
UNIT- 14 VOLUNTARY NATIONAL STANDARDS

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14.0 OBJECTIVES

Through this chapter we shall learn about:

- The utility of Voluntary Standards in providing quality assurance in regard to Food & Agricultural Products;
- As to how the "AGMARK" System of Quality Certification and the BIS Certification Mark or ISI Certification Mark proved consumer friendly;
- As to how successfully is process of Quality Control & Grading through AP(G&M) Act or BIS Act carried out?
- Need to obtain 'Certificate of Authorization' under AP(G&M) Act or a 'License' under BIS Act;
- The procedure for Quality Certification or Quality Assurance under AP(G&M) Act and BIS Act undertaken;
- The pivotal role of Laboratories in quality control to establish that food or agricultural commodities are pure and of quality and safe for human consumption OR otherwise commodities need to be rejected.

- The procedure of Grading under AGMARK and Certification under BIS of food & agricultural commodities and respective Certification Marks.

14.1 INTRODUCTION

A number of organizations at national level are engaged in the formulation of grade standards for food & agricultural commodities and monitoring their quality parameters. These are basically classified as: (1) Mandatory and (2) Voluntary. The mandatory provisions are implemented through a number of legislative measures as provided under the respective Acts/Rules. Under the voluntary system two main organizations are engaged i.e. Directorate of Marketing & Inspection through Agricultural Produce (Grading & Marking) Act, 1937 {AP (G&M) Act} popularly known as "AGMARK" System of Quality Control and the other is Bureau of Indian Standards through Bureau of Indian Standards Act, 1986 (BIS Act) popularly known as BIS. BIS was earlier known as "ISI" (Indian Standard Institution). Apart from these two organizations under the present concept of self-quality assurance certification system, many other agencies have also been authorized to certify the quality of products. It is obligatory on the part of every Government to ensure that the quality of commodities supplied to its citizens is certified for its wholesomeness. The grading and quality control of commodities also protects the producer or processor from exploitation and strengthens his price bargaining position. Needless to mention that grading and certification protects the consumer by ensuring purity, quality and safety of the food & agricultural products.

Both these quality control systems namely; "AGMARK" & BIS /ISI work almost in the similar pattern. The AP (G&M) Act requires the Producer/Processor/Manufacturer desirous to grade and mark his products under the 'Certification Mark' (AGMARK) to obtain 'Certificate of Authorization' as per prescribed terms and conditions. The approved chemist of the approved laboratory takes representative sample from the lot for the purpose of its analysis. After the sample is found conforming to the prescribed standards, it is certified for grading and packaging and marking is carried out in prescribed manner. The BIS Act enables the licensed manufactures having requisite production and testing facilities or willing to avail such facility from BIS Laboratory to use the Mark on their products if the commodity is found conforming to the specifications laid therein. In this context it is worthwhile to mention that enough stress should be laid on the basic requirements for enforcing quality control in internal trade. A network of well equipped laboratories to carry out necessary quality control analysis and grading of food & agricultural articles efficiently needs to be developed. The present day view is that National standards should be aligned with International standards for giving impetus not only to exports but for internal trade in food & agricultural commodities. Though the developing countries like ours have now become much conscious of the economic growth they need, yet they have to ensure that their standards are fully comparable with international standards to gain economic advantage in the world market. It is, therefore, necessary to harmonize the national standards with international standards (Codex). The newly created Food Safety Authority of India should create necessary infrastructural facilities to attain this objective.

It is also to be realized that under the present quality control system, it is not only necessary to standardize a product, but also the standardization of inspection techniques, test procedures, sampling techniques, packaging materials and other processes. All these measures are necessary to enable successful marketing of a product up to the satisfaction of consumer acceptability. The process of standardization has in fact to start right from the production level up to the entire process till the product is marketed and consumed. The mechanism of grading and standardization is a continuous process and the same needs constant review and improvements depending upon the technological changes and requirements. Standards are dynamic and need to be revised periodically taking into account development of new varieties of various agricultural commodities and technological developments.

14.2 BUREAU OF INDIAN STANDARDS

The Bureau of Indian Standards Act, 1986 was enacted by the Ministry of Consumer Affairs, Food & Public Distribution Government of India. The Bureau of Indian Standards Act, 1986 popularly known as “BIS” has specified a Standard Mark to be called the Bureau of Indian Standards Certification Mark which is of an approved design and contains such particulars as are prescribed to represent a particular Indian Standard. It was earlier known as “ISI” [under Indian Standard Institution (Certification Mark) Act, 1952)] which also continues to be a recognized Mark (ISI Mark) under the BIS Act. This Act is based on the concept of self-quality assurance certification system. The BIS Act enables the licensed manufactures having requisite production and testing facilities or willing to avail such facility from BIS Laboratory to use the Mark on their products if the commodity conforms to the specifications laid therein. Under the present concept of self-quality assurance certification system, many other agencies have also been authorized by the Bureau to certify the quality of a product. BIS Certification Mark has the following design:



Bureau of Indian Standards, the National Standards Body of India, is entrusted with the task of formulating national standards in various technology areas. These standards are formulated through various Sectional committees, Subcommittees & Adhoc Panels. To ensure that consumer interests are effectively represented in these technical committees, BIS invites offers from NGOs and consumer activists to send their particulars and areas of interest in which they will like to participate to the Head of the nearest BIS Regional or Branch Office. The addresses of BIS Offices are available on the BIS website. Depending on the technical expertise and experience of the interested parties, BIS considers providing appropriate representation in the relevant Technical Committees. Bureau has been empowered to constitute, following ‘Advisory Committees’ besides other committees for the efficient discharge of its various functions, namely:-

- a. Certification Advisory Committee;
- b. Standards Advisory Committee;
- c. Laboratory Advisory Committee;
- d. Planning and Development Advisory Committee;

The following important definitions as contained under this Act are reproduced here to help you understand the various activities of Bureau of Indian Standards:

"Indian Standards Institution" means the Indian Standards Institution set up under the Resolution of the Government of India in the former Department of Industries and Supplies No. 1 Std.(4)/45, dated the 3rd day of September, 1946. It is registered under the Societies Registration Act, 1860;

"Indian Standard" means the standard (including any tentative or provisional standard) established and published by the Bureau, in relation to any article or process indicative of the quality and specification of such article or process and includes –

- I) any standard recognized by the Bureau; and
- II) any standard established and published, or recognized, by the Indian Standards Institution and which has been in force, immediately before the date of establishment of the Bureau of Indian Standard;

"Specification" means a description of an article or process as far as practicable by reference to its nature, quality, strength, purity, composition, quantity, dimensions, weight, grade, durability, origin, age, material, mode of manufacture or other characteristics to distinguish it from any other article or process;

"Standard Mark" means the Bureau of Indian Standards Certification Mark specified by the Bureau to represent a particular Indian Standard and also includes any Indian Standards Institution Certification Mark specified by the Indian Standards Institution;

"Trade mark" means a mark used or proposed to be used in relation to goods for the purpose of indicating, or so as to indicate, a connection in the course of trade between the goods and some person having the right, either as proprietor or as registered user, to use the mark, whether with or without any indication of the identity of that person;

[An article is said to be marked with a 'Standard Mark' if the article itself is marked with a Standard Mark or any covering containing, or label attached to, such article has been so marked].

14.2.1 LICENSE UNDER BIS TO USE ISI CERTIFICATION MARK

"Licence" under this Act means a licence granted under this Act to use the Indian Standards Certification Mark in relation to any article or process which conforms to the Indian Standard and includes any licence granted under the Indian Standards

Institution (Certification Marks) Act, 1952 and is in force immediately before the date of establishment of the Bureau of Indian Standards (BIS):

- The Bureau may, by order, grant, renew, suspend or cancel a licence in such manner as laid under regulations.
- The grant or renewal of the licence under the relevant sub-section shall be subject to conditions and on payment of fees as prescribed under the regulations.

14.2.2 POWERS AND FUNCTIONS OF BUREAU OF INDIAN STANDARDS

The 'Bureau' may exercise such powers and perform such duties as are assigned to it by or under this Act and, in particular, such powers include the power to -

- establish, publish and promote the Indian Standard, in relation to any article or process in such manner as may be prescribed;
- recognize as an Indian Standard, any standard established by any other Institution in India or elsewhere, in relation to any article or process, in such manner as may be prescribed;
- specify a Standard Mark to be called the 'Bureau of Indian Standards Certification Mark' which shall be of such design and contain such particulars as may be prescribed to represent a particular Indian Standard;
- grant, renew, suspend or cancel a licence for the use of the Standard Mark;
- levy fees for the grant or renewal of any licence;
- make such inspection and take such samples of any material or substance as may be necessary to see whether any article or process in relation to which the Standard Mark has been used, conforms to the Indian Standard or whether the Standard Mark has been improperly used in relation to any article or process with or without a licence;
- seek recognition of the Bureau and of the Indian Standards outside India on such terms and conditions as may be mutually agreed upon by the Bureau with any corresponding institution or organization in any country;
- establish, maintain and recognize laboratories for the purposes of standardization and quality control and for such other purposes as may be prescribed;
- undertake research for the formulation of Indian Standards in the interests of consumers and manufacturers;
- recognize any institution in India or outside which is engaged in the standardization of any article or process or the improvement of the quality of any article or process;
- provide services to manufacturers and consumers of articles or processes on such terms and conditions as may be mutually agreed upon;
- appoint agents in India or outside India for the inspection, testing and such other purposes as may be prescribed;
- establish branches, offices or agencies in India or outside;
- inspect any article or process, at such times and at such places as may be prescribed in relation to which the Standard Mark is used or which is

required to conform to the Indian Standard by this Act or under any other law irrespective of whether such article or process is in India or is brought or intended to be brought into India from a place outside India;

- coordinate activities of any manufacturer or association of manufacturers or consumers engaged in standardization and in the improvement of the quality of any article or process or in the implementation of any quality control activities;
- Perform such other functions as may be prescribed.

14.2.2 ESTABLISHMENT, PUBLICATION AND PROMOTION OF INDIAN STANDARDS

(1) Establishment -

a) The Bureau may establish Indian Standards in relation to any article or process and may amend, revise or cancel the standards so established as may be necessary, by a process of consultation with consumers, manufacturers, technologists, scientists and officials through duly constituted committees as provided therein.

[Provided, that any Indian Standard established by the “Indian Standards Institution” at any time before the date on which the BIS Act, the Rules and Regulations came into force, may deemed to have been established under the provisions of the Act, the Rules and the Regulations.]

b). All standards, their revisions, amendments and cancellations are established by notification in the Official Gazette.

(2) Technical Committees -

a). For the purpose of formulation of Indian Standards in respect of articles or processes; technical committees of experts have been constituted. Such committees include experts from Division Councils, Sectional Committees, Subcommittees and Panels.

b). Division Councils, Sectional Committees and Sub-committees are reconstituted once every three years. The tenure of Panels may be decided by the concerned Sectional Committee.

(3) Division Councils

a). Division Councils are set up by the Bureau in defined areas of industries and technologies for formulation of standards. These include concerned officers of the Bureau and representatives of various interests such as consumers, regulatory and other Government bodies, industry, scientists, technologists and testing organizations. These may also include consultants. An officer of the Bureau is the Member Secretary.

Major functions of a Division Council are as follows:

To advise on the subject areas to be taken up for formulation of standards in their

respective areas keeping in view the national needs and priorities;

- I. To set up Sectional Committees within their areas, define their scopes, appoint their Chairmen and members and coordinate their activities;
- II. To approve proposals for work, decide which of the proposals should be taken up and direct the Sectional Committee(s) concerned to undertake the approved work and to determine the priority to be assigned to the work.
- III. To advise on matters relating to research and development needed for the establishment of standards or their revisions;
- IV. To study the work of international organizations and their committees in standards formulation as related to the area of work of the Division Council and recommend on the extent and manner of participation in standardization activities at the international level;
- V. To advise on implementation of established standards;
- VI. To receive and deal with activity reports and to make recommendations thereon to the Bureau concerning matters in which the decision of the Bureau is necessary;
- VII. To carry out such tasks as may be specifically referred to it by the Bureau/Standards Advisory Committee.

(4) Sectional Committees, Subcommittees and Panels -

- a. Sectional Committees are appointed by Divisional Councils or if necessary by the Bureau for the preparation of a particular standard or group of standards. These include concerned officers of the Bureau and representatives of various interests such as consumers, regulatory and other Government bodies, industry, scientists, technologists and testing organizations and may also include consultants, but consumer interests shall, as far as possible, predominate.
- b. A Sectional Committee may appoint subcommittees and/or panels.
- c. Sectional Committees, subcommittees and panels may co-opt experts to assist them in the work of standardization.

(5) Procedure for Establishment of Indian Standards

- a. Any Ministry of the Central Government, State Governments, Union Territory Administrations, consumer organizations, industrial units, industry-associations, professional bodies & members of the Bureau and members of its technical committees may submit proposals to the Bureau for establishing a standard or for revising, amending, or canceling an established standard by making such request in writing.
- b. The work of formulation of standards on any specific subject is undertaken when the Division Council concerned is satisfied as a result of its own deliberations or on investigation and consultation with concerned interests that the necessity for standardization has been established.

- c. When the subject has been investigated and the need established, the Division Council concerned assigns the task of formulating the standard to an appropriate Technical Committee or may appoint a new Technical Committee for the purpose.
- d. When request for establishing a standard for any specific subject has not been accepted after its due consideration, the person who proposes is informed of the decision.
- e. A draft standard prepared and duly approved by a Committee is issued in 'draft form' and widely circulated for a period of not less than one month amongst the various interests concerned for critical review and suggestions for improvement. The wide circulation may be waived if so decided by the Sectional Committee where the matter is urgent or non-controversial.
- f. The appropriate Technical Committee, thereafter finalize the draft standard giving due consideration to the comments that may be received. The draft standard after it has been approved by the Sectional Committee or its Chairman; is submitted to the Chairman of the Division Council concerned for adoption on its behalf.
- g. All established standards are reviewed periodically, at least once in five years, to determine the need for revision or withdrawal. Standards which in the opinion of the Sectional Committee need no revision or amendment are reaffirmed by the Sectional Committee.
- h. Proposals for revising or amending published standards, is considered by the Technical Committee concerned. The revision or amendment is then dealt with in accordance with the relevant clauses of Rule 6, dealing with the establishment of Indian Standards.
- i. The Director General, however, have the power to issue amendments of the corrigenda type meant to correct errors and omissions in established Indian Standards, without referring to the concerned Technical Committee or the Division Council and report to the concerned Technical Committee.
- j. The Director General also have the power to tentatively modify such of the provisions of an Indian Standard as in his view are necessary for expeditious fulfillment of any of the objectives of the Act. [Provided, that within six months of such actions; concurrence of the concerned Sectional Committee is duly obtained.]
- k. Withdrawal of an established Indian Standard is decided upon by the Chairman of the respective Division Council on the recommendation of the Sectional Committee concerned.

(6) Status of Indian Standards -

- a. The procedure employed in establishing Indian Standards is designed to ensure that all interested parties have an opportunity to put forward their views, that a consensus has been obtained on the contents of the standards and that there is substantial support for the standards.
- b. Indian Standards are voluntary and available to the public. Their implementation depends on adoption by concerned parties. However, an Indian Standard becomes binding if it is stipulated in a contract or referred to in legislation or made mandatory by specific orders of the Government.

(7) Publication - The Indian Standards established by the Bureau, their revisions and amendments are published and copies thereof, in any form as may be determined by the Bureau, are made available for sale.

14.2.4 ESTABLISHMENT AND RECOGNITION OF LABORATORIES

(1) Functions of Laboratories established and maintained by the Bureau –

- carry out testing of samples in relation to the use of the Standard Mark;
- carry out Research and Development investigations or testing for collecting data for evolving and revising Indian Standards and for quality assessment studies;
- provide support services to industries for quality improvement on such terms and conditions to be laid down by the Bureau from time to time;
- Carry out such other functions as may be necessary to fulfill the objectives of the Bureau.

(2) (a) The Bureau may recognize any laboratory in India or in any other country for carrying out testing of samples in relation to use of the Standard Mark and such other functions as may be necessary. In case any laboratory after recognition ceases to fulfill any conditions laid down at the time of recognition, it shall be liable to be de-recognized by the Bureau. The guidelines for recognition and de-recognition of laboratories have been laid down by the Bureau.

(b) Registration of Recognized Laboratories - The Bureau maintains a register of such laboratories as are recognized by it for testing samples of articles or processes in relation to the relevant Indian Standards.

“The Ministry of Commerce, Government of India, being the nodal ministry for World Trade Organization (WTO) matters, has designated ‘Bureau of Indian Standards’ as the WTO TBT (Technical Barriers to Trade) Enquiry Point for India.”

14.2.5 FOOD SAFETY MANAGEMENT SYSTEMS (FSMS) CERTIFICATION SCHEME

FSMS for Safe Food Supply Chains:

Food Safety is related to the presence of food borne hazards in food at the point of consumption. Food reaches the consumers via supply chains that may link many different types of organizations. A single weak link can result in unsafe food that is dangerous to health. As food safety hazards can occur in the food chain at any stage, adequate control throughout the supply chain is essential. Therefore, food safety is a joint responsibility of all organizations within the food chain including; producers, manufactures, transport & storage operators, sub contractors, retail and food service outlets and service providers.

Recent studies have shown that there is significant increase of illnesses caused by infected food in both developed and developing countries which give rise to considerable economic costs besides being health hazards. The need for establishing a food safety management system by all types of organizations within the food chain has been necessitated due to the following :

- Increased international acceptance of food products
- Reduces risk of product/service liability claims
- Satisfies customer contractual requirements
- Ensures safety of food products
- Greater health protection
- Demonstrations conformance to international standards and applicable regulatory requirements
- Helps to meet applicable food safety related statutory & regulatory requirements
- Ensures to compete effectively in national and international markets

International Organization for Standardization (ISO) has published ISO 22000:2005 - Food Safety Management Systems [FSMS] – Requirements for any Organization in the Food Chain, with a view to provide framework for internationally harmonized requirements for systematically managing safety in food supply chains. Consequent to publication of ISO 22000; BIS has adopted this International Standard as IS/ISO 22000:2005. This standard integrates the principles of Hazard Analysis and Critical Control Point (HACCP) system developed by Codex Alimentarius Commission and combines the HACCP plan with Prerequisite Programme (s) (PRPs) and is fully compatible with Quality Management Systems (QMS) as per ISO 9001: 2000.

Hazard Analysis & Critical Control Point (HACCP) ISO 15000 is a process control system designed to identify and prevent microbial and other hazards in food production. HACCP includes steps designed to prevent problems before they occur and to correct deviations through a systematic way as soon as they are detected.

The ISO 22000:2005 standard outlines Food Safety Management System Requirements for any organization in the food chain, and is one of a family of standards focused at the development, implementation and improvement of a food safety management system.

BIS has launched Food Safety Management Systems (FSMS) Certification IS/ISO 22000:2005 scheme which envisages grant of FSMS Certification licence to organizations according to IS/ISO 22000 Standards.

14.2.6 APPLICABILITY OF BUREAU OF INDIAN STANDARDS UNDER PFA ACT

PFA Act/Rules restrict the sale of certain specified foods or use of ingredients or

food additives or 'Food Grade' Plastic Materials, except under ISI (Indian Standards Institution Certification Mark). Some of these are as under:

- As contained under Rule 49 (5) of PFA Act, they include: Containers made of 'Plastic Material' used as appliances or receptacles for packing or storing food articles; Containers made of Aluminum or Aluminum Alloy for utensils;
- Food Additives as specified under Rule 48 (C) of PFA Act;
- Foods or Food Ingredients: Rule 49: [8 (Titanium Dioxide), 11(Lactic Acid), 16(Condensed Milk & Milk Powder), 17 (Mineral Oil Food Grade), 19 (Infant Foods & Baby Foods), 28 (Packaged Drinking Water), 29 (Packaged Mineral Water), 30 (Tin Plates to be used for manufacture of Tin Containers)] of PFA Act, 1955;

CHECK YOUR PROGRESS EXERCISE 1

1. What is BIS Standards Mark known as?

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2. What do you understand by specifications?

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3. How will you define 'Trade Mark' under BIS Act?

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4. How is a 'license' defined under BIS Act?

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5. What is the need of inspection to be carried out under BIS Act?

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6. What do you understand by 'Technical Committee' under BIS Act?

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7. What for is the 'Division Council' set up under BIS?

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8. Why a License is required under BIS Act?

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9. What do you understand by 'Draft Standard'?

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10. What do you understand by recognition of Labs under BIS Provisions?

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14.3 AGMARK [AP (G&M) ACT, 1937]

In India, several Acts and Orders are in force for implementation with a view to protect the consumer against adulteration and unfair practices. The starting point of quality control in India was the enactment of Agricultural Produce (Grading & Marking) Act, 1937 [AP(G&M) Act, 1937].

Agricultural Produce (Grading & Marking) Act, 1937 provides for the grading and marking of agricultural and other produce. The Act empowers the Central Government to make Rules for :

- (a) fixing grade designations to indicate quality of any scheduled article.
- (b) defining the quality indicated by every grade designation, and
- (c) specifying grade designation marks to represent particular grade designation.

As per provision in Section 3 of the Act, General Grading and Marking Rules, 1988 are notified in which the detailed procedures for grant of Certificate of Authorisation, setting up of laboratories, issue of Certificate of Agmark Grading, action on irregularities, consumer protection measures, etc. are given. As on date, 105 specific Commodity Grading & Marking Rules covering 197 commodities are notified which provide information on commodity specific requirements relating to hygienic aspects, packaging, labeling and grade standards based on quality parameters.

Grade standards notified as per the provisions of the Act are popularly called **AGMARK** Standards. These standards differentiate between quality and 2-3 grades are prescribed for each commodity. Different grades are prescribed based on intrinsic quality of the agricultural commodities and various other parameters related to cleanliness, extraneous matter, active components, etc. Grades help farmers/traders to get prices for agricultural commodities commensurate with the quality produced by them. Consumers get the produce of the quality desired by them. Till date, grade standards for 197 agricultural commodities have been notified. These include cereals, pulses, oilseeds, fruits and vegetables, creamery

butter & ghee, vegetable oils, spices, honey, wheat atta, besan, etc. List of commodities for which grade standards are prescribed and their details can be had from the Agmark website.

Directorate of Marketing & Inspection (DMI) in the Department of Agriculture & Cooperation, Ministry of Agriculture, Government of India is implementing the provisions of the Act.

14.3.1 STANDARDIZATION AND GRADING OF AGRICULTURAL COMMODITIES.

Grading provides description of the quality of the consignment and assists in the formation of a legally binding agreement. It facilitates proper marketing of agricultural commodities. It also ensures that agricultural commodities move through the market faster and without obstructions. This also facilitates transactions without physical verification by the distant buyers.

Advantages of Grading

- It brings confidence between the buyer and the seller.
- It facilitates interstate and international marketing.
- Disputes in the market can be solved amicably.
- Stability of the price is ensured.
- Farmers can take loans easily from the banks on the basis of grades of produce stored in the godown
- Arbitrary fixation of price by middlemen is eliminated.
- Brings about improvement of the crop.
- Reduces risk of producer and seller in transactions.
- Future marketing is facilitated. Grades become a commercial measure of quality.
- It also helps in implementation of contract farming.

14.3.2 Formulation of Grade Standards

Framing of standards of agricultural commodities is a complex process. There are hundreds of varieties of an agricultural commodity being grown in varied agro climatic conditions. As such, there are wide variations in physical and chemical parameters. Standards of agricultural commodities are framed in a scientific way. Basically it involves the following steps.

- (i) Agricultural commodity for which grade standards are to be framed is selected keeping in view national priority, necessity and demand.
- (ii) A sampling plan is prepared based on the areas in which the commodity is grown, processed and traded.
- (iii) Physical and chemical parameters to determine the purity and quality of the commodity are identified.

- (iv) Samples of the commodity are collected by the field offices from growing areas, whole sale and retail markets as per the sampling plan.
- (v) The samples are analysed in the Regional Agmark Laboratories and Central Agmark Laboratory for the identified parameters.
- (vi) Analytical data obtained is statistically analysed and Central Agmark Laboratory suggests the limits of various quality parameters for different grades.
- (vii) The specifications of the commodity prescribed in Prevention of Food Adulteration Rules, 1955 and international standards viz. Codex Alimentarius Commission, ISO, etc. are consulted.
- (viii) The relevant Committee on Agmark standards discusses the draft standards with trade, industry and consumer organizations.
- (xi) Preliminary Grading & Marking Rules for the Commodity are drafted and are vetted by the Ministry of Law & Justice, translated into Hindi and published in the Gazette of India for inviting comments and suggestions from all stake holders.
- (x) The comments/suggestions received are considered and final notification is drafted, vetted by the Ministry of Law & Justice, translated into Hindi and published in the Gazette of India.

Following Commodities on Agmark standards have been constituted :

1. Foodgrains and Allied Products.
2. Oils Seeds, Vegetable Oils & Dairy Products.
3. Essential Oils.
4. Spices and Condiments.
5. Fruits and Vegetables.
6. Other Commodities.

14.3.3 GRADING AND CERTIFICATION of AGRICULTURAL COMMODITIES

The grading activities are directed for the benefit of farmers and consumers while it also helps the traders in an efficient movement of the produce from the producers to the consumers. Promotion of standardization and grading of agricultural and allied produce is one of the important activities of the Directorate of Marketing & Inspection. The Directorate promotes standardization & grading and implements scheme of certification of agricultural and allied products for orderly marketing under the provisions of Agricultural Produce (Grading & Marking) Act, 1937 as amended in 1986. Grading is carried out in accordance with the standards notified and by following the established practices and procedures and as per the instructions issued under the provisions of the Act and Rules. It serves a means of describing the quality of commodities to be purchased or sold by the buyers or sellers all over the country and abroad. This also establishes a common trade language and avoids the need for physical checking and handling at many points. The system of grading and certification benefits both the sellers and buyers in view of the fact that the producer get the price commensurate with the quality produced by him and consumer gets a quality product in turn of money spent.

Grading and certification activities can be broadly classified into

- (i) Grading and Certification for Internal Trade
- (ii) Grading and Certification for Exports.

14.3.4 GRADING AND CERTIFICATION FOR INTERNAL TRADE.

The scheme for certification of agricultural commodities is **voluntary** except for blended edible vegetable oils and fat spread. Certification under AGMARK is mandatory for these commodities as per provisions in the Prevention of Food Adulteration Rules, 1955. The parties desirous of certifying an agricultural commodity under Agmark should have hygienic premises, necessary infrastructure to process and pack the commodity and access to a well equipped laboratory for the estimation of prescribed parameters. They can either have their own laboratory or get attached with the State Grading Laboratory or Commercial Laboratory approved by the DMI for grading and marking of the commodities. There are more than one thousand approved laboratories in the country to attend to grading and marking. The Chemist of the laboratory is trained in one of the Regional Agmark Laboratories (RALs) and is approved for carrying out grading and marking. Certificate of Authorisation (C.A) is granted to such parties on their request after they submit the required documents and their capacity to process and pack the commodity is ascertained. The approved Chemist of the C.A. holder analyses the raw material and the processed commodity for determining the grade standard and gets it packed in his presence. Inspecting Officers of DMI frequently visit the authorised premises for carrying out inspections and draw check samples which are analysed in the RALs for ascertaining their conformance with the prescribed standards. Check samples are also drawn from the market and analysed in RALs.

There are more than six thousand Certificate of Authorisation holders throughout the country. These Certificate of Authorisation holders grade and mark the agricultural commodity through the laboratories approved for the purpose.

Vegetable oils, ghee, honey, creamery butter, spices, wheat atta, suji, maida, besan, etc. popularly graded and certified under AGMARK for domestic trade. Agmark certified products are pre-tested in the laboratories of the authorized packers as per the prescribed standards.

LABELING REQUIREMENTS ON AGMARK CERTIFIED PRODUCTS.

All products certified under Agmark should have Agmark insignia and following details printed on them.

- (i) Name and address of the authorised packer
- (ii) Name of the commodity
- (iii) Grade
- (iv) Lot/Batch/TF No.
- (v) Date of packing.
- (vi) Best Before Date
- (vii) Net Weight /Volume.
- (viii) Maximum Retail Price.

(ix) List of ingredients in descending order of their wt. (in case of mixed spices, etc).

Design of Agmark insignia.



14.3.5 GRADING AND CERTIFICATION FOR EXPORTS

DMI is attending to certification of many agricultural commodities for exports. Essential oils and fruits and vegetables are important. European Commission has approved the conformity checking operations of DMI for pre shipment inspection for export of fresh Fruits and Vegetables to EU countries. Agricultural Marketing Adviser has been notified as Official Authority and DMI as inspection body for the purpose. Inspection and certification is **voluntary**. DMI is attending to certification of fruits and vegetables for exports through approved laboratories. Grapes and onions are being certified for exports. The certification involves conformance to grade standards prescribed in Fruits and Vegetables Grading and Marking Rules, 2004. The food safety parameters viz. residues of pesticides, heavy metals, etc. are required to be conformed to those specified in Codex Alimentarius Commission or importing countries requirements.

14.3.6 INFRASTRUCTURE FOR THE CERTIFICATION PROGRAMMES

DMI is headed by Agricultural Marketing Adviser to the Government of India. DMI has head quarters at Faridabad and 11 Regional Offices and 26 Sub-offices spread all over the country to implement the certification programme. Head Office at Faridabad attends to the policy matters and framing/revision of standards. 11 RALs spread all over the country provide analytical support for the analysis of research samples and check samples drawn from the authorized packers' premises and market. These RALs analyse private samples also received from any stake holder on payment basis. Central Agmark Laboratory at Nagpur is the apex laboratory. There are three Cotton Classing Centers, one each at Abohar, Surat and Nagpur. Cotton Classing Centers provide services for the benefit of cotton growers and their cooperatives, ginning and pressing cooperatives, federations, etc. These Centers provide cotton sample testing facilities to farmers and their cooperatives free of cost for testing different quality parameters. These Centers also provide training in Kapas grading to the personnel sponsored by Government, Semi Govt. organizations, Cooperatives and other Institutions.

14.3.7 ROLE OF CENTRAL AGMARK LABORATORY & REGIONAL AGMARK LABORATORIES

Directorate of Marketing & Inspection responsible for Agmark quality control system has set up 11 Regional Agmark Laboratories [RAL(s)] spread all over the country. The Central Agmark Laboratory (CAL) at Nagpur is the apex laboratory. These RAL(s) are assigned to carry out the following important functions:

- (i) Analysis of research samples of agricultural commodities for framing their standards
- (ii) Analysis of check samples of Agmark certified commodities for ensuring conformance with prescribed standards.
- (iii) Training to the chemists of authorised packers/approved laboratories in the grading of agricultural commodities.

CAL, Nagpur works as the apex laboratory and is primarily engaged in research activities and in association with RAL (s) also undertakes to a) evolve new methods and standardize the already existing methods of analysis / tests of food & agricultural commodities including meat products; b) formulation of specifications for new commodities for bringing under the purview of Agmark and c) revision of Specifications of various commodities i.e. agricultural & food products including meat products etc, d) create awareness amongst consumers and traders with regard to grading, standardization and quality of various food & agricultural products.

14.3.8 APPLICABILITY OF AGMARK STANDARDS UNDER PFA ACT

AGMARK provisions are made applicable in the following items under PFA Rules:

A. Rule 15 of PFA: In case of a sample of food which has been taken by the Food Inspector from AGMARK sealed container, the label on the Sample container shall also bear the following additional information

- (a) Grade;
- (b) AGMARK Label No./Batch No.;
- (c) Name of Packing Station.

B. Rule 44B of PFA: The Ghee having less Reichert Value (An analytical parameter) and a different standard for Butyro- Refractometer Reading at 40°C (An analytical parameter) than that has been specified for the Area from which it is brought for sale or storage; shall not be stored or sold except under the 'AGMARK' seal.

C. Rule 44C of PFA: Til Oil obtained from white Sesame seeds grown in Tripura, Assam & West Bengal having different standards than those specified for Til oil shall be sold only in sealed containers bearing AGMARK label/seal.

D. Rule 44E of PFA: Kangra Tea shall be sold or offered for sale only if it is graded and marked in accordance with provisions under APGM Act, 1973 and

rules made there under. It shall be sold in sealed packages/containers bearing Agmark Seal.

E. Rule 49 (21): Blended Edible Vegetable Oils shall be sold only in sealed packages weighing not more than 5kg and shall bear AGMARK seal in accordance with the provisions under APGM Act1937;

F. Rule 49 (23): The Fat spread shall be sold in only sealed packages weighing not more than 500g and shall bear AGMARK seal in accordance with provisions under APGM Act1937;

Check Your Progress Exercise 2

11) What for does the AP(G&M) Act empower the Central Government?

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12) Which are the commodities popularly graded and marked under AP(G&M) Act?

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13) Why does DMI promote Grading and Standardization?

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14) What do you understand by 'Standardization' under this Act?

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15) Mention two advantages of Grading?

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16) What do you know about 'Certificate of Authorization' under this Act?

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17) What do you mean by Grading and certification for Internal Trade under this Act?

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18) For which commodities European Commission has approved the conformity checking operations of DMI for preshipment inspection?

19) How are the Grading and Certification activities beneficial to farmers, processors and consumers?

20) How are the standards of agricultural commodities framed under Agmark?

14.4 LET US SUM UP

The implementation of 'voluntary standards' under AP(G&M) Act, 1937 as well as BIS Act, 1986 are a great leap towards quality control assurance measures available to the consumer. These standards help provide the consumer the quality products of his choice, for which he aspires for. AP(G&M) Act, 1937 has empowered the Central Government to prescribe the grade standards for agricultural commodities, food products and livestock products which stipulate conditions governing the use of standards. The implementation of this programme has enabled the Directorate of Marketing & Inspection (DMI) to provide 'AGMARK' certified products readily available in the market. These products are certified for their quality and purity. Any person desirous of being authorized to grade and mark an article under this Act has to obtain 'Certificate of Authorization' from the office of DMI as per procedure laid. The Laboratory services of DMI play pivotal role by being a competent part of Quality Assurance System. Central Agmark Laboratory besides working as an Apex Laboratory in association with Regional Agmark Laboratories carries out research work on food & agricultural commodities for quality certification. CAL, Nagpur in assistance with RAL(s) undertakes to: a) evolve new methods and standardizing already existing methods of analysis / tests of food & agricultural commodities including meat products; b) formulation of specifications for new commodities for bringing them under the purview of AGMARK c) revision of specifications of various commodities i.e. agricultural & food products, meat products etc periodically d) create awareness amongst consumers and traders with regard to grading, standardization and quality of various food & agricultural products. Bureau of Indian Standards (BIS) attends to product and process certification. Licence under this Act may be obtained for the use of the Bureau of Indian Standards Certification Mark in respect of any article or process which conforms to the Indian Standards. Inspection is carried out and samples are taken of any such material or substance as may be necessary to see whether any article or process in relation to which the Standard Mark has been used, conforms to the Indian Standard or whether the Standard Mark has been improperly used in relation to any article or process. The Bureau may recognize any laboratory in India or in any

other country for carrying out testing of samples for use of the Standard Mark and such other functions as may be necessary. For the purpose of formulation of Indian Standards in respect of articles or processes, technical committees of experts have been constituted including experts from specialized bodies; Division Councils, Sectional Committees, Subcommittees and Panels are appointed under BIS Act. This organization works under the present concept of self-quality assurance certification system. Bureau of Indian Standards, the National Standards Body of India, is entrusted with the task of formulating national standards in various technology areas and to provide consumer welfare services.

14.5 SUGGESTED FURTHER READING

Bureau of Indian Standards (BIS) Act, 1986; Indian Standard Institution (Certification Mark) Act, 1952, Website: [www.bis.org.in],

PFA Act 1954 & Rules 1955, [Website: [<http://www.mohfw.nic.in> (See under Health Activities)]];

Agricultural Produce (Grading & Marking) Act, 1973 (As amended up to 1986), Website:[<http://www.agmarknet.nic.in>]; General Grading and Marking Rules, 1988 (As amended up to 1991) [see under the icon “Grade Standards”],

Food Safety Management System [website: www.bis.org.in & www.nqa-usa.com]

14.6 KEY WORDS

- ISI** : Indian Standards Institution.
- NGOs** : Non-Governmental Organizations.
- Quality Standards** : The standards framed ,based upon the intrinsic properties of Agricultural or Food Commodities.
- ISO** : International Organization for Standardization.
- Standard Mark** : "Standard Mark" means the Bureau of Indian Standards Certification Mark specified by the Bureau to represent a particular Indian Standard and also includes any Indian Standards Institution Certification Mark specified by the Indian Standards Institution.

Research & Developments (R&D): : R & D investigations or testing are carried out for collection of data for evolving and revision of Indian Standards or Quality Assessment studies.

Food Grade Material : It means any material coming in to contact with Foods which does not contaminate it so as to render the food unfit for consumption.

Tin Plate : The Tin Sheets to be used for fabricating Tin Containers for packaging Vegetable oils & fats should conform to BIS Standards.

AGMARK : The Quality Certification mark under the AP(G&M) Act.

AP(G&M) Act : Agricultural Produce (Grading & Marking) Act,1937.

Quality Conscious : Well awakened about the quality of the product.

Quality : ISO defines Quality as “the totality of features and characteristics of a product that bear on its ability to satisfy stated or implied needs”.

Aflatoxin: : Toxic metabolite of Aspergillus’s flavus which attacks high protein agricultural produce like; groundnuts and other nuts or products.

Microbial Contamination : The presence of microorganisms (harmful bacteria) in foods.

Metallic Contaminants : Presence of poisonous/ heavy metals in foods beyond the limits specified in PFA Rules in force for the time being.

Mandatory : Such provisions which are compulsory or binding to comply.

TBT : Technical Barriers to Trade (under World Trade Organization).

DMI : Directorate of Marketing & Inspection (Govt. of India).

CAL & RAL : Central Agmark Laboratory & Regional Agmark Laboratory.

Blended Edible Vegetable Oils : Admixture of any two edible vegetable oils, individual oil of which shall conform their respective standards prescribed under PFA Rules and any of the oil shall have proportion not less than 20% in the mixture (as defined under PFA Rules).

14.7 ANSWERS TO CHECK YOUR PROGRESS EXERCISES

1. BIS Standard Mark is known as 'BIS Certification Mark' or 'ISI Certification Mark';
2. "Specifications" mean a description of an article or process as far as practicable by reference to its nature, quality, strength, purity, composition, quantity, dimensions, weight, grade, durability, origin, age, material, mode of manufacture or other characteristics to distinguish it from any other article or process;
3. "Trade mark" means a mark used or proposed to be used in relation to goods for the purpose of indicating, or so as to indicate, a connection in the course of trade between the goods and some person having the right, either as proprietor or as registered user, to use the mark, whether with or without any indication of the identity of that person;
4. "Licence" means a licence granted under section 15 to use the Indian Standards Certification Mark in relation to any article or process which conforms to the Indian Standard and includes any licence granted under the Indian Standards Institution (Certification Marks) Act, 1952 and is in force immediately before the date of establishment of the Bureau of Indian Standards (BIS):
5. Inspection is carried out and samples of any material or substance are taken as may be necessary to see whether any article or process in relation to which the Standard Mark has been used conforms to the Indian Standard or whether the Standard Mark has been improperly used in relation to any article or process with or without a licence;

6. 'Technical Committee' of experts is constituted for the purpose of formulation of Indian Standards in respect of articles or processes. Such committee may include experts from Division Councils, Sectional Committees, Subcommittees and Panels.
7. 'Division Council' is to be set up by the Bureau in defined areas of industries and technologies for formulation of standards. These shall include concerned officers of the Bureau and representatives of various interests such as consumers, regulatory and other Government bodies, industry, scientists, technologists and testing organizations. These may also include consultants.
8. The License under BIS Act enables the licensed manufactures having requisite production and testing facilities or willing to avail such facility from BIS Laboratory to use the Mark on their products if the commodity conformed to the specifications laid therein.
9. A draft standard prepared and duly approved by a Committee is issued in 'draft form' and widely circulated for a period of not less than one month amongst the various interests concerned for critical review and suggestions for improvement.
10. The Bureau may recognize any laboratory in India or in any other country for carrying out testing of samples in relation to use of the Standard Mark and such other functions as may be necessary. In case any laboratory after recognition ceases to fulfill any conditions laid down at the time of recognition, it shall be liable to be de-recognized by the Bureau.
11. The AP(G&M) Act empowers the Central Govt. to prescribe the grade standards for agricultural commodities, stipulate conditions governing the use of standards and laying down procedure for marking, packing etc.
12. Under the Agmark voluntary grading Scheme, grading and marking of many commodities is popularly carried out which include; Atta, Spices, Vegetable oils, Honey, Ghee, Butter etc.
13. The DMI promotes standardization and grading and implements scheme of certification of agricultural and allied products for orderly marketing under the provisions of Agricultural Produce (Grading & Marking) Act, 1937. It ensures realization of prices commensurate with the quality produced by the farmers/processors and consumers get the quality desired by them.
14. Standardization is a process of formulation of quality parameters and applying rules for the grading and marking of agricultural commodities. Grading and Standardization are terms intimately related to quality of an agricultural or a food product.
15. Two advantages of Grading are (a) It brings confidence between buyers and sellers.
(b) It helps in implementation of contract farming.
16. Any person or body of persons desirous of being authorized to grade and mark an article under the provisions of this Act has to obtain 'Certificate of Authorization'. This certificate authorizes a person or body of persons to grade and mark a commodity under Agmark.
17. Grading and certification of agricultural commodities for internal trade means commodities to be marketed within the country. It is voluntary in nature and is carried out under the provisions of Agricultural Produce (Grading & Marking) Act, 1937.

- 18 European Commission has approved the conformity checking operations of DMI for preshipment inspection of fruits and vegetables.
- 19 Grading and Certification is carried out in accordance with the standards notified, following meticulous procedure of sampling, testing, packaging, marking and sealing as per the instructions issued under the provisions of the Act and Rules. It serves as a means of describing the quality of commodities to be purchased or sold by the buyers or sellers all over the country. It is thus beneficial to farmers, producers & consumers.
- 20 The standards are framed in a scientific manner. A sampling plan is first drawn for collecting adequate number of representative samples of the concerned commodity from different producing areas and assembling centers over a period of time. These samples are analyzed in various Regional Agmark Laboratories for various physical and chemical parameters. On the basis of analytical data generated, grade standards are formulated keeping in view the standards framed under the provisions of the PFA Act, 1954.