EVALUATION OF PRODUCTION CONTROL IN A SEASONING COMPANY

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Abstract

The evaluation of production control in a seasoning company constituted the central theme of this work, which analyzed, from a theoretical perspective, the main foundations of Production Planning and Control, performance indicators, and quality control practices applicable to the food sector. The study's general objective was to understand the importance of production control as a strategic tool for operational efficiency, competitiveness, and organizational quality. The research was characterized as bibliographic, qualitative in nature, and descriptive in purpose, grounded in the analysis of books, scientific articles, technical standards, and legislation related to production management and the food industry. Concepts concerning production management were examined, as well as the strategic, tactical, and operational levels of planning; production scheduling and control; performance indicators such as productivity, efficiency, and OEE; and quality control practices, including Good Manufacturing Practices, process standardization, inventory control, and traceability. The theoretical analysis showed that the proper structuring of Production Planning and Control contributed to the balance between supply and demand, reduction of waste, improvement of productivity, and greater reliability of processes. It was verified that the systematic use of performance indicators and the adoption of rigorous quality practices strengthened organizational competitiveness and promoted greater food safety. It was concluded that production control represented an indispensable strategic element for companies in the seasoning sector, and that alignment among planning, results monitoring, and quality management is essential to ensure efficiency, sustainability, and continuous improvement.

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INTRODUCTION

Production management constitutes one of the main fields of administration, being responsible for the organization, coordination, and control of the resources necessary for transforming inputs into goods and services. In a scenario marked by high competitiveness, technological advances, and growing demands from the consumer market, Production Planning and Control (PPC), performance indicators, and quality control systems assume a strategic role in the pursuit of efficiency, cost reduction, and continuous improvement. As highlighted by Slack, Chambers, and Johnston (2018), effective operations management depends on balancing supply and demand, the proper use of resources, and the ability to monitor results systematically.

The literature shows that PPC integrates strategic, tactical, and operational decisions, fostering alignment between organizational objectives and the execution of productive activities (Chiavenato, 2014). In parallel, indicators such as productivity, efficiency, and OEE provide quantitative support for performance assessment and the identification of improvement opportunities (Nakajima, 1988). In the context of the food industry, quality control—grounded in Good Manufacturing Practices, process standardization, and traceability—becomes even more relevant due to sanitary requirements and the responsibility associated with food safety (ANVISA, 2002; ABNT, 2015).

Given this context, the present work had the general objective of analyzing, under a theoretical foundation, the importance of production management and production control as strategic tools for organizational efficiency. As specific objectives, it sought to understand the fundamentals of Production Planning and Control, examine the main indicators of production performance, and discuss quality control mechanisms applicable to the industrial sector, especially the food industry.

The hypothesis adopted was that the structured adoption of planning practices, performance monitoring, and quality control contributes significantly to improving operational efficiency, reducing

waste, and strengthening organizational competitiveness. It was also considered that the integration among people, processes, and technology constitutes a determining factor for the success of production management.

The justification for the study is grounded in the relevance of the theme for organizations that seek sustainability, quality, and operational excellence. Understanding production management instruments allows not only the improvement of internal processes, but also the promotion of greater safety, reliability, and customer satisfaction.

Methodologically, the work was developed through bibliographic research, qualitative in nature and descriptive in purpose, based on the analysis of books, scientific articles, technical standards, and legislation relevant to the area. The study was structured into sections that initially addressed the fundamentals of production management, followed by a discussion on Production Planning and Control, production performance indicators, and quality control in the food industry, concluding with final considerations. In this way, the introduction presents an overview of the parts that compose the work, highlighting its organization and thematic coherence.

METHODOLOGY

The research was characterized as an applied study, with a qualitative approach and descriptive purpose, based exclusively on bibliographic research. The work aimed to analyze production control in a seasoning company from consolidated theoretical references in the areas of Production Management, Production Planning and Control, Performance Indicators, and Quality Control in the Food Industry.

Regarding methodological procedures, a survey and analysis of books, scientific articles, technical standards, and legislation pertinent to the production and food sectors were carried out. The research focused on interpreting and articulating the main concepts related to production management, the levels of strategic, tactical, and operational planning, production scheduling and control, performance

measurement through indicators such as productivity, efficiency, and OEE, as well as quality practices, including Good Manufacturing Practices, process standardization, inventory control, and traceability.

Data analysis occurred in a theoretical and interpretive manner, establishing relationships between the concepts studied and their applicability in the context of a company in the seasoning segment. There was no collection of empirical data, interviews, or application of field research instruments. The study was based exclusively on the systematization and critical reflection of the selected bibliographic content, enabling the construction of a consistent analysis regarding the importance of production control as a strategic tool for operational efficiency, quality, and organizational competitiveness.

DEVELOPMENT

PRODUCTION MANAGEMENT

Production Management constitutes one of the fundamental pillars of organizational administration, as it involves planning, organizing, directing, and controlling the processes responsible for transforming inputs into goods or services. In conceptual terms, production can be understood as the set of activities that add value to raw materials, information, or resources, converting them into products intended to meet market needs. In this sense, production management is not limited to the factory environment, but also encompasses service-providing companies, in which a transformation process likewise occurs, even if intangible. As Nigel Slack emphasizes, every organization has a production function responsible for creating and delivering value to the customer, regardless of its size or segment of operation.

The fundamental concepts of production management are related to efficiency, effectiveness, productivity, quality, flexibility, and reliability. Efficiency refers to the proper use of available resources, seeking to minimize waste and costs; effectiveness concerns the achievement of established objectives, meeting customer expectations. Productivity, in turn, represents the relationship between results obtained and resources employed, constituting an important indicator of organizational performance. Quality,

meanwhile, assumes a strategic role, especially in competitive markets in which consumers value consistent standards and safety in the products they purchase. According to Idalberto Chiavenato, production administration requires balance among human, material, technological, and financial resources, integrating them to ensure sustainable results.

Within the scope of productive management functions, production planning, activity scheduling, process control, and continuous improvement stand out. Planning involves defining what will be produced, in what quantity, in which period, and with which resources. This is a strategic stage because it directly affects costs, deadlines, and the organization's ability to serve the market. Scheduling details the sequence of operations, organizing workflow and distributing tasks among sectors and teams. Control, in turn, consists of the systematic monitoring of activities, comparing actual performance with what was planned and making adjustments when necessary. For Henri Fayol, to control means to verify whether everything occurs according to the established plan—an enduring principle in contemporary production management.

In addition to these classic functions, modern production management has incorporated the logic of continuous improvement and innovation. The pursuit of leaner processes, waste reduction, and greater integration among sectors has become a priority in competitive environments. Approaches such as lean production and process management reinforce the need for a systemic view, in which each productive stage influences the organization's overall performance. Thus, production management came to be understood not only as operational control, but as an organizational strategy.

With regard to production systems, they can be classified according to production volume and the degree of product standardization. Among the main types are the project production system, used for unique and customized products; make-to-order production, geared to specific demands; batch production, which manufactures defined quantities of one product before starting another; and mass or continuous production, characterized by high volume and high standardization. Each system requires different forms of planning and control, directly impacting costs, inventories, and flexibility. As Russell

Ackoff argues, organizations should be understood as open systems that interact with the environment and need to adapt their production processes to market changes.

From a more humanized perspective, it is important to recognize that production management is not restricted to numbers, machines, and indicators. It involves people, knowledge, skills, and work relationships that directly influence organizational results. Productive performance depends on team engagement, effective leadership, and an organizational culture oriented toward cooperation and continuous improvement. In this way, production management assumes a strategic role by integrating technical efficiency and human appreciation, promoting not only economic results but also more sustainable and collaborative organizational environments.

PRODUCTION PLANNING AND CONTROL (PPC)

Production Planning and Control (PPC) constitutes one of the main areas of organizational management, as it organizes, coordinates, and monitors productive resources with the objective of ensuring that goods and services are produced in the appropriate quantity, at the right time, and at the lowest possible cost. PPC integrates information about demand, productive capacity, inventories, deadlines, and available resources, transforming data into operational decisions that ensure efficiency and competitiveness in different organizational contexts. As Slack, Chambers, and Johnston (2018) point out, production planning and control aim to balance supply and demand, ensuring that the organization meets market needs without compromising its internal resources.

Conceptually, PPC involves two complementary dimensions: planning, which anticipates decisions and defines future guidelines, and control, which monitors the execution of activities and corrects possible deviations. Its main objectives include optimizing the use of resources, reducing waste, minimizing excess inventories, avoiding delivery delays, and ensuring continuity of productive flow. For Chiavenato (2014), planning means establishing objectives and defining the means necessary to achieve them, while controlling implies verifying whether actual performance corresponds to what was planned,

promoting adjustments whenever necessary. In the productive environment, these functions take on a strategic character, as they directly influence costs, quality, and customer satisfaction.

Production planning occurs at three distinct levels: strategic, tactical, and operational. At the strategic level, long-term decisions are defined, such as installed capacity, technology adoption, and production policies, which guide the organization's competitive positioning. At the tactical level, the focus is on the medium term, involving aggregate production planning, definition of periodic volumes, inventory management, and resource sizing. At the operational level, planning details day-to-day activities, specifying production orders, task sequencing, and resource allocation. According to Fayol (1916), effective administration depends on integration among planning, organization, direction, and control, ensuring coherence between strategy and execution.

Production scheduling represents an essential stage of PPC, as it converts general plans into concrete actions. At this phase, the sequence of operations, the start and end deadlines for activities, and the utilization of machines and teams are defined. Scheduling seeks to reduce idle time, avoid bottlenecks, and ensure a continuous workflow. Tools such as schedules and Gantt charts assist in organizing tasks and visualizing production progress. According to Buffa and Sarin (1987), efficient scheduling contributes to greater operational stability and better use of installed capacity.

Production control and follow-up complete the PPC cycle. This stage consists of monitoring actual performance, comparing results with established targets, and identifying possible deviations. Indicators such as productivity, rework rate, delay index, and inventory levels provide essential information for decision-making (Slack; Chambers; Johnston, 2018). When inconsistencies are identified, control enables rapid interventions, preventing negative impacts and strengthening continuous process improvement.

From a humanized perspective, PPC is not limited to technical systems and instruments. It involves clear communication among sectors, cooperation among teams, and leadership committed to sustainable results. The success of planning and control depends on alignment among people, processes,

and technology (Chiavenato, 2014). When structured in an integrated manner, PPC promotes not only operational efficiency, but also greater predictability, reduction of internal conflicts, and strengthening of trust between the organization and customers.

In this way, Production Planning and Control is configured as an indispensable strategic tool for organizations of different sizes and sectors. By integrating planning, scheduling, and control across multiple decision-making levels, PPC ensures balance between demand and productive capacity, contributing to consistent results, competitiveness, and long-term sustainability.

PRODUCTION PERFORMANCE INDICATORS

Production performance indicators constitute fundamental instruments for production management, as they allow the measurement of results, identification of failures, and guidance of strategic decisions in different organizational contexts. In increasingly competitive industrial environments, systematic performance measurement becomes an indispensable condition for ensuring efficiency, quality, and sustainability. As Kaplan and Norton (1997) emphasize, defining consistent indicators makes it possible to align strategic objectives with operations, promoting greater organizational control and direction. Within the productive scope, such indicators provide a concrete basis for process evaluation and for the implementation of continuous improvements.

Productivity is one of the main performance indicators, defined as the relationship between the quantity produced and the resources used in the process. Slack, Chambers, and Johnston (2018) note that productivity can be measured partially, considering only one specific resource such as labor or equipment, or totally, involving all inputs employed. An increase in productivity indicates a greater capacity to generate results with the same resources or a reduction in costs to maintain a given level of production. Drucker (1998) emphasizes that productivity represents one of the main contemporary managerial challenges, as it directly influences the competitiveness of organizations in a globalized market.

Efficiency, in turn, relates to the degree of utilization of available resources and to the comparison between actual and planned performance. According to Chiavenato (2014), efficiency means performing activities correctly, using time, materials, and technology appropriately, while effectiveness corresponds to achieving established objectives. In the productive environment, efficiency analysis makes it possible to identify waste, operational failures, and opportunities for optimization. Fayol (1916) had already stated that the control function in administration aims to verify whether everything occurs according to the established plan—an essential principle underlying modern production monitoring systems.

Among the widely used indicators in industry, OEE (Overall Equipment Effectiveness) stands out, translated as Overall Equipment Efficiency. The concept was disseminated by Nakajima (1988) in the context of Total Productive Maintenance and is structured around three components: availability, performance, and quality. Availability measures effective operating time in relation to scheduled time; performance evaluates actual production speed compared to the expected standard; and quality considers the proportion of products manufactured without defects. Applying OEE allows the identification of losses related to unplanned downtime, speed reduction, and rework, contributing to continuous improvement of production processes (Nakajima, 1988).

The control of losses and waste is also of significant relevance in evaluating production performance. The lean production philosophy emphasizes the systematic elimination of waste as a path to greater operational efficiency. Ohno (1997), in developing the Toyota Production System, identified categories of waste such as overproduction, waiting time, unnecessary transportation, excess inventory, improper movement, and defects. Monitoring these factors enables greater rationalization of processes and cost reduction. According to Slack, Chambers, and Johnston (2018), effective operations management depends on the capacity to measure and control these losses in a structured and continuous manner.

In this way, indicators of productivity, efficiency, OEE, and waste control are configured as strategic tools for production management, as they provide objective data that support managerial decisions and promote ongoing process enhancement. The systematic use of these indicators strengthens

organizational competitiveness and contributes to balancing economic performance, operational quality, and sustainability.

QUALITY CONTROL IN FOOD INDUSTRIES

Quality control in the food industry is configured as an essential element to ensure food safety, compliance with sanitary standards, and consumer satisfaction. In a sector directly related to public health, quality surpasses the market dimension and assumes a strategic and regulatory character. According to the Brazilian Association of Technical Standards (ABNT, 2015), quality management involves the systematic application of policies, procedures, and controls intended to ensure that products and processes meet previously established requirements. In the food industry, this commitment becomes even more rigorous due to biological, physical, and chemical risks that can compromise the integrity of the final product.

Good Manufacturing Practices (GMP) constitute the foundation of the quality control system in the food sector. In Brazil, the National Health Surveillance Agency established specific guidelines through Resolution RDC No. 275 (ANVISA, 2002), which defined requirements related to hygiene, physical structure, pest control, employee training, and the organization of the production process. GMP aims to prevent contamination and ensure adequate conditions for handling, storage, and transportation of foods. As Forsythe (2013) highlights, implementing good practices significantly reduces microbiological risks and contributes to building an organizational culture oriented toward food safety.

Process standardization also plays a fundamental role in quality control. The clear definition of standard operating procedures enables greater uniformity in production, reduced variability, and greater predictability of results. Paladini (2012) states that standardization is one of the pillars of quality management, as it ensures repeatability and control of production stages. In the food context, this means establishing standards for formulation, processing time, temperature, storage, and packaging, ensuring

that each batch produced maintains consistent sensory and sanitary characteristics. In addition, standardization facilitates training, internal audits, and compliance with legal requirements.

Inventory control and traceability constitute complementary dimensions of the quality system. Proper inventory management prevents expiration, losses due to deterioration, and failures in the preservation of inputs. According to Slack, Chambers, and Johnston (2018), efficient inventory management balances material availability and operating costs, contributing to greater production stability. Traceability, in turn, makes it possible to identify the origin of raw materials, track the product's path throughout the production chain, and act quickly in cases of nonconformity. The Food and Agriculture Organization of the United Nations highlights that traceability systems strengthen transparency and increase consumer confidence (FAO, 2011).

In addition, systems such as Hazard Analysis and Critical Control Points (HACCP) are consolidated as preventive tools in quality control. This method structures risk identification and the definition of critical control points throughout production, enabling continuous monitoring and immediate corrective actions (Codex Alimentarius, 2003). The integration among GMP, standardization, inventory control, traceability, and HACCP strengthens the quality management system, making it more robust, preventive, and aligned with national and international sanitary requirements.

From a humanized perspective, quality control in the food industry involves not only technical standards and procedures, but also social responsibility and business ethics. The production of safe food requires collective commitment, continuous employee training, and leadership oriented toward prevention. In this way, quality control is consolidated as a strategic element that articulates food safety, operational efficiency, and consumer trust, contributing to the sustainability and credibility of organizations in the sector.

CONCLUSION

The analysis developed throughout this work showed that production management, Production Planning and Control (PPC), production performance indicators, and quality control constitute essential pillars for organizational efficiency and competitiveness. The theoretical foundation made it possible to understand that productive performance depends not only on operational capacity, but on the integration among strategic planning, adequate activity scheduling, continuous monitoring of results, and commitment to quality and safety standards.

It was found that PPC plays a central role in organizing productive resources, promoting balance between demand and capacity, reducing waste, and increasing operational predictability. Likewise, performance indicators such as productivity, efficiency, and OEE proved to be indispensable instruments for measuring results, identifying bottlenecks, and supporting managerial decisions based on concrete data. Systematic measurement proved to be a fundamental condition for continuous improvement and for strengthening organizational competitiveness.

In the scope of quality, especially in the food sector, the relevance of Good Manufacturing Practices, process standardization, inventory control, and traceability stood out as mechanisms that ensure safety, regulatory compliance, and consumer confidence. The preventive approach, supported by structured control systems, proved essential to minimize risks and ensure operational sustainability.

It was concluded that production excellence results from alignment among people, processes, and technology, requiring integrated management, committed leadership, and an organizational culture oriented toward continuous improvement. Thus, production control and quality management are configured not only as technical tools, but as fundamental strategies to ensure efficiency, social responsibility, and sustainability in organizational environments that are increasingly demanding and competitive.

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