ISO 22000 standard

ISO 22000 is a standard developed by the International Organization for Standardization dealing with food safety. This is a general derivative of ISO 9000.

Food Safety – Concept that food will not cause harm to consumer when it is prepared and / or eaten according to its intended use.

The ISO 22000 international standard specifies the requirements for a food safety management system that involves the following **elements**:

- interactive communication
- system management
- prerequisite programs
- HACCP principles

Communication along the food chain is essential to ensure that all relevant food safety hazards are identified and adequately controlled at each step within the food chain. This implies communication between organizations both upstream and downstream (Customers and Suppliers) in the food chain. Communication with customers and supplies about identified hazards and control measures will assist in clarifying customer and supplier requirements. Fig. 1 shows direct and indirect involvement of stakeholders or people in communication within the food chain which is applicable in 22000 standards.

The prerequisite programs (PRPs) incorporate the generic procedures - such as Sanitization Standard Operating Procedures (SSOPs) and Good Manufacturing Practices (GMPs) that must be taken into account to ensure a safe and hygienic workplace. These describe the proper hygienic practices needed to create a safe environment. The PRPs set the foundation for a strong HACCP plan and range from facility management to pest control, to environmental considerations and beyond. The PRPs also define control measures to ensure a safe environment in the food chain.

ISO 22000 standards

- Enable organizations to
  - Demonstrates ability to control food safety hazards
  - Demonstrates compliance to statutory & regulatory requirements
  - Evaluate assess and meet customers' requirements
  - Communicates food safety information throughout food chain
  - Ensures food is safe at the time for human consumption

Production to Consumption (22000 standards)

- Boat to Throat
- Farm to Fork
- Plow to Plate
- Stable to Table

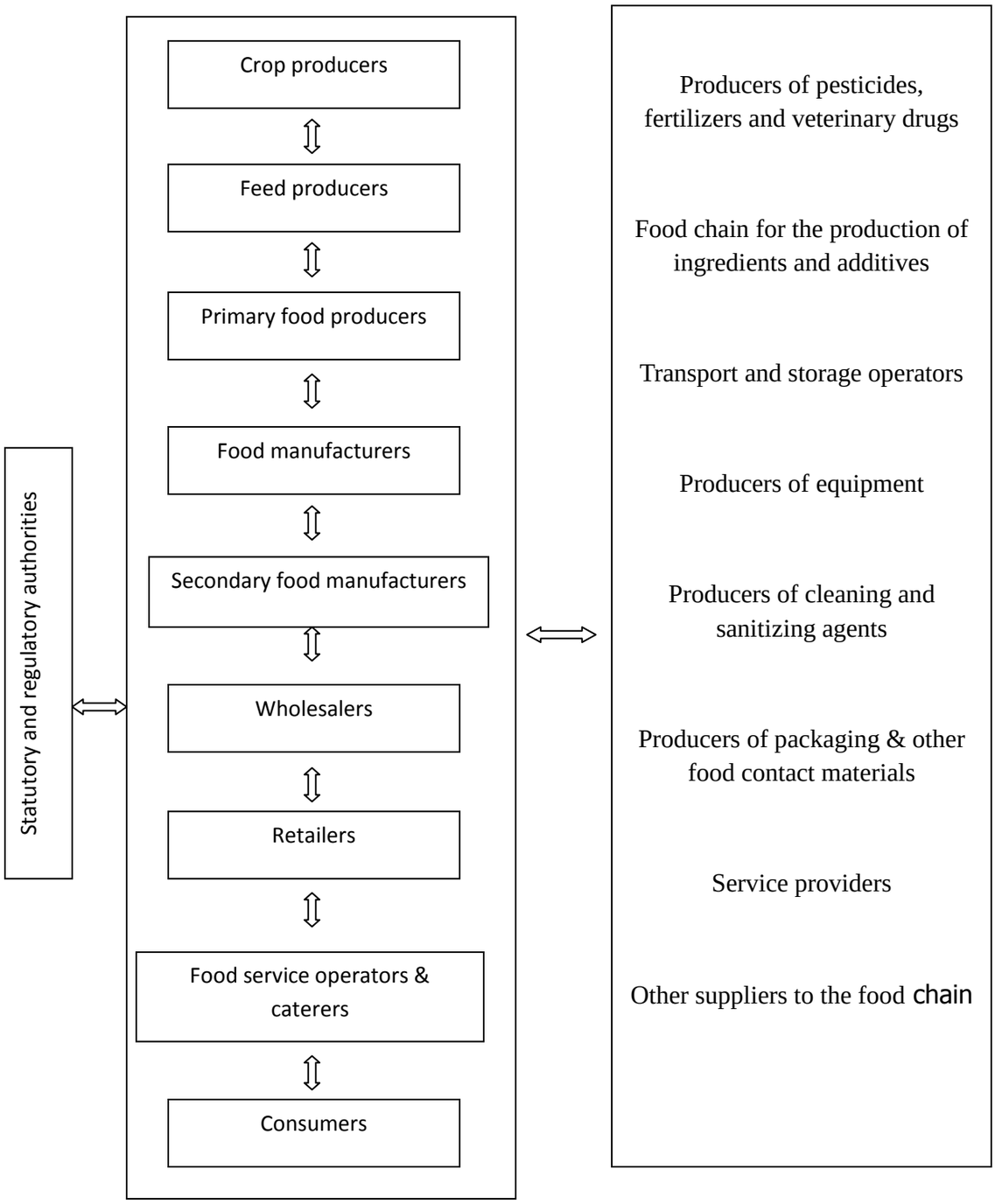

Fig. 1: Communication within the Food Chain, applicable in 22000 standards.

Food Safety Management System

Now, more than ever, all food chain stakeholders are required to demonstrate their commitment to food safety and quality. Major food retailers are now requiring that their suppliers adhere to the Safe Quality Food (SQF) initiative, as well as other food safety regulations such as Hazard Analysis Critical Control Points (HACCP), and ISO 22000. The leading methods for demonstrating safety and quality in the food chain are to implement HACCP, ISO 22000 and SQF food safety processes into a Food Safety Management System (FSMS). HACCP involves identifying hazards within the FSMS and controlling them through prerequisite programs (PRPs) and/or Critical Control Points (CCPs) in the food production and preparation process. ISO 22000 guides the HACCP process and incorporates it into its standard.

IS0 14000

In recent years, there has been an heightened awareness of environmental issues around the world. As a direct result of this awareness, IS0 created a series of voluntary environmental standards known as the IS0 14000 family of standards. These standards address a wide variety of environmental issues including environmental management systems (EMS), environmental performance, labeling and auditing. ISO 14001 is the only standard to which organizations become certified. The environmental management system should be designed to allow the organization to achieve and control its stated environmental performance goals. IS0 14001 is a standard that describes the five core elements of an environmental management system. Those five elements have been briefly described down:

1. Environmental Policy

The first element, the environmental policy, provides a framework for developing the remaining elements of the system. The policy must be appropriate to the nature of the environmental impacts as a result of organization's activities, products or services. The policy contained all requirements of the standard.

2. Planning

The second element, planning, requires that the organization identify environmental aspects and legal and other requirements. The organization must then establish objectives and targets and an environmental management program to minimize the effects on the environment.

3. Implementation

The third element, implementation, requires that the organization define responsibility for the environmental management system (EMS), identify training needs, document communication procedures, manage all ISO 14001 documents, establish controls over operations associated with significant aspects, and maintain emergency response systems.

4. Checking and Corrective Action

The forth element, checking and corrective action, requires that the organization establish monitoring and measurement of key system variables, establish corrective action mechanisms, maintain records of system performance and conformance and institute system audits.

5. Management Review

The fifth element, management review, requires that the staff review the EMS to ensure effectiveness and address and need for change to the core elements to achieve continual improvement.