



# Digestate Biofertiliser Producer Accreditation Scheme

Webinar 19 September 2024

# What is Digestate?

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Digestate is a co-product of AD

Digestate can improve plant growth and reduce the need for mineral fertilisers

Digestate supplies...

- readily available nutrients to plants
- organic matter to improve soil quality

# Why set up a scheme?

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- Circular economy principles are applied to digestate in many countries
- Treating digestate to specified quality standards allows it to attain product status, ie biofertiliser.
- Product status improves customer confidence and opens up markets.
- Quality standards based on criteria limits ensuring that biofertiliser is safe when applied to soils regarding animals and food production
- This Scheme brings these concepts to New Zealand to help the AD industry develop and grow

# Developed through a team approach

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Project funded from MfE Waste Minimisation Fund

Managed by small team

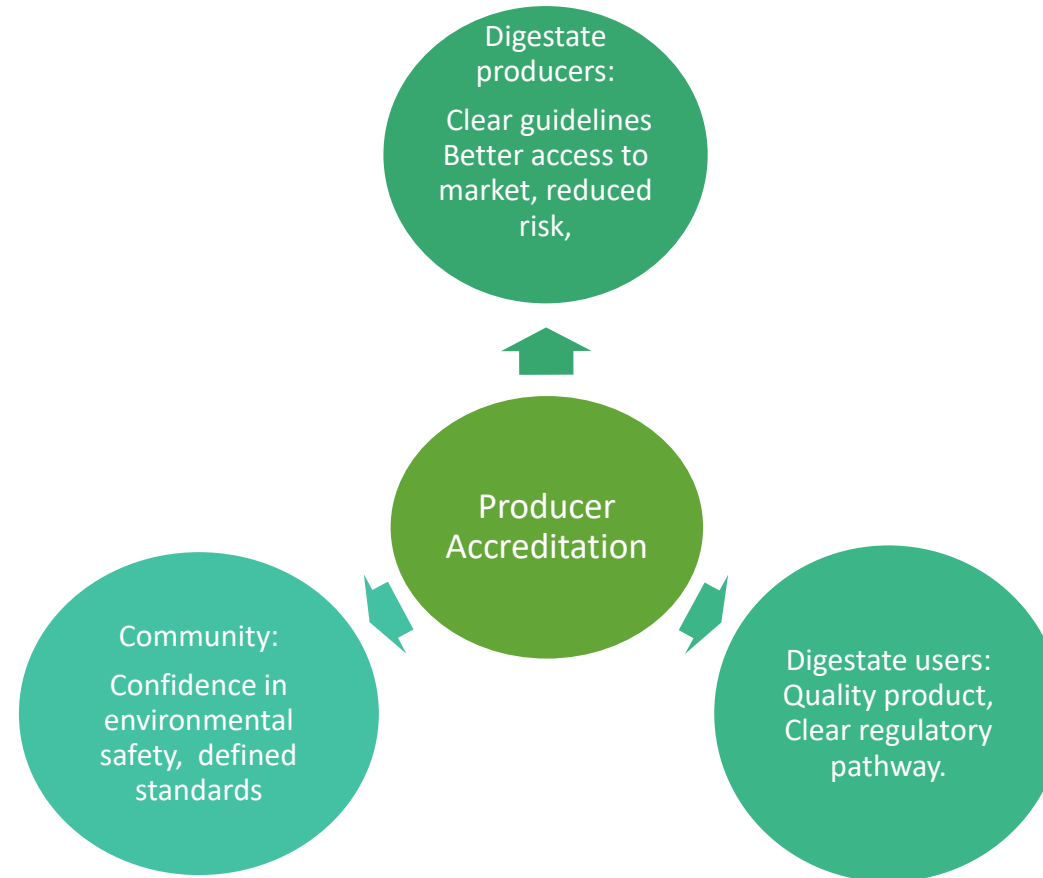
Oversight by Steering Group

- Review of international schemes and best practice
- Identification of NZ legislation requirements
- Adaption of PAS110 to NZ legislative requirements
- Draw on Biosolid Guidelines Technical research
- Consultation with international scheme administrators
- Link with World Biogas Association work programmes



# Benefits of Accreditation Scheme

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# Digestate or Biofertiliser?

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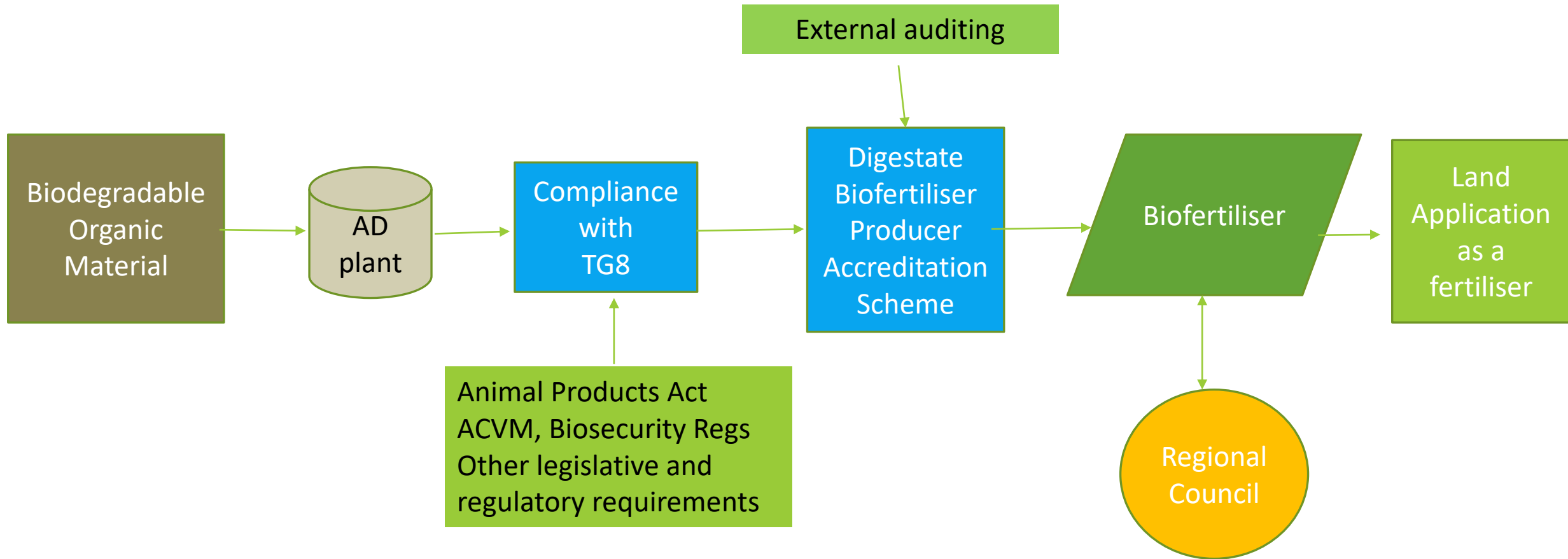
## **Digestate**

- no quality standard on feedstock
- does not meet Scheme limits for heavy metals, pathogens and QA procedures
- suitability for land application to be determined by respective regional council (no agreed standards)
- may require a resource consent

## **Biofertiliser**

- originate from source separated organic material
- meets Scheme requirements for heavy metals, pathogens and QA procedures (agreed standard)
- meets requirements of Animal Products Act and ACVM
- is independently audited

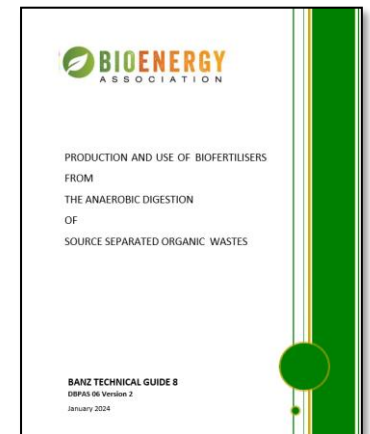
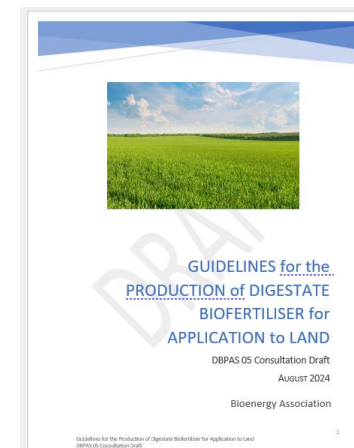
# Biofertiliser Pathway



# Scheme Documentation

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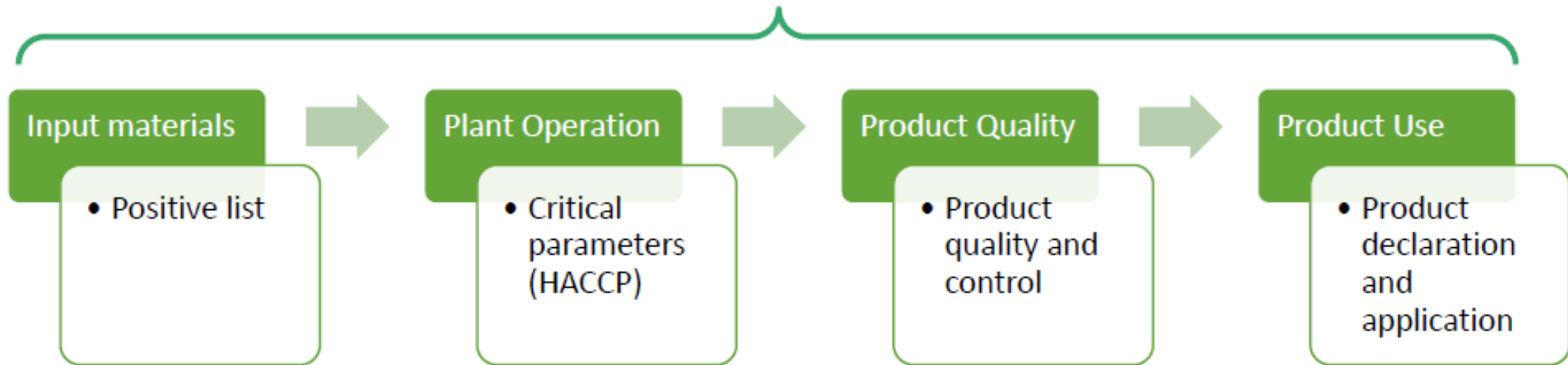
- **Digestate Biofertiliser Guidelines**
  - Criteria and QA that designate digestate as a biofertiliser
- **Producer Accreditation Scheme**
  - Support and advocacy for producers of digestate biofertiliser that meet the criteria of the Guidelines
  - Auditing process
- **Technical Guide 8**
  - Management of production of quality digestate to meet accreditation
- **Information Sheet 67**
  - Background and overview of scheme
- **Technical Notes**
  - Provide technical details





# Producer QA Framework

Quality Assurance – to produce consistent and safe product  
aligned with Animal Product Act



Quality Control – to control environmental load  
science-based limits adopted from Beneficial Guidelines

# Digestate Biofertiliser Guidelines

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## Key sections

- **Input feedstock requirements**

- Any abattoir material must be previously fit for human consumption and have high risk matter (brain and spinal cord) removed.
- Meat and meat products previously fit for human consumption

- **End product quality criteria**

- Heavy metals, pathogens, physical contaminants, nutrients, stability

- **QA requirements**

- Quality Management System, HACCP
- Facility Management Plan – process monitoring, sampling & testing frequency

- **Labelling and distribution**

- Product information at POS, including labelling
- Guidance on safe application requirements

# Approved Feedstock Inputs

Feedstocks must be source segregated and controlled by supplier contracts to ensure quality and control waste inputs. They include:

- Kerbside food scraps collections, incl FOGO
- Commercial food waste
- Post consumer – restaurant, café, ‘spoiled’ Previously safe for human consumption, but now not so.
- Abattoir material\*
- Agricultural crops – no clopyralid or aminopyralid
- Animal manure (no biosolids)
- Paunch grass

\*spinal cord and brain matter removed through Specific Risk Material process

| Biodegradable Organic Material  |  |
|---|--|
| Group A (requires pasteurisation)   | Group B (does not require pasteurisation)  |
| Kerbside food waste collections <u>incl FOGO</u>  | Agricultural break crops   |
| Food manufacturing that is not solely plant based   | Fruit, orchard/packhouse waste   |
| Primary processing, <u>ie approved abattoirs</u>  | Vegetable, paddock waste <u>incl stems, roots</u>  |
| Post consumer foodstuffs  | Forage, grass, pasture   |
| <ul style="list-style-type: none"> <li>• Food approved for human consumption, <u>ie spoiled</u></li> <li>• Restaurant, café, catering waste (<u>incl milk, milk product, egg products</u>)</li> </ul> | Food manufacturing that is solely plant based  |
| Fats, oils, grease, <u>greasetrap</u>   | Brewery waste  |
| Paunch grass  | Vineyard – grape marc  |
| DAF ex abattoir, dairy farm or factory  | Animal manure (biofertiliser must be used on same farm from which the manure is sourced) |
| Animal manure (biofertiliser can be used on farms from which the manure is not sourced)   |  |

# End Product Criteria

5 key aspects :

- Nutrient
- Chemical
- Biological parameters
- Physical
- Stability



# Labelling and Distribution

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- Products are labelled correctly
- *Product Information Documents* are used
- Transport and storage requirements
- *Dispatch Records* completed for every sale
- *Precautions for use declaration*



# Producer Accreditation Scheme

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- Accreditation of AD producers provides assurance they are consistently making biofertiliser that meets the criteria set out in Digestate Guidelines.
- Accreditation is through self-declaration of the producer. They must prove to an assessor that they comply.
- Continuous monitoring of compliance by Scheme Administrator
- Backed by complaints process. Non-compliance results in removal of accreditation
- The accreditation scheme will provide industry regulation over the quality of digestate being applied to land

# Producer Accreditation Scheme

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Ensures producers have been audited and confirms their ability to continuously produce quality biofertiliser.

## Benefits for AD producer

- Licence to promote compliance with Digestate Guidelines
- Support from Governance Committee and Technical Advisory Group
- Participate and access to field trials and results
- Training and best practice guidance
- Shared advocacy of suitability of legislation and regulations
- Support via Bioenergy Association's complaints resolution process

# Launch of Accreditation Scheme

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Best way to test the Scheme is to use it

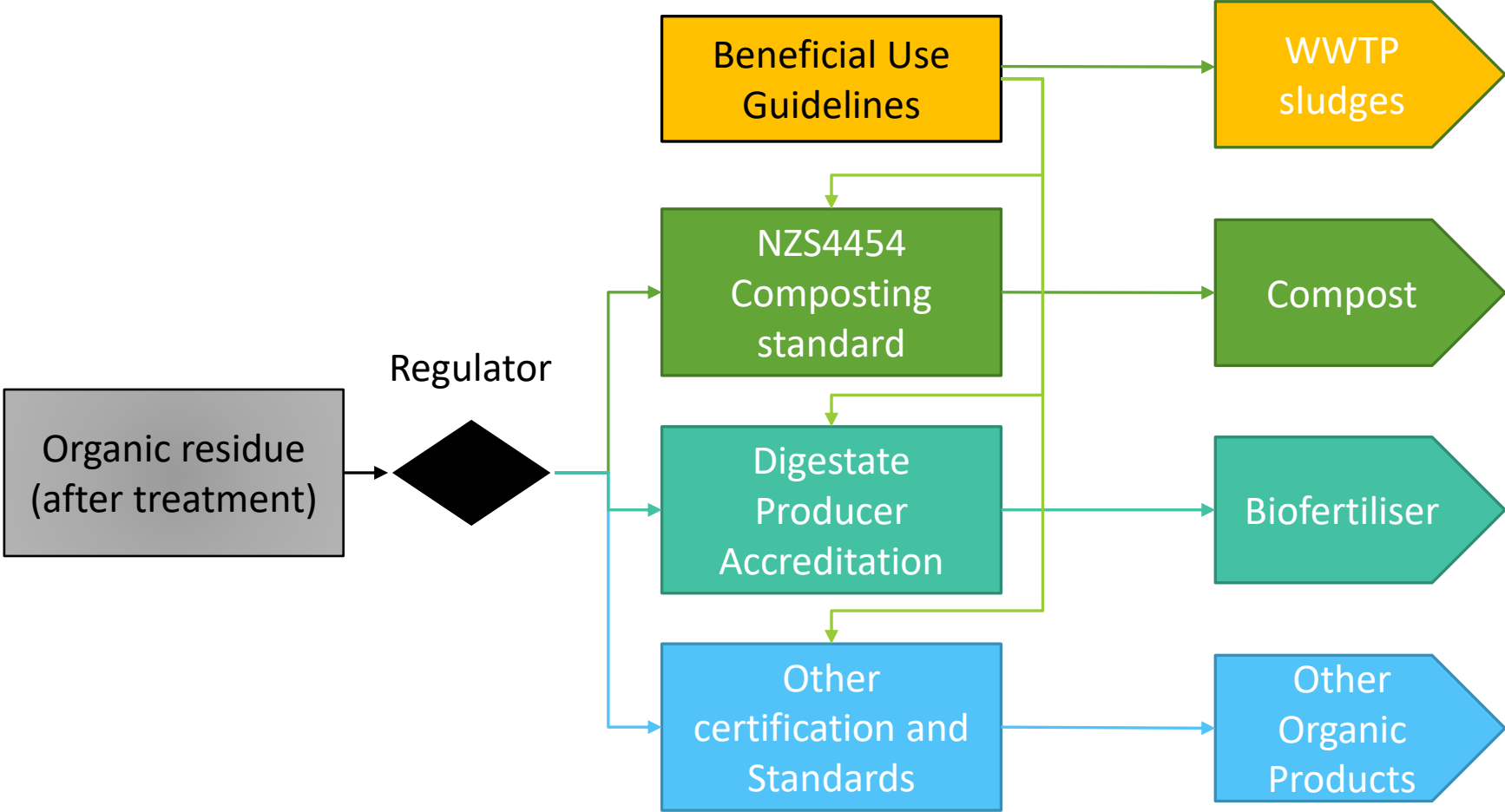
Living documents, can be updated and revised

Undertake an accreditation audit with AD producer



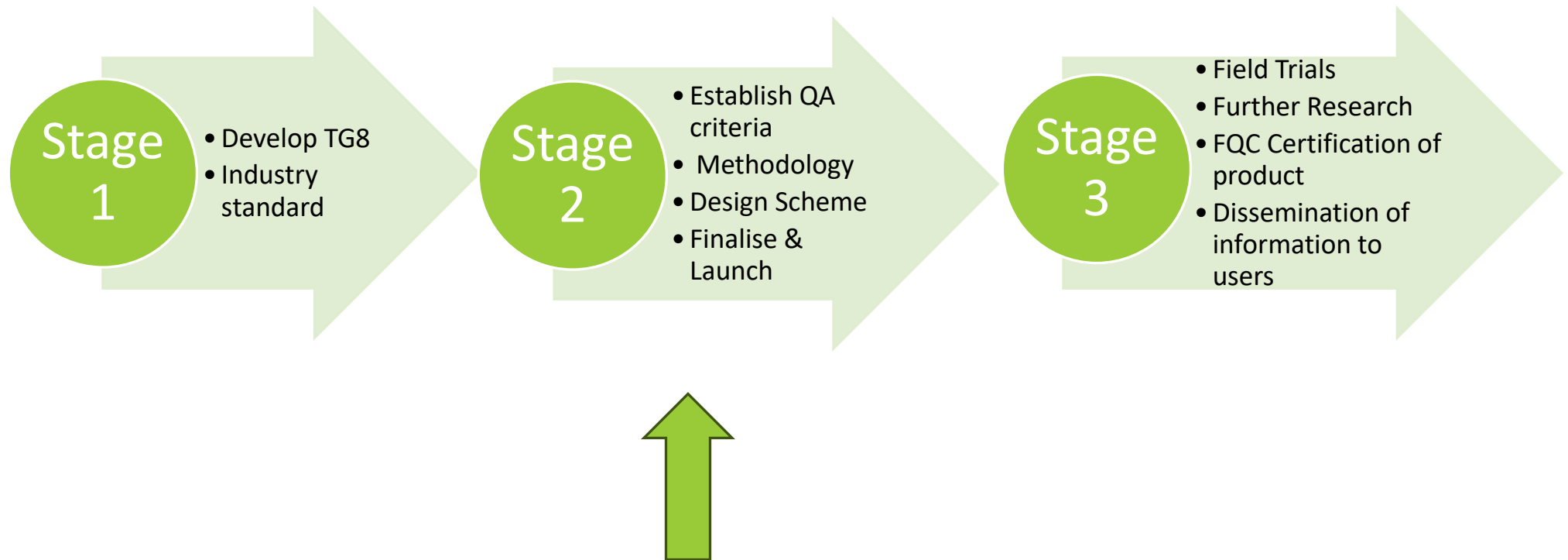


# Our Vision for the Scheme



# Project Milestones

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# Future Research

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- Consolidate knowledge to date on emerging contaminants such as PFAS
- Review biosecurity/exotic disease risk with independent expert in epidemiology
- Characterisation of properties of digestate
- Field trials
- Work with FQC to establish criteria for certification of product

# Thank you – Any Questions?

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Scheme documents can be found on the Bioenergy website –

<https://www.biogas.org.nz/biofertiliser>

Or contact Elena Izaguirre  
Biofertiliser Programme Manager

[Elena.Izaguirre@outlook.com](mailto:Elena.Izaguirre@outlook.com)



# Fertiliser Definition

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# Fertiliser Quality Council Certification (Pending)

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Digestate that meets the requirements and criteria of the scheme is audited and receives Fertmark certification.

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Benefits include one scheme to certify fertilisers and digestate biofertiliser.

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Bioenergy and the Fertiliser Quality Council continue dialogue on Fertmark certification for digestate biofertiliser.



# Why Certification?

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## Waste



Recycling of organics – key to Waste Strategy

## Mindset



Lack of understanding about digestate

## Tools



Absence of regulation/standard