

JAOC INVESTIGATIONS

INTELLIGENCE DIVISION

INTELLIGENCE DOSSIER

SUBJECT: Porcine Byproduct Integration in Global Supply Chains & Religious Compliance

DATE: August 2026

VERSION: 1.1

CLASSIFICATION: Open Source Intelligence

PAGES: 6

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EXECUTIVE SUMMARY

This dossier outlines the pervasive integration of porcine (pig) byproducts across multiple sectors of daily civilian, agricultural, and industrial life. The global meat processing industry operates on a "zero-waste" model, meaning elements not used for direct human consumption are chemically or physically rendered for secondary markets. These derivatives are heavily embedded in supply chains where their origin is almost entirely obscured from the end consumer.

KEY FINDINGS

- Approximately **98%** of every pig carcass is utilised.
- Over **15 million tonnes** of porcine byproducts are processed annually within the EU alone.
- Most derivatives appear under **generic chemical names**, making origin verification extremely difficult.
- This creates major conflicts with **religious dietary rules** and consumer transparency.

1. AGRICULTURAL & FOOD CHAIN INTEGRATION

Porcine derivatives enter the food and agricultural supply chain through multiple pathways, often under innocuous or technical names that obscure their animal origin.

Derivative	Application	Function
Blood & Bone Meal	Commercial Agriculture	Sterilised, ground fertiliser high in nitrogen and phosphorus
Processed Animal Proteins	Livestock & Aquafeed	Used in poultry and farmed fish feed, permitted in the EU
Fatty Acids / Glycerin	Pesticides	Acts as binding agent to stick chemicals to plant surfaces
L-cysteine	Commercial Baking	Dough conditioner to soften bread, crusts and bagels
Gelatin	Food & Beverage	Thickener in yogurts/ice cream; clarifying agent for beer, wine and juice
Mono- & Diglycerides (E471)	Processed Foods	Emulsifier; often porcine-sourced unless certified vegan
Hydrolysed Collagen	Supplements	Labelled simply as "collagen" with no species stated

2. INDUSTRIAL MANUFACTURING & CONSTRUCTION

Beyond food applications, porcine byproducts serve as critical inputs across heavy industry and construction:

- **Cellular Concrete:** Blood proteins create insulating micro-bubbles.
- **Adhesives & Latex:** Pork fatty acids are key emulsifiers in synthetic rubber production.

- **Bone Glue:** Used in high-end woodworking, bookbinding and archival paper sizing.
- **Plywood & Panels:** Dried blood used as a binder in wood products.
- **Biofuel:** Rendered fats processed into biodiesel and heating fuels.

3. MEDICAL & PHARMACEUTICAL APPLICATIONS

Porcine biology is approximately 80% similar to humans, making porcine tissue widely used in modern medicine:

- Heart valves, temporary skin grafts for burns and surgical mesh.
- Gelatin shells for most oral medications.
- Heparin, enzymes and specialised insulin formulations.
- Catgut sutures and cell culture materials.

4. CONSUMER & HOUSEHOLD GOODS

Porcine derivatives are present in a wide range of everyday consumer products, often unlabelled:

- **Cosmetics:** Glycerin, stearic acid and collagen in soaps, creams and toothpaste.
- **Household:** Crayons, candles, floor waxes, match heads and plastic lubricants.
- **Technical:** Light-sensitive coatings for photographic and X-ray film.

5. RELIGIOUS PROHIBITION & IMPACT ON MUSLIMS

Pork and all derivatives are explicitly forbidden (*Haram*) in Islam, under three core sources of divine law:

Quranic Sources

- **Surah Al-Baqarah 2:173** – Forbids flesh of swine and all that follows.
- **Surah Al-Ma'idah 5:3** – Lists swine as prohibited.
- **Surah Al-An'am 6:145** – Declares it "impure".
- **Surah An-Nahl 16:115** – Confirms the ban.

Sunnah (Prophetic Tradition)

- **Sahih al-Bukhari 2236 / Sahih Muslim 1581** – Prophet Muhammad ﷺ stated trade and use of pork is forbidden.

Jurisprudence (Fiqh)

- **Ijma' (Consensus):** All major schools agree porcine material is *Najasaḥ Ghalizah* (heavy impurity).
- **Istihala:** Most scholars rule industrial processing does not remove forbidden status.
- **Exception — Darurah:** Life-saving medicine with no alternative is the sole permitted use.

Practical Impact on Consumers

- Ingredients hidden under generic names: gelatin, glycerin, stearic acid, E471, L-cysteine.

- No UK/EU legal requirement to state animal origin on product labels.
- Creates extra cost, work and uncertainty for Muslim consumers seeking compliant products.
- Halal certification typically adds 15–30% to product prices due to supply chain auditing.
- Shared manufacturing lines risk cross■contamination even when porcine ingredients are not primary components.

6. TRANSPARENCY CONCERNS

- Industry efficiency is prioritised over consumer disclosure.
- Mandatory origin labelling does not exist for most derivatives.
- Verification requires direct manufacturer confirmation or costly independent laboratory testing.

INVESTIGATOR NOTE: *This report is based on open■source intelligence, industry data and religious scholarship. No claim is made regarding the status of any individual product; consumers should seek specific certification or direct manufacturer confirmation before making purchasing decisions.*