

OLIWA Policy Brief #1

**Safe circular pathways for olive by-products,
insect-based feed, and bio-based materials
in the Mediterranean**

*Policy and regulatory review for the European Union,
Algeria, Tunisia and Türkiye*



1. Why this brief matters

OLIWA turns olive-sector by-products into new value chains for feed, additives, packaging and biogas. To scale these solutions safely, the project needs clear and harmonised regulatory pathways across the Mediterranean.



2. Core policy challenge

The main bottleneck is not only technology, but regulatory clarity: which substrates may be used to rear insects, which insect-derived ingredients may enter feed chains, and how safety, traceability and circularity should be demonstrated.



3. Key message

Safe circularity must come first. Low-risk, well-characterised olive by-products should be prioritised for insect rearing and bio-based applications, while higher-risk waste streams should be channelled to non-feed routes unless specific authorisations exist.



4. Scope of the brief

Geographic focus



EU
legislation



Algeria



Tunisia



Türkiye

Value chain focus



Feed



Insects



Additives



Bioplastics



Packaging



Biogas

Main issues addressed



Insect substrates
and safety
assessment



Insect-derived
feed ingredients
and oils



Olive extracts
and feed /
packaging
applications



Bioplastics,
edible packaging
and cosmetics



Regulatory gaps
and policy
recommendations



This project is part of the PRIMA programme supported by the European Union's Horizon 2020 Research and Innovation programme under Grant Agreement No 2432.



Project coordinator:
University of Torino | OLIWA project

OLIWA Policy Brief #1

EU regulatory baseline

What current EU rules allow, restrict and leave unresolved



1. How the EU treats insects

Insects reared for food or feed are treated as farmed animals. Their rearing substrates must therefore comply with feed law, hygiene rules, animal by-product rules and contaminant requirements.



2. Authorised insect uses in feed

Product	EU status	Main condition
Insect processed animal protein (PAP)	Allowed for aquaculture, poultry and pigs	Only from authorised species reared on eligible substrates
Ruminant feed	Not allowed	TSE / feed-ban restrictions remain
Insect oil / fat	Possible	Subject to feed safety, processing and traceability rules
Live insects	Possible for non-ruminants	Case-by-case within general feed framework



3. Substrate rules matter most



Lower-risk pathways

- Olive pomace
- Olive leaves
- Plant-based agro-industrial by-products
- Traceable, characterised feed-grade materials



Restricted or excluded pathways

- Manure
- Catering waste
- Digestive tract content
- Mixed household waste and high-risk animal by-products



4. Main EU regulatory gaps



No sufficiently detailed insect-specific substrate classification standard



Analytical procedures are not yet harmonised for substrate-to-insect-to-feed safety assessment



More evidence is needed on contaminant carry-over and allergenicity



Greater clarity is needed for substrate additives, insect oils and functional insect-derived ingredients



Key implication for OLIWA

For market-oriented feed chains, OLIWA should prioritise well-characterised olive by-products and other low-risk plant streams, while diverting higher-risk residuals to non-feed routes such as biogas unless specific authorisations exist.



This project is part of the PRIMA programme supported by the European Union's Horizon 2020 Research and Innovation programme under Grant Agreement No 2432.



Project coordinator:
University of Torino | OLIWA project

OLIWA Policy Brief #1

Mediterranean country review

Regulatory situation and gaps in Algeria, Tunisia and Türkiye



Cross-country message

Across the three partner-country contexts, general food and feed laws exist, but insect-specific operational rules remain underdeveloped. This creates uncertainty for investors, producers and competent authorities.

Country	Current situation	Main gaps	Priority next steps
 Algeria	General food safety, veterinary and consumer-protection rules exist	No clear insect-specific rules for species, substrates, processing or feed destinations	 Develop pilot technical guidance aligned with EU safety logic
 Tunisia	Broad food and feed safety framework, including traceability and hygiene principles	No explicit insect-specific implementing rules; limited clarity on feed routes and halal-related acceptability	 Issue insect-specific guidance for feed, substrates and safety controls
 Türkiye	Comparatively EU-aligned food and feed framework	Still needs clearer insect-specific rules on farming, substrates, processing and product safety	 Clarify explicit alignment with the EU authorised-species and substrate model



1. Shared regional gaps

- Limited insect-specific technical guidance
- Unclear rules on permitted substrates
- Need for analytical protocols and traceability
- Need for clearer rules on insect oils, additives and by-products



2. Why EU alignment helps

- Facilitates future trade and market access
- Supports investor confidence
- Improves safety and trust
- Creates comparable data across Mediterranean pilots



3. OLIWA policy direction

Use the EU framework as the benchmark while co-developing Mediterranean guidance adapted to olive-sector side streams, local authorities and regional market realities.



This project is part of the PRIMA programme supported by the European Union's Horizon 2020 Research and Innovation programme under Grant Agreement No 2432.



Project coordinator:
University of Torino | OLIWA project

OLIWA Policy Brief #1

Policy actions and roadmap

From regulatory gaps to actionable Mediterranean guidance



1. Recommended policy actions



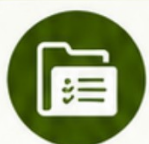
1. Create a Mediterranean positive list of low-risk insect substrates

Define and maintain a science-based positive list of olive by-products and co-products suitable for insect rearing across the Mediterranean.



2. Adopt a harmonised substrate-to-insect-to-feed safety testing protocol

Establish a standard multi-step protocol for chemical, microbiological and nutritional safety across all intended use routes.



3. Prepare separate compliance dossiers for feed, additives, packaging, cosmetics and biogas routes

Provide route-specific dossiers to align with distinct regulatory frameworks and authorisation requirements.



4. Clarify regulatory treatment of insect oils, insect-derived ingredients and substrate additives

Set clear definitions, classification rules and labelling expectations across jurisdictions.



5. Use precise claims for bioplastics, compostable materials and edible packaging

Apply accurate, verifiable claims that reflect real performance and comply with EU rules.



6. Build a Mediterranean regulatory data commons with open, non-confidential evidence

Aggregate and share validated data to support risk assessment, transparency and policy alignment.

2. Indicative roadmap



Step 1

classify olive-based substrate streams and risk levels



Step 2

validate analytical methods and pilot safety dossiers



Step 3

engage authorities and publish national policy notes



Step 4

develop Mediterranean guidance and standardisation proposals

3. Take-home message



Circularity does not mean feeding every waste to insects. It means using well-characterised, low-risk by-products where safety is demonstrated, and routing higher-risk residuals to more suitable pathways such as biogas or other non-feed applications.

Expected benefits



Safer circular feed chains



Better investor and producer certainty



Stronger Mediterranean regulatory convergence



More credible scale-up of OLIWA innovations



This project is part of the PRIMA programme supported by the European Union's Horizon 2020 Research and Innovation programme under Grant Agreement No 2432.



OLIWA project | University of Torino | @OLIWAproject