

**HALAL ANIMAL FEED IN MALAYSIA: A PATHWAY TOWARDS A RISK  
MANAGEMENT PLAN**

Nurulaina Saidin<sup>i</sup>, Mohd Ashrof Zaki Yaakob<sup>ii</sup>, Zulaipa Ruzulan<sup>iii</sup>, Hanifah Musa Fathullah  
Harun<sup>iv</sup> & Mohd Amzari Tumiran<sup>v</sup>

<sup>i</sup> Senior Lecturer, Academy of Contemporary Islamic Studies, Universiti Teknologi MARA (UiTM) Shah Alam. nurulainasaidin@uitm.edu.my

<sup>ii</sup> (*Corresponding author*). Associate Professor, Academy of Contemporary Islamic Studies, Universiti Teknologi MARA (UiTM) Shah Alam. ashrof@uitm.edu.my

<sup>iii</sup> Lecturer, Academy of Contemporary Islamic Studies, Universiti Teknologi MARA (UiTM) Shah Alam. zulaipa3198@uitm.edu.my

<sup>iv</sup> Senior Lecturer, Academy of Contemporary Islamic Studies, Universiti Teknologi MARA (UiTM) Shah Alam. hanifah0704@uitm.edu.my

<sup>v</sup> Senior Lecturer, Academy of Contemporary Islamic Studies, Universiti Teknologi MARA (UiTM) Shah Alam. amzari92@uitm.edu.my

**Article Progress**

**Received:** 10 September 2025

**Revised:** 10 October 2025

**Accepted:** 30 December 2025

**Abstract**

*Animal feed is regarded as one of the Halal control points in animal-based food production. Improper feeding practices, repeatedly reported in the media, have led to the issuance of national and states fatwas in 2007, declaring animals fed with non-Halal feed or impurities as impermissible for consumption. Hence, ensuring that animals are provided with Halal feed is a judicious step to uphold the Halal integrity of livestock products. However, various risks concerning safety, quality, and Halal compliance remain significant challenges in the production of Halal animal feed. The objective of this paper is to explore the major challenges in developing Halal animal feed standards in Malaysia and to propose a conceptual pathway for a Halal Risk Management Plan (HRMP) that can ensure Halal integrity throughout the animal feed supply chain. This study adopts a qualitative research methodology using document analysis of fatwas, Halal standards, feed regulations, and relevant academic literature. The analysis identifies key issues related to Shariah interpretation, regulatory frameworks, industry readiness, and global trade, and synthesizes them thematically to propose a conceptual framework for Halal assurance in animal feed production. Addressing these issues could position Malaysia to pioneer Halal feed certification in the future and further strengthen the integrity of its livestock-based food supply chain.*

**Keywords:** Halal, Animal, Feed, Certification, Management.

**INTRODUCTION**

Malaysia has positioned itself as a global leader in the Halal industry, with certification systems that extend across food, pharmaceuticals, cosmetics, and logistics (Daud et al., 2023). Despite this comprehensive framework, one critical upstream element, the animal feed, has yet to receive systematic attention in Halal certification (Ahmed, 2023; Saidin et al., 2022).

This issue is not only technical in nature but also affects the integrity of animal-based food products because the type of feed given to animals determines the Halal status

of meat, milk, and eggs. With the increasing Muslim population, animal feed has been identified as a product that should be certified Halal, particularly in Muslim-majority countries.

Some Halal certification bodies from countries such as Indonesia, the Philippines, and Switzerland have already issued Halal certification for animal feed, yet in Malaysia, feed is still not included among certifiable products (Ahmed, 2023; SinarDaily.my, 2023). Hence, the safety, quality, and feeding practices in the animal feed industry continue to create uncertainties among Muslims, especially regarding the Halal status of animals fed with non-Halal feed or impurities.

Malaysia, as the pioneer in Halal certification, should also take up the baton by including animal feed as one of the products that can be Halal certified, to ensure Halal assurance of food products from farm to fork. The global pet food sector also demonstrates growth in the Halal segment (Vorotnikov, 2022), indicating similar potential demand for Halal feed for farm animals.

Concerns over feeding practices are not new in our country. In fact, since 2007, national and state *fatwas* highlighted that livestock fed with impure or non-Halal feed could no longer be considered Halal for Muslim consumption (JAKIM, 2021). These rulings were prompted by recurring cases of animals being fed with animal feed containing doubtful or prohibited ingredients, underscoring the sensitivity of this issue within the Muslim community.

As a result of the *fatwa*, the Malaysian Standard on Halal Food Production (revised MS1500:2009) introduced specific clauses prohibiting farm animals and aquatic animals from being fed with *najis* or non-Halal ingredients (Department of Standards Malaysia, 2009). More recently, the revision of the Malaysian Halal Certification Procedure Manual (MPPHM) 2020 removed animal feed from the category of products ineligible for certification (JAKIM, 2020).

Although feed has not yet been certified as Halal, this change signals the potential expansion of the certification framework to include animal feed as a product that can be certified Halal in the future. In reality, animal feed in Malaysia cannot be certified as Halal due to the absence of a dedicated standard and certification scheme.

Nonetheless, growing concerns raised by scholars (Saidin et al., 2022; Ashraf & Abd Rahman, 2022), consumer associations, and industry stakeholders underscore the urgent need for the development of a Halal feed standard (Muhammad Yusri Muzamir & Siti Norshafikah Rosli, 2019; Sajida Asarullah Khan, 2019), as feed is a critical factor influencing the Halal status of animal-derived food products.

The establishment of such a framework, however, presents several challenges, particularly in harmonising Shariah interpretations related to feed ingredients, strengthening regulatory readiness, and managing the complexities of global supply chains. Although Halal feed is important for ensuring the integrity of animal-based food products, there is limited guidance in the existing literature on developing clear Halal standards, regulatory frameworks, and risk management strategies specifically for feed production.

Few previous studies focus on Shariah perspectives of animal feed and risks associated with it in animal production (Saidin et al., 2022; Ashraf & Abd Rahman, 2022; ur Rahim & Massod, 2023). Other related research focused on *al-jallalah* issues, considering the fact that animals fed with non-halal feed could be categorised as *al-jallalah* and therefore not permitted for consumption according to the National Fatwa Council (Arifin et al., 2021; Ghazali & Sabjan, 2024; Muflih et al., 2017; Saidin et al., 2024).

Only a handful of studies have focused on the legal and regulatory framework related to animal feed in the country (Saidin & Abdul Rahman, 2016; Saidin et al., 2018; Saidin, 2019). As a result, there is a significant knowledge gap regarding the creation of standard criteria, certification processes, and management systems to ensure consistent Halal assurance in the feed supply chain. This gap needs to be addressed to provide practical recommendations for developing effective Halal standards and certification for animal feed in Malaysia.

In this context, this paper aims to explore the key challenges in developing Halal animal feed standards in Malaysia and to propose the Halal Risk Management Plan (HRMP) as a potential pathway to strengthen Halal assurance in animal-based food production.

## **METHODOLOGY**

This study adopts a qualitative documentary analysis approach focusing on Malaysian and international Halal standards, *fatwas*, regulatory documents, and previous academic works. The analysis identifies key Shariah, policy, regulatory, and industry-related challenges that affect the development of Halal feed standards and proposes a conceptual framework through the Halal Risk Management Plan (HRMP).

## **RESULTS AND DISCUSSION**

Given the qualitative and conceptual nature of this study, the results and discussion are presented together to provide an integrated interpretation of the findings. The analysis is based on documentary evidence drawn from national *fatwas*, Halal standards, regulatory documents, and relevant academic literature. This approach allows for a comprehensive understanding of the key challenges and implications associated with developing Halal animal feed standards in Malaysia.

The findings reveal six major categories of challenges, namely Shariah-related, policy and regulatory, industry and cost, awareness and capacity, enforcement, and global trade challenges. Each of these is discussed in detail in the following subsections, together with relevant insights and proposed measures to strengthen the Halal assurance framework through the implementation of the Halal Risk Management Plan (HRMP).

Following the identification of these challenges, this study further examines the potential risks and hazards associated with feed production that could compromise the Halal integrity of animal feed. The discussion begins with an overview of the risk analysis process, which presents a systematic approach to identifying, evaluating, and managing potential threats across the feed supply chain.

This is followed by an examination of Halal Risk Management in feed production, highlighting how existing food safety frameworks, such as Hazard Analysis and Critical Control Point (HACCP), Good Manufacturing Practice (GMP), and Good Hygiene Practice (GHP), can be adapted and complemented by the Halal Risk Management Plan (HRMP) to address both safety and Shariah compliance.

Finally, the study proposes a Risk Management Pathway for Halal animal feed, detailing a step-by-step application of HRMP principles, covering hazard analysis, control point identification, monitoring, verification, and documentation. This ensures ongoing Halal assurance from raw material sourcing to distribution. Collectively, these sections demonstrate how risk-based management can serve as a practical mechanism for developing a future Halal feed certification framework in Malaysia.

### **Challenges in Developing and Implementing Halal Animal Feed Standard**

The establishment of a Halal standard for animal feed in Malaysia is a complex and multifaceted process. While the revision of the Manual Prosedur Pensijilan Halal Malaysia (MPPHM) 2020 has opened the possibility for future certification of animal feed (JAKIM, 2020), several challenges can be anticipated both in the development of the standard and in its eventual implementation.

#### **1. Shariah-Related Challenges**

One of the primary challenges in Halal animal feed standard development lies in the determination of Shariah rulings concerning certain feed ingredients, especially those being utilised in the preparation of formulated feed. Since feed is produced using a complex mixture of various ingredients such as grains, protein meals, vitamins, and minerals to meet animals' specific nutritional needs, the possibility of utilising ingredients with unknown Halal status is indisputable.

Besides, the status of substances such as dried blood meal, bone-derived materials, gelatin, enzymes, and plasma may differ across schools of thought. Hence, the absence of a specific *fatwa* related to these issues creates uncertainty, and the drafting of a standard would necessitate clear guidance from religious authorities. This is so because the existing *fatwa* focused more on the impermissibility of animals, specifically fish being fed non-Halal feed (JAKIM, 2021), not on the ingredients or specific materials utilised in feed production.

## **2. Policy and Regulatory Challenges**

At the policy level, the absence of a dedicated Halal feed standard in Malaysia makes it difficult to establish a clear regulatory framework. The development of such a standard will require close coordination among relevant agencies, including JAKIM, the Department of Veterinary Services (DVS), the Ministry of Agriculture and Food Security (MAFS), and Jabatan Standard Malaysia. Effective collaboration between these bodies is necessary to ensure consistency, avoid overlapping mandates, and provide clear guidelines for industry players.

## **3. Industry and Cost Challenges**

From the perspective of manufacturers, compliance with a new Halal feed standard may involve significant costs. Reformulating feed to exclude doubtful ingredients, sourcing certified raw materials, and undergoing Halal audits could place additional financial burdens, particularly on small and medium enterprises (SMEs). This is supported by a study by Moid et al. (2024), highlighting the perspective of industry players that Halal certification procedures are complicated, time-consuming and costly for SMEs.

Besides, to date, market acceptance for animal feed remains uncertain. Farmers of different races and religions may be reluctant to pay a premium for Halal-certified feed unless there is strong consumer demand for downstream Halal products.

## **4. Awareness and Capacity Challenges**

The level of awareness and readiness among feed producers regarding Halal compliance remains uncertain. To date, no published studies or surveys have been conducted to evaluate the level of awareness or readiness among industry players to adopt or produce Halal animal feed. Effective implementation would therefore require comprehensive training, capacity building, and awareness campaigns targeted at manufacturers, suppliers, and livestock farmers. Without adequate capacity-building measures, industry adoption is likely to be slow

## **5. Enforcement Challenges**

Ensuring compliance across the supply chain is another major challenge. Limitations in manpower and technical expertise within enforcement agencies may hinder effective monitoring. Additionally, inconsistencies in enforcement across states could lead to credibility issues, thereby undermining consumer confidence.

## **6. Global Trade Challenges**

As Malaysia relies heavily on imports of raw feed materials such as corn, soybeans and barley grains for ruminant and poultry feed (MIDA, 2023), ensuring the Halal integrity of these imports is also a major challenge. In fact, dependency on imported animal feed leaves Malaysia's poultry industry highly vulnerable to global shocks such as currency exchange, wars and pandemics that could inflate costs for animal production (Bh Reporters, 2025). Besides, cross-border recognition of Halal certification for feed ingredients will be necessary once animal feed be certified Halal in the near future.

## **Halal Risks and Hazards in Feed Production**

The Halal concept in feed production is not only limited to the raw materials and ingredients used throughout the production processes but also includes the overall aspects of a feed

supply chain, including the preparation, manufacturing, storage and distribution (Saidin et al., 2022). The identification of the contamination risks is a primary concern for Halal, safety and quality compliance of Halal products.

In food production, identifying the risks will improve the Halal food preparation and transportation operations and help to develop a risk-prevention approach. Similarly, in the production of Halal animal feed, risk assessment is indeed very important to eliminate the possibility of cross-contamination with non-Halal elements and to eliminate hazards associated with animal feed.

While other safety assurance programs, such as HACCP, Good Manufacturing Practices (GMP) and Good Hygiene Practice (GHP) are commonly used to prevent food contamination from occurring, Halal Risk Management Plan (HRMP) can be used to analyse the potential risks of contamination along the supply chain, to prevent the occurrence of contamination of food and beverages with *al-naajs* and non-Halal elements (Ab. Karim et al., 2016; Yahya et al., 2016).

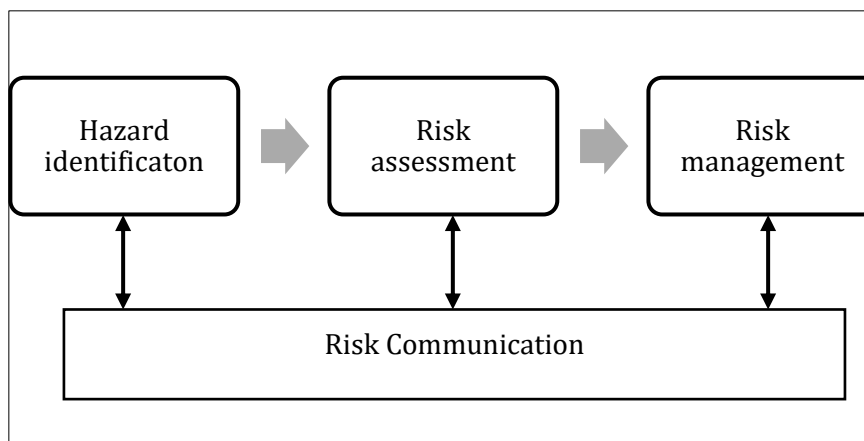
Hence, this HRMP could also be utilised in analysing the potential risks of cross-contamination with non-Halal elements along the feed supply chain, especially during the preparation, production, storage and distribution of Halal animal feed.

### Risk Analysis Process

The concept of risk analysis has been widely recognized as a systematic approach to identifying, evaluating, and managing potential threats that may compromise safety, quality, or compliance within a given system. It serves as an essential decision-making tool in various sectors, including food safety, animal health, and Halal assurance. According to the Food and Agriculture Organization (FAO, 2012), risk analysis comprises a structured framework that ensures consistency, transparency, and scientific integrity in addressing potential risks.

This process is particularly relevant to Halal animal feed production, where the assurance of both *Halal* and *tayyib* elements requires a comprehensive and proactive evaluation of possible hazards across the supply chain. As illustrated in Figure 1, the risk analysis process consists of four main components: hazard identification, risk assessment, risk management, and risk communication (FAO, 2012).

In the context of Halal animal feed, hazard identification focuses on recognizing potential non-Halal contaminants or precursors, while risk assessment evaluates their likelihood and severity, as guided by Annex B of MS2400:2019. Risk management is operationalized through the seven principles of the Halal Risk Management Plan (HRMP), ensuring that Halal integrity is preserved at each stage of the feed supply chain. Risk communication, on the other hand, plays a vital role in disseminating information among stakeholders to strengthen compliance, transparency, and consumer trust.



**Figure 1: Four Main Components Of The Risk Analysis Process**  
Source: FAO 2012

### **Halal Risk Management of Feed Production**

In general, risk management refers to the process of identifying, analysing, and controlling risks. In supply chain studies, risk management is commonly divided into two main categories: (i) ex-ante supply chain risk management, and (ii) ex-post supply chain risk management (Dong & Cooper, 2016). Ex-ante risk management emphasises proactive measures through early identification and assessment of potential risks, followed by the adoption of strategies such as supply chain integration, multilevel procurement, and inventory management to reduce vulnerabilities.

In contrast, ex-post risk management focuses on actions taken after a risk has materialised, where the aim is to respond effectively by formulating and applying suitable mitigation strategies. As previously mentioned, challenges in Halal animal feed production, storage, and transport, as well as an absence of specific standards and schemes for such products, underscore the necessity for a structured approach to maintain Halal integrity.

In this context, the implementation of a Halal Risk Management Plan (HRMP) in feed production provides a practical pathway to address these challenges. Halal Risk Management Plan (HRMP) can be an initial yet crucial measure in promoting assurance in the Halal industry by systematically identifying, categorising, and mitigating risks at each stage of the feed supply chain, recognising that providing animals with Halal nutrition represents the first critical control point in animal-based food production.

Adopting this risk-based approach is essential for the development of a comprehensive Halal feed standard at the national level, while fostering confidence among consumers, regulators, and industry stakeholders (feed manufacturers, suppliers and farmers). Within the Malaysian Halal certification framework, the assurance of Halal products is managed through the Halal Assurance Management System (HAS) (JAKIM, 2020).

As part of this system, industries are required to implement the Halal Risk Management Plan (HRMP), which serves to identify and evaluate potential risks in order to safeguard Halal integrity. While HRMP focuses on identifying and reducing risks, HAS offers a broader system for documentation, monitoring, and continuous improvement throughout the supply chain.

Applying these systems to animal feed production is important, as it makes Halal compliance not only a response to risks but also a built-in part of the management process. This combined approach can support the development of a formal Halal feed standard in the future and further strengthen the Halal ecosystem from farm to table. The Halal Risk Management Plan (HRMP) was first introduced in 2010 within the framework of Halal certification for logistics services, under the name *Halalan-Toyyiban Risk Management Plan (HTRMP)* (Department of Standards Malaysia, 2010).

At that time, this system was mandated as part of compliance with the Halal logistics standards (MS 2400), which were then known as the Halalan-Toyyiban Assurance Pipeline. The standards comprised three parts: Part 1 – Management System Requirements for Transportation of Goods and/or Cargo Chain Services; Part 2 – Management System Requirements for Warehousing and Related Activities; and Part 3 – Management System Requirements for Retailing.

In the latest revision, the Halalan-Toyyiban Assurance Pipeline standards have been replaced by the *Halal Supply Chain Management System (HSCMS)*, consisting of three parts: Part 1 – Transportation: General Requirements (First Revision); Part 2 – Warehousing: General Requirements (First Revision); and Part 3 – Retailing: General Requirements (First Revision). Within this framework, the system is formally referred to as the *Halal Risk Management Plan (HRMP)*. The Halal risk management is structured around seven key principles:

- i. Identification of potential Halal contaminants/precursors;
- ii. Identify control measures;
- iii. Identify the Halal Control Point (HCP);
- iv. Identify the monitoring system for the specified HCP;

- v. Identify corrective actions against the determined HCP;
- vi. Identify the verification procedure;
- vii. Documentation and record management.

The above-mentioned seven (7) key principles of Halalan Toyyiban Critical Control Points (HTCCPs) are applied in accordance with the *JAKIM Halal Assurance Management System Guidelines 2020* and the *Malaysian Standard MS2400:2019 (Part 1, 2 & 3)*. Specifically, the *Reference Tables for Determination of Likelihood, Severity and Risk Ranking* provided in Annex B, as well as the *Risk Management Plan Summary* in Annex C of MS2400:2019 (Part 1, 2 & 3), are utilized in the development of the Plan (Department of Standards Malaysia, 2019). Table 1 presents the seven principles of HRMP together with their key descriptions.

**Table 1: Seven Principles of Halal Risks Management Plan (HRMP)**

Principle	Title	Description
1	Identification of Halal potential contaminant and/or precursor	This is carried out by developing a flow diagram for all processes in Halal production and listing all potential contaminants and/or precursors related to the processes.
2	Determination of control measures	This involves listing all measures that will eliminate or prevent contamination in line with Halal requirements.
3	Determination of Halal Control Point (HCP)	Conducted by identifying the HCP, i.e., a stage at which control can be applied and is necessary to remove the contaminants and/or precursors.
4	Determination of a monitoring system for HCP	Deciding on a scheduled sequence of observations or measurements to assess the degree of control at the identified HCPs.
5	Determination of corrective actions to HCP	Recognizing predetermined actions to be taken when an HCP shows a loss of control.
6	Determination of verification procedures	Creating and applying methods to confirm that the HRMP system is functioning effectively, supported by evidence such as audits or process validation.
7	Documentation system and management of records	Developing and maintaining proper procedures and practices for record keeping.

Source: Based on JAKIM's Halal Assurance Management System Guidelines 2020 and MS2400:2019 Part 1, Annex B & Annex C

### Proposed Risk Management Pathway for Animal Feed

This pathway explains how risks in animal feed production can be identified, evaluated, and controlled through the Halal Risk Management Plan (HRMP). It focuses on recognizing possible sources of non-Halal contamination, assessing how serious and likely they are to occur, and applying control measures at critical points. By following these steps, the integrity of animal feed as Halal and safe (Halalan-ṭayyiban) can be better protected throughout the supply chain.

Table 2 outlines the proposed risk management pathway for animal feed production under the Halal Risk Management Plan (HRMP). The pathway follows a step-by-step approach, starting from the identification of potential risks up to continuous improvement, with examples tailored to animal feed practices.

**Table 2: Proposed Pathway Towards Risk Management in Halal Animal Feed**

Principle (MS 2400 / MHMS)	Steps/Actions	Examples in Animal Feed Production	Key Outcome
1. Conduct Hazard Analysis	Identify potential Halal and safety risks in the feed chain.	- Imported soybean meal may be processed with non-Halal enzymes. - Vitamin premix may use porcine gelatin.	Comprehensive list of Halal hazards.

	Assess raw materials and processes.	- Cross-contamination during transport/storage.	
2. Identify Halal Control Points (HCPs)	Determine where control is essential to prevent Halal non-compliance.	- Raw material sourcing stage. - Processing line previously used for non-Halal feed. - Storage area segregation.	Clear Halal HCPs identified.
3. Establish Critical Limits	Define acceptable Halal criteria for each HCP.	- Only suppliers with valid Halal certificates. - Zero tolerance for porcine-derived additives. - Equipment cleaning verified before Halal production use.	Benchmark for Halal compliance.
4. Establish Monitoring Procedures	Set procedures to monitor each HCP continuously.	- Routine inspection of storage. - Supplier certificate verification. - Regular testing for contamination.	Consistent monitoring records.
5. Establish Corrective Actions	Define steps to correct any deviation from Halal limits.	- If contamination is detected → segregate/destroy affected batch. - If supplier fails Halal audit → suspend sourcing.	Rapid response to restore compliance.
6. Establish Verification Procedures	Verify that HRMP system is working effectively.	- Internal Halal audits. - Third-party certification checks. - Lab testing for raw materials.	Independent assurance of HRMP effectiveness.
7. Establish Documentation & Record-Keeping	Document all procedures, monitoring, and corrective actions.	- Halal compliance logbook for feed batches. - Digital traceability system. - Reports submitted to JAKIM/MAIN	Transparency, accountability, and traceability.

## CONCLUSION

Although Halal certification for animal feed has not yet been formally introduced in Malaysia, applying the Halal Risk Management Plan (HRMP) for animal feed production can still be considered relevant, considering the importance of animal feed as the initial Halal control point in animal-based food production. Hence, the intention of this study is not to go beyond the authority of the certification body, but to suggest a preparatory framework that may help address potential Halal risks in the feed supply chain.

For industry players, the HRMP could serve as a voluntary reference that supports better risk control and helps to strengthen consumer and market confidence, especially in countries with stricter Halal requirements. From the regulatory perspective, this framework may offer an initial reference point that can be further developed into guidelines or standards if Halal certification for animal feed is implemented in the future. In this way, the study provides a useful baseline for both industry readiness and policy discussion.

## Acknowledgement

The authors gratefully acknowledge the financial sponsorship of this research by the Ministry of Higher Education Malaysia through the Fundamental Research Grant Scheme – Exploratory Research (FRGS-EC) [FRGS-EC/1/2024/SS11/UITM/02/3]. Special appreciation is also extended to the Academy of Contemporary Islamic Studies (ACIS), Universiti Teknologi MARA, for their invaluable support and assistance throughout this study.

## REFERENCES

- Ab Karim, N. F., Samicho, Z., & Muhammad Nurul Azmi, A. F. (2016). *Halalan Toyyiban Elements in Halalan-Toyyiban Risk Management Plan (HTRMP) of Chilled Food Products During Warehousing Activities: A Review*. Journal of Applied Environmental and Biological Sciences, 6(11).

- Animal feed – A Critical Component in the Global Food Chain. <https://www.mida.gov.my/animal-feed-a-critical-component-in-the-global-food-chain/> (accessed on 9th September 2025).
- Arifin, M. L., Gitosaroso, M., Athoillah, M. A., & Nurhadi, R. (2021, November). *Prohibition of Consuming Jallalah Animal: The Science of Hadith*. In Proceeding of Saizu International Conference on Transdisciplinary Religious Studies (pp. 118-126).
- Ashraf, A. M., & Abd Rahman, F. (2022). *Hazards In Poultry Feed Production: An Appraisal From The Halal Perspective*. *Journal of Fatwa Management and Research*, 27(2-SE), 1-16.
- Bentuk Undang-Undang Makanan Halal Untuk Haiwan. <https://www.utusan.com.my/berita/nasional/bentuk-undang-undang-makanan-halal-untuk-haiwan-1.844888> (accessed on 8th September 2025).
- CAP Gesa Pinda Akta Makanan Haiwan 2019. <https://www.bharian.com.my/berita/wilayah/2019/02/533005/cap-gesa-pinda-akta-makanan-haiwan-2019> (accessed on 7th September 2025).
- Daud, A. H. M., Lee, U. H. M. S., & Ismail, A. (2023). *The Practice Of Halal Certification: A Case Of Malaysia's Halal Meat-Based Industry*. *International Journal of Academic Research in Business and Social Sciences*, 13(8), 1484-1497.
- Dong, Q., and O. Cooper. (2016). *An Orders-of-magnitude AHP Supply Chain Risk Assessment Framework*. *International Journal of Production Economics* 182: 144–156. doi:10.1016/j.ijpe.2016.08.021
- Ghazali, U. Z. M., & Sabjan, M. A. (2024). *Towards Halalan Toyyiba Implementation In Malaysia: The Application Of Al-Jallalah, Istihalah And Istibrak Concept In Current Issues Concerning Water-Based Halal Jurisdiction In Malaysia*. *Malaysian Journal Of Islamic Studies (MJIS)*, 8(1), 94-109.
- Feed Cost Decline Boosts Resilience In Malaysia's Poultry Industry: Part 1. <https://avinews.com/en/feed-cost-decline-boosts-resilience-in-malysias-poultry-industry-part-1/> (accessed on 9th September 2025).
- Halal Certification Not For Animal Feed, JAKIM Clarify. <https://www.HalalTimes.com/Halal-certification-not-for-animal-feed-jakim-clarifies/> (accessed on 4th September 2025).
- Halal Certification by JAKIM Does Not Cover Animal Feed. <https://www.bernama.com/en/news.php?id=2194779> (accessed on 7th September 2025).
- Halal Pet Food – An Emerging Segment On The Global Market. <https://globalpetindustry.com/article/Halal-pet-food-emerging-segment-global-market> (accessed on 9th September 2025).
- JAKIM (2021). *Kompilasi Pandangan Hukum Jawatankuasa Muzakarah Majlis Kebangsaan Bagi Hal Ehwal Ugama Islam Malaysia (MKI)*. Shah Alam: Reka Cetak Sdn. Bhd
- Malaysia Now Net Chicken Importer Again As Supply Fails To Meet Demand. <https://www.nst.com.my/news/nation/2025/07/1239644/malaysia-now-net-chicken-importer-again-supply-fails-meet-demand> (accessed on 9th September 2025).
- Manual Prosedur Pensijilan Halal Malaysia (Domestik) 2020. Putrajaya: Jabatan Kemajuan Islam Malaysia
- MS1500: 2009. Halal Food - Production, Preparation, Handling And Storage - General Guidelines (Second Revision), Cyberjaya: Standards Malaysia
- MS2400: 2010. Halalan-Toyyiban Assurance Pipeline - Part 1: Management System Requirements For Transportation Of Goods And/Or Cargo Chain Services, Cyberjaya: Standards Malaysia
- MS 2400-1:2019 Halal Supply Chain Management System – Part 1: Transportation – General requirements (First revision), Cyberjaya: Standards Malaysia
- Moid, M. M., Supian, K., Hasim, N., Yahya, N. F., Shah, N. A., Mahayuddin, N., & Shari, S. S. (2024). *Factors influencing Halal certification application among SME Bumiputera food and beverage manufacturers in Malaysia*. *Selangor Business Review*, 34-50.

- Muflih, B. K., Ahmad, N. S., Jamaludin, M. A., & Nordin, N. F. H. (2017). *The Concept And Components Of Contaminated Animals (Al-Jallalah Animals)*. *International Food Research Journal*, 24.
- Radin Eksan, S. H. (2020). *Halal Risk Management: A Systematic Literature Review*. *Journal of Management and Muamalah*, 10(2), 58-70.
- Saidin, N. (2019). *Halal Animal Feed In Malaysian Aquaculture Industry: Malaysian Regulatory Framework And Shariah Perspective*. Doctoral Dissertation. Universiti Teknologi MARA.
- Saidin, N., & Abdul Rahman, F. (2016). *Halal Feed For Halal Food: An Exploratory Study Of The Malaysian Legal And Regulatory Framework On Animal Feed*. In *Contemporary Issues and Development in the Global Halal Industry: Selected Papers from the International Halal Conference 2014* (pp. 141-151). Singapore: Springer Singapore.
- Saidin, N., Abd Rahman, F., & Abdullah, N. (2018). *A Critical Analysis Of The Legal Framework On Animal Feed In Malaysia: With Special Reference To The Feed Act 2009*. *International Journal of Engineering & Technology*. 7(2.10), 21-25.
- Saidin, N., Abd Rahman, F., & Yaakob, M. A. Z. (2022). *Developing The Halal Animal Feed Standard: Analysis Of Feed Supply Chain Issues*. *al-Qanatir. International Journal of Islamic Studies*, 28(2), 83-91.
- Saidin, N., Yaakob, M. A. Z., Abd Rahman, F., Samori, Z., & Harun, H. M. F. (2024). *Hadith Analysis of Al-Jallalah: A Crucial Framework for Risk Management in Halal Animal Feed Studies*. *Journal of Ecohumanism*, 3(4), 771-777.
- Ur Rahim, S. F. & Masood, M. A. B. (2023). *Global view of animal feed in Halal perspective*. *International Journal of Halal Research*, 5(1), 45-57.
- Yahya, H., Samicho, Z., Firdaus, A., & Nurul, M. (2016). *A Review on Application of Halalan-Toyyiban Risk Management Plan (HTRMP) and Frozen Food Chain during Warehousing Activities for Maintaining Halal, Safety, and Quality*. *Journal of Applied Environmental and Biological Sciences*, 6(11).
- Good Emergency Management Practices: The Essentials – A Guide To Preparing For Animal Health Emergencies. In *Animal Production and Health Manual No. 11*. Food and Agriculture Organisation of the United Nations (2012).

**Disclaimer**

*Opinions expressed in this article are the opinions of the author(s). Al-Qanatir: International Journal of Islamic Studies shall not be responsible or answerable for any loss, damage or liability etc. caused in relation to/arising out of the use of the content.*