mr. & Mrs Isack Shoo	Small
Dar es salam	Ilala	Rugantino	Jayesh Raichura	Small
Dar es salamm	Ilala	Bake food international Ltd	Pittala Satyanarayana	Medium
Dar es salamm	Ilala	A-One product & Bottlers Ltd	METL	Medium
Dar es salamm	Ilala	Premier Cashew industries ltd		Large
Dar es salamm	Ilala	Fida Husein & Co. Ltd		Large
Dar es salamm	Temeke	Best TIGRA Industries LTD	Tanuj.G ,RAJA	Medium
Dar es salamm	Ilala	Judith michael et. Al	Grace/Judith Michael	Micro
Dar es salamm	Ilala	Alphakrust Ltd	Alphakrust Ltd	Medium
Dar es salamm	Temeke	Agro-Processing&Allied Prod LTD	Mohamad	Medium
Dar es salamm	Kinondoni	Al-Wataniya Ltd	Hassan Ally Ahmed	Small
Dar es salamm	Temeke	Dar es salaam Food Products (1975)	Vijay Ram aiya	Small
Dar es salamm	Temeke	Dabaga Veg. & Fruit Cann Co. LTD	Bipin Desai	Small
Dar es salamm	Temeke	Promasidor Com,LTD	David Stuart Cozens	Medium
Dar es salamm	Temeke	Qingdau Industriial INVT.Co. LTD	Hang zhong	Small
Dar es salamm	Temeke	Saas Bakery	Sharifu Ali	Small
Dar es salamm	Temeke	Raha water ltd	Frediric Fali	Small
Dar es salamm	Temeke	Aqua Cool LTD	Asger Dhanji	Small
Dar es salamm	Temeke	Tanzania IDistilleries LTD	TBL	Medium
Dar es salamm	Temeke	Seregeti BREWERIES LTD	Mr Vital Meth, Mark Bomani, Mwita Gachuma	Large
Dar es salamm	Temeke	Noble Foods	Mr Jectiblish Patel	Medium

Dar es salamm	Ilala	SINO Taqnzania Fuwang co. ltd	SINO Tanzania	Small
Dar es salamm	Kinondoni	White salt	M.A. Mwinyi	Small
Dar es salamm	Temeke	Benjamin Milling Macine(Afya MILLING MACINE)	Benjamin Kafunzue	Micro
Dar es salamm	Ilala	Murza Oil Mill	Huruma Daudi& Ramesh Babu	Large
Dar es salamm	Temeke	Min Bakeries	Shamsh	Small
Dar es salamm	Temeke	National Manufacturer and Sales Agency	Shabil A.Sarkar	Small
Dar es salamm	Temeke	Premier Distilleries LTD	Sigaram Reddy Munnangi	Medium
Dar es salamm	Temeke	Fanyashiru super sembe	Saidi Mohamed	Micro
Dar es salamm	Temeke	Morden Confectionary Bakery	Ahamed Abdallah Salehe	Small
Dar es salamm	Temeke	Nes Confectionary LTD	Mohamed Osman	Small
Dar es salamm	Temeke	Top Bakery	Ahamed Ally	Micro
Dar es salamm	Temeke	Shamez Enterprises Ltd	Private Company Ltd	Small
Dar es salamm	Ilala	Buguruni Flour Mills (SSB & Co. Ltd)	Said Salim Bakhresa	Large
Dar es salamm	Ilala	21st Century Food and Packaging Ltd	METL	Medium
Dar es salamm	Ilala	Ally's Bakery	Fauzia Omar Abeid	Small
Dar es salamm	Kinondoni	BIDCO Oil and Soap Ltd	BIDCO Oil and soap Ltd	Large
Dar es salamm	Ilala	Shoprite Checkers Ltd	Shoprite Checkers	Medium
Dar es salamm	Ilala	Noble Distilleries Ltd	J. C. Patel	Small
Dar es salamm	Ilala	Diplomat Distilleries Ltd	Basireddy Squa Shankar Reddy	Small
Dar es salamm	Ilala	Tanzania Breweries Ltd	SABIMiker Tanzania Government	Large
Dar es salamm	Ilala	Shoprite Checkers	Shoprite	Small
Dar es salamm	Kinondoni	Agro - processing and Allied products	Mohamed Enterprises	Medium
Dar es salamm	Ilala	Global Beverage (T) ltd	P. VikramDev Reddy	Small

Dar es salamm	Kinondoni	Coast Mllers co. Ltd	Dharmapal Adgarwal	Medium
Dar es salamm	Kinondoni	Power Foods Ltd	Power Foods Ltd	Small
Dar es salamm	Kinondoni	Afro American Industries	Afro American Industries	Medium
Dar es salamm	Temeke	Asmaa trading ltd	Rashid Hamadi	Small
Dar es salamm	Temeke	Sazira Enteporises	Sylverster machilu	Small
Dar es salamm	Temeke	Enito de la man ltd	Enito de la man	Large
Dar es salamm	Ilala	Mzizima Four Mill	Said Salim Bakhresa & co. ltd	Large
Dar es salamm	Temeke	Agro- Proscesing & Allied Product	Gulam Abbas Dewji	Medium
Dar es salamm	Temeke	Baraka salt	Uamusho wa wakristo Tanazania	Small
Dar es salamm	Temeke	United manufacture and Business ltd	M/s FENG YINDAQN	Small
Dar es salamm	Temeke	Cadbury Bottlers	Nober J. Mbowe	Medium
Dar es salamm	Ilala	Umalipuda Women Group	UMALIPUDA WOMEN GROUP	Micro
Dar es salamm	Kinondoni	Mini bakery Ltd	Amini Manji	Small
Dar es salamm	Ilala	Mukwano Industries ltd	Alkhan Karmali	Large
Dar es salamm	Kinondoni	Saga Enterprises Ltd	Saga Enterprses Ltd	Small
Dar es salamm	Kinondoni	Fairly Delights ltd	M.M. Inaythussie	Small
Dar es salamm	Kinondoni	Asante Dar Bakery	Walid Juma	Micro
Dar es salamm	Kinondoni	MB Bakery	Matilda Barnaba Kabuzya	Small
Dar es salamm	Kinondoni	Best drinks ltd	Subash patel	Micro
Dar es salamm	Kinondoni	Olam (T) Ltd	Olam T ltd	Large
Dar es salamm	Kinondoni	Mbezi beach Bakery Ltd	Paulina Foya	Small
Dar es salamm	Kinondoni	2000 Industries Ltd	M.D Rajesh C. Vora	Medium
Dar es salamm	Kinondoni	Asilia fruit products	Hilda Y. Ulomi	Small
Dar es salamm	Ilala	Bakhresa Food Products Ltd	aid Salim Bakhresa	Large

Dar es salamm	Kinondoni	Baba industries Ltd	Baba industries ltd	Small
Dar es salamm	Kinondoni	Mikoani traders Ltd	Fuad Idha Awadh	Large
Dar es salamm	Kinondoni	Afribakeries Ltd	Atul sheth	Small
Dar es salamm	Kinondoni	Super Meals ltd		Medium
Dar es salamm	Kinondoni	Coca Cola kwanza Ltd	Cocacola SUBCO PTY	Large
Dar es salamm	Kinondoni	Bahari Foods Ltd	Bahari foods ltd	Large
Dar es salamm	Kinondoni	New tradeco Investment (2000) Ltd		Large
Dar es salamm	Kinondoni	Royal Dairy Products Ltd	Sumaria group	Medium
Dar es salamm	Kinondoni	Darbrew Ltd	Tanzania Breweries Ltd	Medium
Dar es salamm	Kinondoni	Tanganyika Instant coffee	Tanganyika Instant Coffee	Small
Dar es salamm	Kinondoni	Tan Dairies	D. K. Mmari	Small
Dar es salamm	Ilala	Bakhresa Food Products Ltd	Said Salm Bakheressa	Large
Dar es salamm	Ilala	Rose Milling Machine	Rose Lymo	Micro
Dar es salamm	Kinondoni	Coca Cola Kwanza		Large
Dar es salamm	Ilala	Starlight Manufacturers Ltd		Medium
Dar es salamm	Temeke	Aamfa Beverages		Medium
Dar es salamm	Ilala	Tropical food LTD		Small
Dar es salamm	Kinondoni	East african Beverages	Mr regnand Mengi	Micro
Dar es salamm	Ilala	Star Light Manufacturers Ltd	Shariff Alawi	Small
Dar es salamm	Kinondoni	Batoul Investiment Ltd	Hassan Ali Ahmed	Small
Dodoma	Dodoma Urban	Abjis Bakery	Sharif Ally Abdallah	Micro
Dodoma	Dodoma Urban	Souds Bakery	Badar Soud	Micro
Dodoma	Kongwa	Kweka Oil mill	Confort Kweka	Micro
Dodoma	Dodoma Urban	Central Tanzania Wine Co. Ltd 9CETAWICOO	Dr. ENG. Fiorenzo Chesin (M.Director)	Medium
Dodoma	Kongwa	P. Munuo oil mill		Micro
Dodoma	Dodoma Urban	Majengo Bakery	Rashid Mbaraka	Micro

Dodoma	Kongwa	Harun Bakery	Harun Lumando	Micro
Dodoma	Dodoma Urban	Malek S. Jamal Oil Mill	Malek S. Jamal	Micro
Dodoma	Dodoma Urban	Rig Inverstment	Mr. Bana	Micro
Dodoma	Kongwa	Kibaigwa R.C. Oil mill	Roman Catholic (RC)	Micro
Dodoma	Kongwa	Patrick Mtoha Oil Mill	Luis Agustino Jaza	Micro
Dodoma	Kongwa	Sayari Oil Mill	Natihaika Mshana	Micro
Dodoma	Mpwapwa	Komkya women group oil	Komkya women group	Micro
Dodoma	Kondoa	Rashid Oil mill	Rashid Musa	Micro
Dodoma	Mpwapwa	Frank Bakery	Frank Mengele	Micro
Dodoma	Kondoa	Sunrise Oil mill	Said A. Said	Micro
Dodoma	Mpwapwa	Roman Catholic Bakery	Roman Catholic	Micro
Dodoma	Dodoma Urban	Tanganyika Vineyards Co. Ltd	Mr. Moses Kagya	Small
Dodoma	Dodoma Urban	Kizota Agro products Ltd	Mahesh Patel	Small
Dodoma	Mpwapwa	Mosha oil mill	Bernard P. Mosha	Micro
Dodoma	Mpwapwa	Upendo Bakery	Severina Bunga	Micro
Iringa	Iringa Manispality	Mama seki	Ritta Sekilovere	Small
Iringa	Njombe	CEFA Njombe milk factory	CEFA	Small
Iringa	Iringa Manispality	Njugoni Milling machine	Nassor juma Nassor	Small
Iringa	Iringa Manispality	madafu Milling machines	Protas T. Madafu	Small
Iringa	Mafinga	Itona Tea factory	Mufindi Tea Company	Large
Iringa	Njombe	Diocise of Njombe	Jimbo La njombe	Micro
Iringa	Njombe	Kibena Tea ltd	TATEPA	Micro
Iringa	Mafinga	Lugoda Factory	Unilever Tea Tanzania Ltd	Large
Iringa	Iringa Manispality	Arae - Nutr Food	Rose Nyato	Micro
Iringa	Iringa rural	Mama Christina Mgonja	Christina Mgonja	Micro
Iringa	Iringa Manispality	Asas Dairies		Small
Iringa	Iringa rural	Tanzathai IR Co.	Michael Flikos	Medium
Iringa	Iringa Manispality	Iringa vegetable oil & related Products		Medium
Iringa	Iringa Manispality	Dabaga Frut and Vegetable canning Co. Ltd	B.I. Desai	Large
Iringa	Iringa Manispality	kamela Chaula Gamkwete	Gamkwete Chaula	Micro
Iringa	Njombe	Luponde tea estate	Mufindi tea	Micro

			company	
Iringa	Mafinga	Mafinga bakery	Retus Msiluwova	Micro
Iringa	Iringa rural	Boma la Ng'ombe Village Company	Halmashauri, CEFA, Village government & CUAMM	Small
Iringa	Iringa Manispality	C. J Sembe safi	chang'ae juma dawa	Small
Iringa	Iringa Manispality	Asks Grain Milling	A.M Mbaraka	Small
Iringa	Njombe	Lupembe Tea Estate	Luponde Tea estate	Medium
Iringa	Njombe	Nole African Benedictine of Hanga	African Benedictine of Hanga	Small
Iringa	Mafinga	Kilima factory	Unilever Tea tanzania ltd	Large
Iringa	Mafinga	TATEPA	TATEPA	Large
Iringa	Mafinga	Kibwele tea Factory	Unilever Tea Tz Ltd	Large
Kagera	Muleba	Mali Juice	Mali Muleba for Agricultural and Local Industries	Small
Kagera	Biharamulo	Deus Bakery	Deus Mzuri	Micro
Kagera	Karangwe	St. Theresia Bakery	St. Theresian Sisters	Micro
Kagera	Karangwe	Matunda mema (T) Ltd	Andrew Kazimoto, Herman Siegnified	Small
Kagera	Karangwe	New Azam Bakery	Sadik Mudirkat	Micro
Kagera	Bukoba Urban	TANICA Co. Ltd	KCU&KDCU&TFC	Medium
Kagera	Karangwe	BUCOP Ltd	Kagera Cooperative Union (KCU) & Karagwe District	Medium
Kagera	Bukoba Urban	Kagera State oil mill	Yahaya Bin Said	Micro
Kagera	Ngara	Joas Bakery	Joas Richard	Micro
Kagera	Bukoba Rural	Kagera Fish Company Ltd	Nico pennessis	Large
Kagera	Muleba	Furaha Bakery	Adolf Martin	Micro
Kagera	Bukoba Urban	Super family Bread bakery	Ridia Simeo	Micro
Kagera	Muleba	Muleba Loaf Bakery (Mutegeki)		Micro
Kagera	Bukoba Rural	Kagera Tea Co. Ltd	Dr. Peter Mgimba	Small
Kagera	Bukoba Urban	SBC (T) Ltd	Ziad Elikhalil	Medium
Kagera	Bukoba Rural	Kadefa Milk		Micro
Kagera	Muleba	Rubya DDH mill	Bukoba Catholic Dioces	Micro
Kagera	Bukoba Rural	Kagera sugar Ltd	Nassor Sei & Seif Seif	Large

Kagera	Ngara	Godfrey Bakery	Godfrey Alphonce	Micro
Kagera	Biharamulo	Victoria Cotton and oil ltd	William Masubi	Small
Kagera	Bukoba Urban	Tops Bread Bakery	Byamungu bukuzana	Micro
Kagera	Bukoba Urban	Mtalemwa Bakery	Renovatus Ruyobya	Micro
Kagera	Bukoba Urban	Kagera Bakery	Husein Isaac	Micro
Kagera	Bukoba Urban	Yakilila Products	Hilda Mwesigo	Micro
Kagera	Bukoba Urban	Bahaya bakery	Domingo Estelito Fernandes	Micro
Kagera	Bukoba Rural	Bukoba Dairy	Mtabazi Claudian	Micro
Kagera	Bukoba Urban	Amir Hamza (T) Ltd	Amir hamza	Micro
Kagera	Bukoba Urban	Mulani Industries Ltd	S.J.Mulani	Micro
Kagera	Bukoba Urban	Vicfish Ltd	Mrs Bohagat, Mr. Alloo	Large
Kagera	Ngara	Baraka Juhudi group	Doroth Shyogotera	Micro
Kagera	Ngara	Cameroon Bakery	Raymond Ndaba	Micro
Kigoma	Kigoma Rural	Kalangala	Kessi Hassan	Micro
Kigoma	Kigoma Urban	Yusufu Msomali	Yusufu Nsimali	Micro
Kigoma	Kigoma Rural	Ehena Salt	Ayoub Kalufia	Micro
Kigoma	Kigoma Rural	Ibonge	Hassani	Micro
Kigoma	Kigoma Rural	Rumako (AMCOS)	Kanyovu coffee curing joint entp.	Small
Kigoma	Kigoma Rural	Family Palm Oil	Mzee Issa Bankeuza	Micro
Kigoma	Kigoma Rural	Kansibu	Moshi - Mlongo	Micro
Kigoma	Kigoma Rural	Kinyo workers	Sect. Elifasi Hiriza	Micro
Kigoma	Kigoma Urban	Uwawaki women group	Uwawaki (Olestina Zenababeti)	Micro
Kigoma	Kasulu	Fransiscan Sisters	Fransiscan Sisters	Micro
Kigoma	Kasulu	Kasulu Beekeepers Coop. Society	Kasulu Beekeepers Coop. Society (KBCS)	Micro
Kigoma	Kibondo	Nathanael Bakery	Nathanael Mishack	Micro
Kigoma	Kibondo	Yasini Bakery	Yasini Hamis	Micro
Kigoma	Kibondo	Benedictor Bakery	Benedicto Philemon	Micro
Kigoma	Kigoma Urban	Kigoma Bakery	Gulshan IK. Visram	Small
Kigoma	Kigoma Urban	Mustafa Bati	Mustafa Bati	Micro
Kigoma	Kigoma Urban	Yohana Kaloza Co.	Yohana Kaloza	Micro
Kigoma	Kigoma Urban	Maendeleo group	Seleman Myenzo	Micro
Kigoma	Kigoma Urban	K.P. Company group	Kumbusho Sadick	Micro

Kigoma	Kigoma Urban	Majuto Mohamed Co.	Majuto Mohamed	Micro
Kigoma	Kigoma Urban	Samsoni Surima	Samsoni Surima	Micro
Kigoma	Kigoma Urban	Joseph Kabito	Joseph Kabito	Micro
Kigoma	Kigoma Rural	Nyanza Mine (T) Refining (Solar)	Mr. Manek & Shaffi Jamar	Large
Kigoma	Kigoma Rural	Nyanza Mine (Thermo)	Mr. Manek & Shaffi Jamal	Large
Kigoma	Kigoma Urban	Jembo Investment group	Adiel Kaaya	Micro
Kigoma	Kigoma Urban	Ally's Bakery	Fauzia Omary Abeid	Small
Kigoma	Kigoma Urban	P.K. group	Paseal Kagome	Micro
Kigoma	Kigoma Urban	Nazareth Women Group	Nazareth Women Group	Micro
Kigoma	Kigoma Rural	Lugoma	Damian Dismas	Micro
Kilimanjaro	Hai	Marki Sunflower Oil Industry	Samson Kileo	Micro
Kilimanjaro	Hai	Muvimaha (Muungano wa vikundi vya maendeleo Hai)	Muvimaha	Micro
Kilimanjaro	Moshi Urban	TBL Macting Plant	Tanzania Breweries Ltd	Large
Kilimanjaro	Moshi Urban	Beverages (soft drinks) (Supa cola)		Small
Kilimanjaro	Moshi Urban	Bonite Bottlers Ltd	IPP Limites	Large
Kilimanjaro	Rombo	Kimuraly Investment Co.Ltd	Au Mnyinga	Small
Kilimanjaro	Hai	Kalali Women dairy Coop. Group	Usharika - Kalali	Small
Kilimanjaro	Hai	Nronga dairy Cooperation	Ushirika wa Wanawake Mronga	Small
Kilimanjaro	Moshi Urban	Sunshine Inestiments Ltd (Bakery project)	J.A. Machenje & family	Small
Kilimanjaro	Moshi Rural	Ruseilar Vegetable Fruits	Women group	Micro
Kilimanjaro	Moshi Urban	Salls Bakery		Micro
Kilimanjaro	Moshi Rural	Kilimanjaro Natural Food coop. Ltd	Grace Kiwelu	Micro
Kilimanjaro	Moshi Rural	GCR Industries Limited	A.A. Ramole & family	Small
Kilimanjaro	Moshi Urban	Bonite Bottlers Ltd	IPP Limites	Large
Kilimanjaro	Moshi Urban	Tanzania Coffee Board	Tanzania Coffee Board	Small

Kilimanjaro	Moshi Urban	Parmar Beuty Products		Small
Kilimanjaro	Rombo	Rombo spring water		Small
Kilimanjaro	Moshi Urban	(Baba loaf Modern Bakery) Printing services (T) Lt	F.J. Mushgi & Family	Small
Kilimanjaro	Moshi Rural	Vegetable & fruits	Women group - Usharika wa Mande	Micro
Kilimanjaro	Moshi Urban	Keys Natural Spring water	Lucy Ndesamburo	Small
Kilimanjaro	Moshi Urban	Mister Loaf Bakery	Abdallah Ismail	Small
Kilimanjaro	Moshi Urban	Akiyda Tanzania Ltd		Small
Kilimanjaro	Moshi Urban	Union Sezrice store		Micro
Kilimanjaro	Moshi Urban	Chuchuba Ice Industry Lt	Chuchuba Company	Small
Kilimanjaro	Moshi Rural	Fukeni Mini dairy	ELCT-Northern Diocese	Micro
Kilimanjaro	Moshi Urban	M/S Haz Enterprises		Micro
Kilimanjaro	Moshi Rural	Ari Food Products	Bibi Aripa G. Marealle	Micro
Kilimanjaro	Moshi Rural	TPC Ltd	Sukari Inverstment Co. Ltd	Large
Kilimanjaro	Moshi Urban	Gaurmet Coffee Ltd	Jeremy M. Block	Medium
Kilimanjaro	Moshi Urban	Rajmoni Distilleler bottlers (P) Ltd	Inderiit Singh	Small
Lindi	Nachingweya	Somea Group	Ibrahim somea	Small
Lindi	Nachingweya	Mohamed Osman Abubakar		Micro
Lindi	Ruangwa	Tungoyane Group	5 Members	Micro
Lindi	Lindi Urban	Vara Mills	Manoje Vara	Small
Lindi	Ruangwa	TubamopeGroupp	5 Members	Micro
Lindi	Nachingweya	Ukahuva	6 Member	Micro
Lindi	Liwale	Wamo Mills	Hamidu Mohamed	Micro
Lindi	Kilwa	Tan Pesca Ltd	Mahad Suleiman	Small
Lindi	Lindi Urban	Luqmaan Bakery	Mohamed Hamis Khaify	Micro
Lindi	Kilwa	Said Mohamed Timami		Micro
Lindi	Nachingweya	Tumaini women Gp	5 Members	Micro
Manyara	Babati Rural	Manyala Sugar Co. Ltd	Company	Large

Manyara	Babati Rural	Endanahai Estate	Mukesh Ogadu	Small
Manyara	Babati Rural	Dudumera Plantation Ltd	Mr. Chagan Uka Modhwadia	Medium
Manyara	Babati Urban	Godlisten E. Mahase	Godlisten E. Mghase	Small
Manyara	Babati Urban	Super Quality	Saidi Juma Hamoud (Said & brothers)	Small
Manyara	Babati Urban	Edward Mbesere	Mr. Edward	Small
Manyara	Babati Rural	Kewel Coffee Estate	Gitu Soni	Small
Manyara	Babati Urban	Musa Ernest	Musa Ernest	Micro
Manyara	Babati Urban	Ndimini Oil Mill	Muhidini Juma	Micro
Manyara	Babati Rural	Krishna Seed Co. Ltd	Atiya Visa	Small
Manyara	Babati Rural	Mara Estate	Mahesh Patel	Small
Manyara	Babati Urban	Edible Mill	Emmanuel Mmari	Micro
Manyara	Babati Rural	Miombo Estate	Narender Patel	Small
Manyara	Babati Urban	Masumbuko Chakala	Msumbuko Chakala	Small
Manyara	Babati Urban	Swalehe Iddi Omari	Swalehe Iddi	Small
Manyara	Babati Rural	Magugu Farm	Mr. Babu Atia	Small
Manyara	Babati Urban	Paskalia Petro	Paskalia Petro	Micro
Manyara	Babati Rural	Endanahai Plantation Ltd	Mr. Aman Hirji	Medium
Manyara	Babati Urban	Shafii Cooking Oil	Shafii	Small
Manyara	Babati Urban	Babati Oil Mill	Godwin Wambura	Micro
Manyara	Hanang	Mama Ali Bakery	Mama Ali	Micro
Manyara	Hanang	Merinjo Shirima	Merinjo Shirima	Micro
Manyara	Hanang	Yona Muro	Yona Muro	Micro
Manyara	Hanang	Ndundu		Micro
Mara	Musoma Urban	Winners Bakery	Hafidh Waziri	Small
Mara	Musoma Urban	Oaulina Simon	Paulina Simon	Micro
Mara	Musoma Urban	St. Joseph Oil Press Machine	R.C. Diocese of Musoma	Micro
Mara	Serengeti	Martin Joseph	M. Joseph	Micro
Mara	Musoma Urban	Kashilimu Soya Products	Stepheno Kashilimu	Micro
Mara	Musoma Rural	St. Anthony VTC		Micro
Mara	Tarime	Baraki Sisters Farm	Immaculate Heart Sisters of Africa	Micro
Mara	Tarime	Mugabe Farm Extension Center	Mr. Ngaliba	Micro
Mara	Musoma Urban	Elieshi Group		Micro
Mara	Musoma Urban	Hilda Kalomba	Hilda Kalomba	Micro
Mara	Bunda	Bundaa Oil Industries Ltd	Mukesh Saula	Large
Mara	Musoma Urban	Mara Milk (maziwa Mara)	James Mathayo	Small
Mara	Musoma Rural	Buluba Ginners Ltd	Rajesh Kapoor	Medium

Mara	Musoma Urban	Victoria Food products Ltd	Emmanuel Kanisius, Edward Mohere, Abel Mohere, Cle	Small
Mara	Musoma Urban	Makilagi Maziwa Mara	Victor Peter Makilagi	Micro
Mara	Tarime	mara Coffee ltd	C.M. G	Medium
Mara	Musoma Urban	Musoma Fish processors Ltd	N. Rajesh Kumar (manager)	Large
Mara	Musoma Urban	Mugube Bakery (T) LTD	Zahara Said Ibrahim	Small
Mara	Musoma Urban	Prime catch exports Limited	Jessa Family (Mr & Mrs Nadiri Jessa)	Large
Mara	Musoma Rural	Buhemba rural agricultural centre	Diocese of Mara-Aglicana	Micro
Mara	Musoma Urban	Stela Dunia	SIDO	Micro
Mara	Bunda	S & C Ginning Co. Ltd	CMG group & Sumaria Group	Medium
Mara	Musoma Urban	Musoma Bottlers Ltd	Haji BACHOO	Small
Mbeya	Mbarali	Mbarali Rice Farms Poultry Abattoir	PSRC	Small
Mbeya	Mbeya Urban	A.H. Family Bakery	Hilary Ngonyani	Small
Mbeya	Mbeya Urban	Erinest Mwaisaka	Erinest Mwaisaka	Micro
Mbeya	Mbeya Urban	Omary Musa Mdemu	Omary Musa Mdemu	Micro
Mbeya	Mbeya Urban	Nembu Oil Mills	Eliza Sai'gulan	Micro
Mbeya	Mbeya Urban	Sarah Saamweli Mareruka	Sarah Samweli Mareruka	Micro
Mbeya	Mbeya Rural	Uyole Investment Co. Ltd	Uyole Investment Co. Ltd	Small
Mbeya	Mbozi	Mbozi Coffee curing Co. ltd	Cooperative union	Large
Mbeya	Mbeya Urban	Aron Kibona	Aron Kibona	Micro
Mbeya	Mbeya Urban	Nosigwe Buya	Nosigwe Buya	Micro
Mbeya	Mbeya Urban	Anold Kelya	Anold Kelya	Micro
Mbeya	Chunya	Latifah Abdisalum	Hamza Kassim	Micro
Mbeya	Mbeya Urban	Sabina Kipengole (Mama Ilapa)	Sabina Kipangole	Micro
Mbeya	Chunya	Jaribio	Kikundi cha Jaribuo	Micro
Mbeya	Mbeya Urban	City Coffee ltd	City coffee Ltd	Medium
Mbeya	Mbarali	Robert Rice Milling Machine	Robert Munuo	Micro
Mbeya	Rungwe	Mwasa Milk	Godwin Mwasawiba	Micro
Mbeya	Rungwe	Ushirika wa wafugaji Tukuyu	Ushirika wa wafugaji Tukuyu, Rungwe	Micro
Mbeya	Rungwe	Katumba Tea Factory	Wakulima Tea Company	Large

Mbeya	Mbozi	Lima Coffee Ltd	Lima Coffee Ltd	Medium
Mbeya	Mbeya Urban	Mwamba Breweries Ltd	Mwamba Breweries Ltd	Small
Mbeya	Mbeya Urban	Afri Bottlers Ltd	Cocacola SABCO	Large
Mbeya	Mbeya Urban	SBC Tanzania Ltd	SBC Tanzania Ltd	Large
Mbeya	Mbeya Urban	Isanga Dairy Farmers Coop. society	Isanga Dairy farms Coop. Society	Small
Mbeya	Mbeya Urban	Mbeya Milk	Elisha Mbogora	Micro
Mbeya	Mbeya Urban	Eva salibaba Matemtu	Eva Salibaba Matemtu	Micro
Mbeya	Mbozi	Kituo cha miradi Morovian	Moravian Church	Micro
Mbeya	Mbeya Urban	Martha Nsindangi	Maartha Nsiondazi	Micro
Mbeya	Mbozi	YWCA	YWCA	Micro
Mbeya	Kyela	Emmanuel Mwandambo	Emmanuel Mwandambo	Micro
Mbeya	Mbeya Urban	Tiked keti oil mills	Ross Francis Mwakyoma	Micro
Mbeya	Mbozi	Tito Chaula	Tito Chaula	Micro
Mbeya	Kyela	Tip Top Cold Drink	Donald Sanga	Micro
Mbeya	Mbozi	Gideon Kayange	Gideon Kayange	Micro
Mbeya	Mbozi	Gabriel Chaula	Gabriel Chaula	Micro
Mbeya	Mbarali	Mbarali Rice Farm Mill	PSRC	Small
Mbeya	Kyela	Mrs Mageta	Mrs Rahabu Nageta	Micro
Mbeya	Kyela	Alexaander Mwakyoma		Micro
Mbeya	Kyela	Victor Msima	Victor Msima	Micro
Mbeya	Mbozi	Kulyamo	Anton Olinga	Micro
Mbeya	Kyela	Mamza Soap	Vimesh Patel	Micro
Mbeya	Mbeya Urban	Furaha Bakery	Thomas Absob Mwangonda	Small
Mbeya	Ileje	IRDO	Simon Mwang'onda	Micro
Mbeya	Kyela	Kyella mawese Co.	Kyecu/TFNC	Small
Mbeya	Rungwe	Kyimo Investment Co. Ltd	Mlingwa	Small
Mbeya	Kyela	Edina Jackson	Edna Jackson	Micro
Morogoro	Morogoro Urban	Kimango farm Enterprises	Axmamm family	Small
Morogoro	Kilombero	Ngowi Milling machine	Michael Ngowi	Micro
Morogoro	Kilombero	Msolwa K1	Kilombero Sugar	Large
Morogoro	Mvomero	Mtibwa Sugar Estates	Tanzania Sugar Industry	Large
Morogoro	Morogoro Urban	Morogoro Bens Winery	Prof. B. Tiisekwa	Small
Morogoro	Kilombero	Salmin & sons	Mohamed Salmin	Small

Morogoro	Kilombero	Kilimanjaro Sugar Company	Ruembe K2(kilombero Suga Co.)	Large
Morogoro	Kilombero	Nyahumu	KKKT	Small
Morogoro	Kilombero	Amani women Group	Women group	Micro
Mtwara	Mtwara Mikindani	Adela Yasin	Adela	Micro
Mtwara	Mtwara Mikindani	Rukmaleeha Bakery	Khalid M. Sherali	Small
Mtwara	Masasi	Masasi Cashnut processing factory	BUCO Investment Holdings (T) ltd	Large
Mtwara	Mtwara Mikindani	Fajamacoe Women Group	Fajamacoe Women group	Micro
Mtwara	Mtwara Mikindani	Kishari Bakery	Henry Tem	Micro
Mtwara	Mtwara Mikindani	Haule Mills	Harun Albano Haule	Small
Mtwara	Masasi	Tumaini Gasgenut Processsing group	Mariam Kasembe & Christina Mkaniya	Micro
Mtwara	Mtwara Mikindani	Mwajuma I. Nyoni	Mwajuma I. Nyoni	Micro
Mtwara	Tandahimba	Mtawanya salt works	Mr. Mushi (Jionee)	Micro
Mtwara	Tandahimba	Umoja group - constansia Mahanga	Umoja group/Constansia Mahanga	Micro
Mtwara	Tandahimba	Tulinge group	Tulinge group	Micro
Mtwara	Mtwara Mikindani	Mary Msemova	Mary Msemwa	Micro
Mtwara	Masasi	Jifunze Kilimo Bora cha Mihogo	Patrick,Jeremia &Mrekoni	Micro
Mtwara	Mtwara Mikindani	Mikindani Food Processing Women Group	Mikindani Food processing Women group	Micro
Mtwara	Mtwara Mikindani	Khamsin Bakery	Saida Khamsin	Micro
Mtwara	Masasi	Ndanda Factory - Imran Traders	Mohamed Dhalla	Small
Mtwara	Masasi	Meresa	Mainuna Ali	Micro
Mtwara	Mtwara Mikindani	Olam (T) Ltd	Olam International Limited	Large
Mtwara	Newala	Kituwodea	50 Members	Micro
Mtwara	Masasi	Tuungane	8 Members	Micro
Mtwara	Masasi	keso	Clement	Small
Mtwara	Masasi	Ibrahim Bakery	Arif Ibrahim	Micro
Mtwara	Mtwara Mikindani	Super Azaram Sembe	Mohamed Hazaram	Small
Mtwara	Masasi	Jitegemee Group	Kesiya ,Mlkope&Ruth	Micro

Mwanza	Ilemela	Haissaha		Micro
Mwanza	Ilemela	Nyanza Bottling Co. Ltd	Mr. C.M. Gachuma, Mr. J.G. Shah	Large
Mwanza	Nyamagana	Vegetable Oil Industries Ltd	Alliance Agencies Ltd, NCU 1984) ltd & SHIRECU (19	Medium
Mwanza	Nyamagana	Victoria Dairy Ltd		Medium
Mwanza	Nyamagana	Haria food pack ltd		Medium
Mwanza	Ilemela	Twaha A. ishengoma	Twaha A. Ishengoma	Micro
Mwanza	Ilemela	Salum Issa Salum	Salum salum	Micro
Mwanza	Ilemela	Chudaga Utar, P.O. box 6132, Mwanza		Micro
Mwanza	Nyamagana	Regent Food and Drinks Ltd		Small
Mwanza	Ilemela	Bright Oyat Manufacturers		Small
Mwanza	Nyamagana	Tanzania Fish Processors Ltd	Tanzania Fish Processors Ltd	Large
Mwanza	Sengerema	Mwanza mini Milk Plant	Abdala ramadhan Nyalando	Micro
Mwanza	Nyamagana	Bestling (T) Ltd	Vedastus Lukago	Small
Mwanza	Ilemela	Regent Food 7 Drinks ltd	Parkaj J. Suchak	Small
Mwanza	Geita	Tanzania bakery	Mikidadi Juma Feruzi	Small
Mwanza	Nyamagana	Birchand Oil Mill Ltd	Satnal Gupta	Medium
Mwanza	Ilemela	Metrochem Industries	Timothy Bongoko&Lucas Kasulende	Micro
Mwanza	Geita	Habaly's Bakery	Habaly Felician	Micro
Mwanza	Nyamagana	Mwanza Food Industries Ltd	C.M Gachuma	Small
Mwanza	Nyamagana	Tanganyika Pombe Distillaries	TPDL MD Azim Kassam	Small
Mwanza	Ilemela	Mchungu Enterprises		Small
Mwanza	Nyamagana	Furaha Nyanza Co.Ltd	Fayaz Rashid	Large
Mwanza	Nyamagana	Mwanza Fishing Industries Ltd	Meliboob fazal	Large
Mwanza	Ilemela	Tanperch Ltd	Quality Food & Beverages	Large
Mwanza	Nyamagana	Omega Fish Ltd	Mr. Amin Hassanali	Medium
Mwanza	Nyamagana	Vicfish Ltd	H. Bhagat & M Alloo	Large
Mwanza	Ilemela	Tanzania Breweries ltd	Tanzania Breweries ltd	Large
Mwanza	Ilemela	Muya Pure Drinking	Anwar salum	Small

		Water		
Mwanza	Nyamagana	Nyanza Cottonoil Co. Ltd	Mr. samson I. Ngwalida	Medium
Mwanza	Nyamagana	Vegetable Oil Industries Ltd	Alliance Agencies Ltd, NCU 1984) ltd & SHIRECU (19	Medium
Mwanza	Ilemela	Bright Oyat Manufacturerers Ltd	Charles R. Mulaki	Small
Mwanza	Ilemela	Mega Distillers Industries (K) Ltd	Michael M Gaitho & Lucy W Gaitho	Small
Mwanza	Nyamagana	Dynamic Cotton Ginnery Co. Ltd	Jumanne Nkandi Kishimba	Medium
Mwanza	Nyamagana	Hamidu Yusuph		Micro
Mwanza	Nyamagana	Best Food		Small
Mwanza	Ilemela	Nyanza Battling Co. Ltd	Mr. C.M. Gachuma, Mr. J.G. Shah	Large
Mwanza	Nyamagana	Nile Perch Fisheries Ltd	Zully Rahamtulla	Large
Mwanza	Nyamagana	Suncity Bakery	Omary Ally Said	Small
Mwanza	Nyamagana	Warsame Bakery	Basra Mahmoud Ally	Medium
Mwanza	Nyamagana	Mwanza Victoria Bakery	Rashid Haidar Abeid	Small
Mwanza	Ilemela	Tai Beverage	Twaha Ayub Ishengoma	Small
Mwanza	Ilemela	Mona's Beverage Products	Amin Seleman	Small
Mwanza	Ilemela	Zawadi Pure drinking water	Salum Issa Salum	Small
Mwanza	Nyamagana	Bibiti Oil Limited	Nassor Ally	Medium
Pwani	Bagamoyo	Bagamoyo Salt work	H.J Stanley	Small
Pwani	Mafia	TANPESCA Ltd		Large
Pwani	Kibaha Rural	Mkuza Chicks ltd	A.L Maximambali	Small
Pwani	Bagamoyo	Sea salt Ltd	Purebond Ltd	Small
Pwani	Bagamoyo	H.J Stanley & Sons Ltd	Stanley H.J	Small
Pwani	Kibaha	Recipe Foods Mkuza	Hawa Kimolo	Micro
Pwani	Bagamoyo	Chalinze Miller	Said D. Semindu	Micro
Pwani	Kibaha	F.Macha	E.F.Macha	Micro
Rukwa	Nkasi	Khamis Kisiki	Khamis Kisiki	Micro
Rukwa	Sumbawanga Urban	Mtaba 2004 Investiment	Abdi Mohamed	Small
Rukwa	Mpanda	Mpadeco	DED	Small
Rukwa	Sumbawanga Urban	MT White Spoon brown Sugar	Elias Kimati	Micro
Rukwa	Sumbawanga Urban	Savannah Press Machine	Aswige Mwanyanji	Micro
Rukwa	Nkasi	Abdala Jumbe	Abdala Jumbe Mwinyikondo	Micro

Rukwa	Nkasi	Getruda Gerald	Getruda Gerald	Micro
Rukwa	Mpanda	Yellow Flower	Mrs Mhume	Micro
Rukwa	Sumbawanga Urban	welcome bakery	Haji Abdi	Micro
Rukwa	Sumbawanga Urban	Mama bakery	Marua Mtakatifu Malkia wa Afrika	Small
Rukwa	Mpanda	Mwiza Group	Joyce Ntunzwe	Micro
Rukwa	Sumbawanga Urban	Mbwilo Milling	Mr. Anuar M said	Micro
Rukwa	Sumbawanga Urban	Roho Mtakatifu	Kikundi cha wakinamama wa Roho Mtakatifu	Micro
Rukwa	Sumbawanga Urban	Bitimeli Enterprises	Mrs O. Lujaji & Lydia kajibambe	Micro
Rukwa	Sumbawanga Urban	Masista wa Maria Mama malkia wa Afrika	Masista wa Maria mama malkia wa Afrika	Micro
Rukwa	Sumbawanga Urban	ESRY	Halfan Hillary	Small
Ruvuma	Songea Urban	Songea Bakery	William Schmith	Micro
Ruvuma	Mbinga	Diocese wheat milling plant	Catholics Diocese Mbing	Micro
Ruvuma	Mbinga	Mbinga Coffee Curing co Ltd	Cooperative and Government (TCB)	Large
Ruvuma	Songea Urban	Jeamy food Products	Magdalena A. Tarimo	Micro
Ruvuma	Songea Urban	Peramiho Benedictine Fathers Slaughter Facility	Benedictine fathers	Small
Ruvuma	Songea Urban	Peramiho Benedictne Fathers	Benedictine fathers	Small
Ruvuma	Songea Rural	St Agnes Convert Chipole	St Agnes Convert Chipole	Micro
Ruvuma	Songea Urban	Les Group	Lea Moses et al (5 members)	Micro
Ruvuma	Songea Urban	Winners Group	Winners group	Micro
Ruvuma	Mbinga	Diocese Vegetable Oil Processing	Catholics Diocese Mbinga	Micro
Ruvuma	Songea Urban	Mkate wetu Bakery	Archdiocese of Songea	Micro
Ruvuma	Mbinga	Bakery ya Jimbo	Catholics Diocese Mbinga	Micro
Ruvuma	Songea Urban	MAISHA group	Maisha group	Micro
Ruvuma	Songea Urban	UWASISO group	UWASISO	Micro
Ruvuma	Songea Urban	Msamala Millers	Dr. L.M. Gama	Micro
Ruvuma	Songea Urban	Mama Vite group	Mama Vite group	Micro
Shinyanga	Shinyanga Urban	Gaki Investment Oil mill	Gaspar Kileo	Medium

Shinyanga	Shinyanga Rural	Makonda Cheyo Rice mill	Makonda Cheyo	Micro
Shinyanga	Shinyanga Rural	Charles Misungwi mill	Charles Miswingwi	Micro
Shinyanga	Kahama	Maize mill	Kaswiza	Micro
Shinyanga	Shinyanga Rural	Jamal Salum Mill	Jamal Salum	Micro
Shinyanga	Shinyanga Urban	Luhumbo Inv. Oil mill	Abdalah Masoud Ngozi	Medium
Shinyanga	Shinyanga Rural	Gelanja Wapi mill	Gelamja Wapi	Micro
Shinyanga	Kahama	Mabala Kalagh Maize Mill	Mabala Kalagh	Micro
Shinyanga	Shinyanga Rural	Daudi Mwanasabo rice mill	Daudi Mwanasabo	Micro
Shinyanga	Kahama	Daniel itemo Posho mill	Daniel Itemo	Small
Shinyanga	Shinyanga Urban	Kisumwa Machiwery oil mill	Kisumwa Machinery	Micro
Shinyanga	Kahama	Lupando Bakery	Mwakasola	Micro
Shinyanga	Shinyanga Urban	Passion Food Processors	Ollympia Malinda	Micro
Shinyanga	Shinyanga Urban	Brown Eagle oil mill (Tuff cooking oil)	Khalid Hamad	Small
Shinyanga	Shinyanga Rural	Abdallah Patel Rice mill	Abdallah Patel	Micro
Shinyanga	Shinyanga Urban	Jambo Oil mill	Jambo Oil mill & Ginnery	Small
Shinyanga	Kahama	Hussein Samatha Rice mill	Hussein	Medium
Shinyanga	Kahama	Kefa Mahona Rice mill	Kefa Mahona	Small
Shinyanga	Shinyanga Rural	Sudi Rice Mill	Sudi Ally	Micro
Shinyanga	Shinyanga Rural	Malampaka Oil mill	Simon Agency Ltd	Small
Shinyanga	Kishapu	Bunda oil	Bhavesh Ved	Small
Shinyanga	Kahama	Silasi Ngassa Rice Mill	Silasi Ngassa	Medium
Shinyanga	Shinyanga Rural	Shija Mdushi mill	Shija Mdushi	Micro
Shinyanga	Kahama	Sangijo Rice Mill	Sangijo	Medium
Shinyanga	Kahama	Super Rice Mill	Dominic Stephan	Small

Shinyanga	Kahama	Kahama Oil Mill	Muhoja Nkwabi & Emmanuel Nkwaabi	Medium
Shinyanga	Shinyanga Urban	New Balina Bakery	Catholic Diocese of Shinyanga	Small
Shinyanga	Shinyanga Rural	Baraghashi Rice mill	Baraghashi Hamoud	Micro
Shinyanga	Shinyanga Rural	Mohamed Nasoro mill	Mohamed Nassoro	Micro
Shinyanga	Shinyanga Rural	Zavuga Zuberi Rice mill	Zavuga Zuberi	Micro
Shinyanga	Shinyanga Rural	Emmanuel Kimbulu Rice mill	Emmanuel Kimbulu	Micro
Shinyanga	Shinyanga Urban	Fresho oil mill Inuest Co. Ltd	Fresho	Medium
Shinyanga	Kahama	Buyungu Bakery	Samwel Salehe	Micro
Shinyanga	Kahama	Nghumbu Kija Oku Rice mill	Nghumbu Kija Oku	Medium
Shinyanga	Kahama	William rice mill	William Lutema	Small
Shinyanga	Kahama	Jeremia Sahani Rice mill	Jerimia	Medium
Shinyanga	Shinyanga Rural	Malampaka Rice Mill	Maximillian Rwambazi	Micro
Shinyanga	Kahama	Mawenda Omary Rice mill	Mawenda Omary	Medium
Shinyanga	Shinyanga Urban	Bertha J kambesha	Bertha Kambesha	Micro
Shinyanga	Kahama	Mama Diana	Alina Anserimi	Micro
Shinyanga	Bukombe	Kalinda Bakery	Sweet Betty Kalinda	Micro
Shinyanga	Kahama	Musoma Bakery	Jerad Petter	Micro
Shinyanga	Bariadi	Bariadi Mills	Yohana balele	Micro
Shinyanga	Bukombe	Super Bread	Yeremia Ngwandu	Micro
Shinyanga	Kahama	Robert Lufungulo Nkonoki Rice mill	Robert L. Nkonoki	Micro
Shinyanga	Kishapu	Mwadui Bakery	Adam Mberwa	Micro
Shinyanga	Maswa	Al Adawi Co. Ltd	Seleman Said	Small
Shinyanga	Shinyanga Urban	Saud Bakery	Badary saud	Small
Shinyanga	Kahama	Muzna Rice Mill	Muzna S. Hasham	Small

Shinyanga	Kahama	Bilal Said Rice mill	Bilal Said	Medium
Shinyanga	Shinyanga Urban	Nikhil Enterprises	R.J. Gordhandas	Micro
Singida	Iramba	Lulumba Oil Mill	Kiazia Ally Abdallah	Micro
Singida	Iramba	Aman Oil mill	Edward Edfatio Makundi	Micro
Singida	Singida Urban	Pendeza Women group	Martha Kitundu	Micro
Singida	Iramba	Ulemo oil mills	Laurence Benjamin	Micro
Singida	Iramba	Songea oil mills	Raulence Benjamin	Micro
Singida	Iramba	Jabir Oil Mills	Jabir Ahmed	Micro
Singida	Singida Urban	Yemen Oil Mill	Walid K. Ally	Micro
Singida	Iramba	Adimu Oil mill	Abdallah S Adimu	Micro
Singida	Singida Urban	Super Quality oil mill	Said Juma Hamoud	Micro
Singida	Manyoni	Eml Msubi Oil Mill	Emil Msubi	Micro
Singida	Manyoni	R.C Mission Oil mill	R.C mission	Micro
Singida	Iramba	Damson Oil mill	Damson oil mill	Micro
Singida	Iramba	Alfan Ahmed Shams Oil Mill	Alfan Ahamed shams	Micro
Singida	Singida Urban	Usimasi Singida	Mr. Martin Churi	Micro
Singida	Singida Urban	SIA women group	Rehema Hamisi Mtoro	Micro
Singida	Singida Urban	Best Bakery	Mr. John Muganda	Micro
Singida	Singida Urban	Bunda Oil Industry Ltd - Crude	Mr. Mukesh Savla	Small
Singida	Manyoni	Georgi Msemo Oil Mills	Georgi Msemo	Micro
Singida	Singida Rural	Mwamko women group	Group of 20 women - Leader fatma bakati	Micro
Singida	Singida Rural	Sayari oil mill - service	Mr. Martib Churi	Micro
Singida	Singida Urban	Star oil mill	Abdallah Omar Ally	Micro
Singida	Singida Urban	Seif Oil service	Mohamed Seif	Micro
Singida	Singida Urban	Badra oil mill - service	Gaid Hussein Ally	Micro
Singida	Singida Urban	Lake side oil mill - service	Hussein Ally Gaid	Micro
Singida	Singida Urban	Rafiki Oil mill - service	Mahamood Ramadhan Akuu	Micro
Singida	Singida Urban	Singida Fresh oil mill (pre-pack)	Mr. Abdallay Ally	Small
Singida	Singida Urban	Afya Brop oil mill	Khalid Ally	Micro

Singida	Singida Urban	Masha oil mill - service	Hussein Magi Mohamed	Micro
Singida	Singida Urban	Singida Sunshine oil mill	Salum Khalfan	Micro
Tabora	Tabora Urban	Tumbi women group	Women group	Micro
Tabora	Nzega	Mponya Sembe	Rasul K. Ashraf	Small
Tabora	Sikonge	Umima group (women)	Women group	Micro
Tabora	Tabora Rural	Mkombozi group	Mwanaidi	Micro
Tabora	Tabora Rural	Isenga group		Micro
Tabora	Sikonge	Azimio group	Women group	Micro
Tabora	Nzega	Tandale Rice Milling	Jamila Shabutu	Micro
Tabora	Nzega	Mponya Rice mill	Rasul K. Ashraf	Small
Tabora	Tabora Rural	Igembe Nsawo	Juliana	Micro
Tabora	Tabora Rural	Elimika group	Group chairperson (Asia Ally)	Micro
Tabora	Tabora Rural	Vumilia group	Tartu Bakari	Micro
Tabora	Sikonge	Igunga Oil Mill	Farouk Hamoud	Medium
Tabora	Nzega	Mponya Rice milling	Rasul K. Ashraf	Micro
Tabora	Tabora Urban	New Tabora Dairy Plant	Tanzania Christian Farm Development trust	Small
Tabora	Sikonge	Mesina Oil mill (Sundlower)		Micro
Tabora	Urambo	Peter Bakery	Peter G. Chokala	Micro
Tabora	Urambo	Royal Bakery	Mohamed I. Shirwah	Micro
Tabora	Tabora Urban	Pentagon Ice cream & Bakery	Kruthum Dewji	Micro
Tabora	Tabora Urban	Riyadh Bakery	Riyadh	Small
Tabora	Tabora Urban	Ndevelwa farm Produce	Godon Makomiki	Micro
Tabora	Sikonge	Yatakamoyo	Women group - Yatakamoyo	Micro
Tanga	Lushoto	Usambara Spring water Co. Ltd		Small
Tanga	Tanga Urban	Tanga Fresh	TDCU & Frisania Investors	Medium
Tanga	Muheza	East Usambara tea co. ltd	East Usambara Tea Co. Ltd	Large
Tanga	Muheza	Bombay Baahra Trading Co. Ltd (maarvera estate)		Medium
Tanga	Muheza	Muwamu (Muungano wa wasindika vyakula Muheza)	Wasindikaji wa mboga na matunda	Micro
Tanga	Lushoto	Natural Choice Co. Ltd	E.S.Mbando	Medium

Tanga	Lushoto	Usambara Spring water Co. Ltd	Henry Dafa Shekifu	Medium
Tanga	Lushoto	Luponde Tea Factory		Medium
Tanga	Lushoto	Natural Choice Co. Ltd	E.S. Mbando	Small
Tanga	Tanga Urban	Tanga Mofern Bakery	Salim Said	Medium
Tanga	Tanga Urban	M.H. Bakery (Hassan Hussein Musa)	Mahmood Hussein	Small
Tanga	Tanga Urban	Ammy Dairies Ltd (Ammy Brothers & Co)	Mariam Ally Shekue	Small
Tanga	Korogwe	Dindira Tea Factory	George Williamson (T) Ltd	Medium
Tanga	Tanga Urban	Internation Food Procesors Ltd	Mr. Aly E. Awadh	Medium
Tanga	Tanga Urban	International Food pakcers Ltd	Company	Medium
Tanga	Tanga Urban	Wheat milling plant	Pembe Flour Mills Ltd	Large
Tanga	Tanga Urban	Hussein Salt Work (2002)	Shabir Gulamabbas T/A Gussein	Small
Tanga	Tanga Urban	Nuru Enterprises Ltd	Abdu Sharif Nuru	Medium
Tanga	Tanga Urban	Sea Product Tanga	Erick Allard	Medium
Tanga	Tanga Urban	G. Tayebji Soda factory	Partnership	Small
Tanga	Korogwe	Ambaangulu Estates Ltd	George William (T) Ltd	Medium
Tanga	Tanga Urban	Anjari Soda Factory (T) (Tanga)	Esmail A. Anjari ET others	Medium