

# Ensuring Responsible Sourcing for a Safe, Quality and Sustainable Supply of Ingredients for Pet Diets

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## Abstract

This review will focus on the procurement of quality ingredients and the guidelines needed to ensure responsible sourcing for the long term. In today's dynamic ingredient climate, pet food ingredients require constant monitoring regarding preferred suppliers, detailed ingredient specifications and quality testing programs. The monitoring is not only limited to quality parameters but also availability, traceability and, of course, sustainability. These and other ingredient sourcing considerations will be discussed.

## Introduction

In today's market, pet food manufacturers need to consider multiple factors in the selection of vendors and the evaluation and monitoring of ingredients that are incorporated into pet products. A team approach (Figure 1) between technical and procurement is a method that is needed to ensure that all bases

### Glossary of Abbreviations

**HACCP:** Hazard Analysis & Critical Control Points

**ISO 22000:** International Organization for Standardization 22000

**NGO:** Nongovernmental organization

and details of the ingredients are considered for vendors to be approved.

## Technical Responsibility

Technical is responsible for ensuring that ingredients used in pet foods comply with local regulations and that the vendor's material meets these requirements. Routine

on-site audits using the principles of ISO 22000 and HACCP conducted by technical personnel help to ensure that vendors meet the required regulations and quality. Along with food safety and quality, technical communities (R&D and application groups) have the responsibility to ensure that the ingredients used in pet foods meet detailed requirements outlined in an ingredient specification that is designed by the pet food manufacturer.

Depending on the individual ingredient, specifications may be, in part, based on trading standards outlined by local agriculture ministries or departments (e.g., USDA Corn Grades – Table 1) or other commonly recognized guidelines. Typically, pet food manufacturers include additional limits to parameters in specifications to meet safety or quality requirements. These parameters can be necessary to meet the needs of the application for which the ingredient is intended.

Safety of pet food ingredients involving compounds that may pose a health concern (e.g., mycotoxins) is the responsibility of Technical. Many of these type compounds have been defined where limits or recommended safe levels have been established by regulatory agencies. Pet food manufacturers need to continually work closely with their vendors and monitor incoming ingredients for these compounds to keep them within safe limits.

Complete ingredient specifications need to be fully understood by Procurement and vendors. Monitoring of parameters in an ingredient specification and auditing are key components to ensure the safety and quality of ingredients and compliance by vendors. Each ingredient has unique requirements for a technical audit. The more complex the ingredient, the more detailed the audit needs to be.

In addition, the frequency of a technical audit can vary based on ingredient type, confidence in the vendor and vendor location. Technical audit reports need to be complete and shared with both

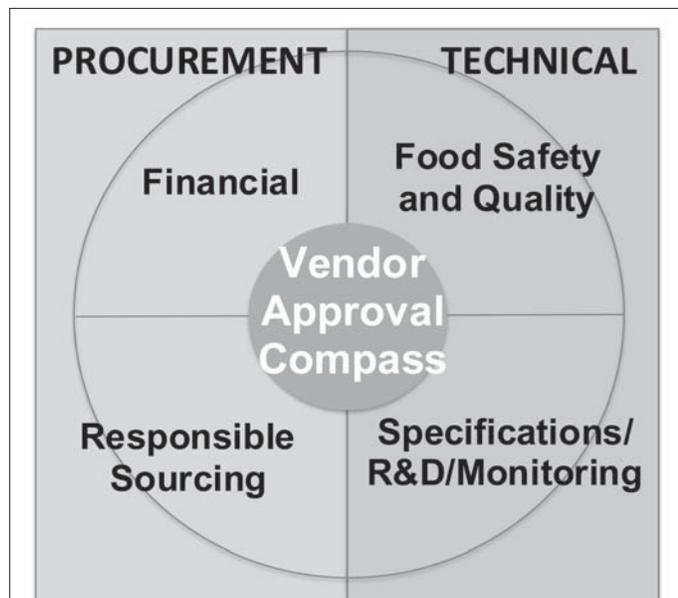


Figure 1

**Table 1: Grades and Grade Requirements of Corn**

Grade	Maximum Limits		Maximum Limits	
	Test weight per bushel (pounds)	Heat-damaged kernels (percent)	Damaged kernels total (percent)	Broken corn and foreign material (percent)
<b>U.S. No. 1</b>	56.0	0.1	3.0	2.0
<b>U.S. No. 2</b>	54.0	0.2	5.0	3.0
<b>U.S. No. 3</b>	52.0	0.5	7.0	4.0
<b>U.S. No. 4</b>	49.0	1.0	10.0	5.0
<b>U.S. No. 5</b>	46.0	3.0	15.0	7.0

**U.S. Sample Grade:**

**U.S. Sample Grade is corn that:**

- (a) Does not meet the requirements for grades U.S. No.1, 2, 3, 4 or 5;
- (b) Contains stones that have an aggregate weight in excess of 0.1 percent of the sample weight, two or more pieces of glass, three or more crotalaria seeds (*Crotalaria* spp.), two or more castor beans (*Ricinus communis* L.), four or more particles of an unknown foreign substance(s) or a commonly recognized harmful or toxic substance(s), eight or more cockleburrs (*Xanthium* spp.) or similar seeds singly or in combination, or animal filth in excess of 0.20 percent in 1,000 grams;
- (c) Has a musty, sour or commercially objectionable foreign odor; or
- (d) Is heating or otherwise of distinctly low quality.

Source: Grain Inspection Handbook – Book II; Corn Chapter 4, Corn Section Number 4.1, Section Grades and Grade Requirements, Page Number 4.2; U.S. Department of Agriculture, Grain Inspection, Packers and Stockyards Administration, Federal Grain Inspection Service 6/18/07.

Procurement and the vendor. Audit deficiencies and corresponding corrective actions with timelines need to be completed as quickly as possible and agreed upon based on the severity of the deficiency. A follow-up audit or verifying evidence of completing the corrective action is the responsibility of Technical.

**Roles of Procurement**

Procurement has numerous roles beyond purchasing ingredients. Procurement is the key point of contact to the vendor on almost every facet. When engaging with a vendor, Procurement may request additional requirements of the vendor and have them agree upon (this is a “must” at Nestlé Purina). These may include:

- Supplier Business Principles (a code of conduct)
- Responsible Sourcing
- Traceability
- Sustainability
- Animal Welfare

If these types of requirements are deemed necessary, the first responsibility of Procurement would be to ensure that vendors acknowledge and agree to a set of business principles and a code of conduct. The principles would include items, but are not limited to, a responsibility to business integrity, sustainability, labor standard, safety and health, and environment. Secondly, Procurement must conduct an audit of these principles and/or responsible sourcing criteria including the corrective action plans and verification or follow-up of these actions. Continual

monitoring of vendors using periodic audits is a part of Procurement’s responsibilities regarding business principles.

Procurement has an obligation to define the true origin of the ingredients purchased. Traceability is critical in order to understand the processing or handling that ingredients have been subjected. Sourcing and quality requirements for ingredients need to be maintained for each upstream touch point or handling step. Procurement along with Technical must outline the degree of upstream auditing and monitoring necessary to ensure integrity of the ingredients purchased.

All industries should share the responsibility of global sustainability and the impact their respective ingredients have on the environment. Pet food manufacturers along with ingredient vendors need to work with regulatory and environmental groups to understand the impact they have on the environment. Reputable consultants and nongovernmental organizations (NGOs) can be of great assistance to pet food manufacturers in identifying sustainability issues and outlining guidelines to follow and require of vendors. Currently, specific fish species and palm oils are two examples of ingredients with high potential sustainability issues.

Procurement and Technical need to have a clear understanding with vendors to ensure proper steps and measures are in place to address sustainability. Approved techniques in securing raw material (e.g., fish harvesting practices) and harvesting quotas need to be enforced to avoid impact on the environment from a sustainability standpoint. Vendor techniques need to be monitored

through periodic audits along with analytical monitoring of ingredients supplied. This is a responsibility of both Procurement and Technical.

Pet food manufacturers have responsibility to assess vendor techniques and methods regarding ingredients they purchase originating from animals. Animal welfare and treatment of animals need to align with established guidelines and practices outlined by regulatory and governmental agencies. As with sustainability, reputable consultants and NGOs can be of great assistance to pet food manufacturers to ensure vendors use approved techniques in the handling and treatment of animals. Procurement and Technical need to account for animal welfare through the auditing process not only from the direct vendor but also for upstream touch points in the product stream.

Finally, a three-way understanding of the quality requirements and sourcing requirements is agreed upon.

- The ingredient vendor has the responsibility to consistently meet these requirements outlined by both Technical and Procurement.
- Technical has the responsibility to monitor the standards and quality limits outlined to meet the needs of the products for which the ingredient is intended.
- Procurement has the responsibility to monitor and enforce the requirements and corrective actions determined through the monitoring and auditing process.

### **Preferred Vendors**

Cost of ingredients on a unit basis is important in any consideration of vendors. However, preferred vendors are not necessarily those that provide the lowest competitive ingredient unit price. Pet food manufacturers typically establish a preferred vendor list of those that have established a record of consistent compliance to meeting ingredient requirements and service performance.

Preferred vendors can and often do result in the overall lowest delivered cost when considering the time and efforts associated with poor vendor compliance and performance. The efforts and costs associated with dealing with delivered ingredients that do not meet specifications can be enormous. Below is a short list of some of the typical issues of poor performing vendors that have an impact on cost other than unit price for the ingredient:

- Late delivery — resulting in loss of production
- Delivery of the wrong ingredient — resulting in loss of production and/or manufacturing out of specification product and recall
- Delivery of ingredients out of specification — resulting in loss of production
- Routinely having issues with meeting requirements — resulting in a higher level of monitoring and added costs

Currently, the ingredient industry is characteristic of dynamic pricing fluctuations and for some ingredients availability is an issue. The demand for ingredients is highly competitive within and between industries. The economic changes taking place in Asia, Latin America and many developing countries have also had an impact on the availability of ingredients. Increased internal growth of food production in developing regions and movement of raw material production location from one region to another also are creating ingredient availability issues in some areas.

These conditions along with changes in buying power among industries are causing the pet food industry to search for new ingredients, new sources of nutrients and additional importation for ingredient solutions. Now, more than ever, pet food manufacturers need to know their vendors and work more closely with them to ensure that ingredient safety and quality specifications are maintained and that responsible sourcing methods are current and within the established guidelines to meet today's needs.