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# GROUP 3 FERTILIZER REGISTRATIONS ACT 36 OF 1947



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PH DUBE

Private Bag X 343, Pretoria, 0001

Tel: +27 12 319 7952, e-mail: [HarryD@daff.gov.za](mailto:HarryD@daff.gov.za)

FERTASA WORKSHOP

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# Group 3 Fertilizer

- **“Group 3 fertilizer”** is a natural or synthetic substance or organism/s that improve/s the growth or yield of plants or the physical, chemical or biological conditions of the soil and does not qualify for registration as a group 1 or 2 fertilizer.
  - Includes:
    - Biofertilizer (Fungi, Mycorrhizae, bacteria)
    - Soil enhancers (water retention)
    - Fulvic and humic acid
    - Sea weed
    - Amino Acids
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- ❑ Products of plant and animal origin (exclude bone and blood meal)
  - ❑ Fertilizer coatings
  - ❑ Plant Growth Regulators
  - ❑ Novel products
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# General Requirements

## 1. A covering letter

- Explaining what is the product, what is it intended for

## 2. Filled application form

- Including formulation table where possible and necessary

## 3. COA from a reputable laboratory

- ISO 17025:2005 SANAS accredited,
- GLP (EU)
- AgriLASA
- DAFF recognized laboratory



## 4. Efficacy studies where required

- ❑ A summarized version of studies must be submitted.
- ❑ Must be short and precise.
- ❑ Factual
- ❑ Report must be scientific (Include **Introduction, materials and methods, results, short discussion and conclusion**)
- ❑ Conclude based on statistical analyses
- ❑ All claims in report must be referenced
- ❑ A picture is worth a thousand words
- ❑ Histograms must have error bars
- ❑ Clear and conclusive summary of results



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# Efficacy Studies (continued)

- ❑ Must be conducted by certified natural scientist or equivalent if overseas
  - ❑ Or conducted under supervision of registered natural scientists
  - ❑ Published peer reviewed studies admissible as supporting documents
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# General Requirements (continued)

## 5. Toxicological studies

- ❑ Conducted according to OECD guidelines
- ❑ Dermal
- ❑ Inhalation
- ❑ Oral
- ❑ Environmental
- ❑ Fate



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# General Requirements (continued)

## 5. Phytotoxicity

To demonstrate that the product has no negative effect on plants-

- ❑ Modification in the development cycle
  - ❑ Thinning
  - ❑ Modification in colour
  - ❑ Necrosis
  - ❑ Deformation
  - ❑ Effects on yield (quantity and quality)
  - ❑ Must be a scientific process not visual estimation.
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# BIO-FERTILIZERS

## ■ Specific requirements :

Excludes legume inoculants which are covered as agric remedies

- ❑ Product identification (imports)
- ❑ CFU
- ❑ Mass release permit (DEA and DAFF: Plant health)
- ❑ Shelf life
- ❑ Product purity - determine the purity/contamination level
- ❑ Compatibility in the case of a mixture of microbes



# BIOFERTILIZERS (continued)

- **Quality control analysis indicating :**
  - ❑ Colony Forming units (CFU) Counts - is the number of microbial colony able to grow on the growth medium per ml of the product
  - ❑ Spore count - determine the amount of spores present in the product expressed as spores per ml
  - ❑ Shelve life or life expiry date
  - ❑ The strain used



# SOIL ENHANCERS

- **A PRODUCT that is added to the soil to improve soil physical conditions.**
- It does not directly have beneficial effects to plants
- Improve WHC, CEC, hydraulic conductivity

## SPEC REQUIREMENTS

- Efficacy trials-field, green house, glass house, laboratory
- Include at least two types of soils with differing clay content
- Phytotoxicity



# HUMIC AND FULVIC ACID

- **Trial protocol if the product is for trial purpose**  
**Include:**
  - ❑ Origin of product (is it plant or mineral based)
  - ❑ Efficacy trials (significance difference very difficult to establish)
  - ❑ Phytotoxicity
  - ❑ Parameters to be measured
  - ❑ Solubility (water)



# Sea Weed

- **Specific Requirements**
  - ❑ COA (hormones)
  - ❑ Is it enriched with synthetics
  - ❑ Phytotoxicity?
  - ❑ Efficacy Trials
  - ❑ Describe the product
  - ❑ Where is it sourced
  - ❑ How is it processed



# Coatings, Inhibitors, release controllers

Improves efficacy of fertilizers

Increases soil residency

Mostly nitrogen inhibitors (urease)

## ■ Requirements

- ❑ Toxicological studies
- ❑ Efficacy studies (Laboratory, field, Glass house)
- ❑ Must include incubation
- ❑ Must demonstrate that product is available using correct analyses (extraction and NOT digestion)



# PLANT GROWTH REGULATORS (PGR)

- Includes natural and synthetic
  - Auxins, Brassino Steroids, Cytokinins, Geberillc acid
  - Analyses
  - Efficacy studies
  - Phytotoxicity
  - Special attention towards application rates



# Products of Plant and Animal origin

## ■ COA

- ❑ Permission from veterinary Directorate (DAFF)
- ❑ Toxicology (where required)
- ❑ Efficacy
- ❑ Phytotoxicity
- ❑ Processing Method
- ❑ Import permit from DAFF Plant Health



# Tips

- **If in doubt contact the office of the Registrar for clarification and possible extra requirements that may apply**
- **Submit trial protocol for advise before commencement with trials (not compulsory)**
- **Lack of statistical significant difference does not imply practical difference**
- **Read guidelines and understand them**
- **Familiarity (what constitute it)**



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**THANK YOU**

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