

NOSB NATIONAL LIST FILE CHECKLIST

CROPS

MATERIAL NAME: Aquatic Plant Extracts

CATEGORY: Synthetic

Complete?: _____

- NOSB Database Form**
- References**
- MSDS (or equivalent)**
- Date file mailed out:** 1/17/95
- TAP Reviews from:** _____
 Donald Blak-ney
 Bruce Spencer
 James Johnson
- Supplemental Information:**

MISSING INFORMATION: _____

NOSB/NATIONAL LIST COMMENT FORM/BALLOT

Use this page to write down comments and questions regarding the data presented in the file of this National List material. Also record your planned opinion/vote to save time at the meeting on the National List.

Name of Material Aquatic Plant Extracts

Type of Use: Crops; Livestock; Processing

TAP Review by:

1. Donald Blakeney
2. Bruce Spencer
3. James Johnson

Comments/Questions:

My Opinion/Vote is:

Signature _____ Date _____

USDA/TAP REVIEWER COMMENT FORM

Use this page or an equivalent to write down comments and summarize your evaluation regarding the data presented in the file of this potential National List material. Attach additional sheets if you wish.

This file is due back to us within 30 days of: Due MAR 01 1995

Name of Material: Aquatic Plant Extracts

Reviewer Name: James Johnson

Is this substance Natural or Synthetic? Explain (if appropriate)

Natural - this product should be accepted/approved as natural if unadulterated.

Please comment on the accuracy of the information in the file:

file complete except "manufacture" & status section

This material should be added to the National List as:

Synthetic Allowed Prohibited Natural

or, This material does not belong on the National List because:

Are there any restrictions or limitations that should be placed on this material by use or application on the National List?

None

Any additional comments or references?

Products such as Geemar from Agrimar are "cryo-crushed" at very low temperatures. Don't know if this product has anything added. Heavy metals all seem below EPA standards. Green color.

Signature

James P. Johnson

Date

3/8/95

ORGANIC FOOD PRODUCTION ACT/NATIONAL LIST SECTIONS

USDA/TAP REVIEWER COMMENT FORM

Use this page or an equivalent to write down comments and summarize your evaluation regarding the data presented in the file of this potential National List material. Attach additional sheets if you wish.

This file is due back to us within 30 days of: Due: MAR 01 1995

Name of Material: Aquatic Plant extracts

Reviewer Name: Bruce Spencer

Is this substance Natural or Synthetic? Explain (if appropriate)
Natural

Please comment on the accuracy of the information in the file:
Accurate

This material should be added to the National List as:

Synthetic Allowed Prohibited Natural

or, This material does not belong on the National List
because: Natural allowed

Are there any restrictions or limitations that should be placed on this material by use or application on the National List?
NO

Any additional comments or references?

Signature Bruce Spencer Date 3-6-95

USDA/TAP REVIEWER COMMENT FORM

Use this page or an equivalent to write down comments and summarize your evaluation regarding the data presented in the file of this potential National List material. Attach additional sheets if you wish.

This file is due back to us within 30 days of: Due: MAR 01 1995

Name of Material: Aquatic Plant Extracts

Reviewer Name: Donald Blakemey

Is this substance Natural or Synthetic? Explain (if appropriate)

CORRECT

Please comment on the accuracy of the information in the file:

This material should be added to the National List as:

Synthetic Allowed Prohibited Natural

or, This material does not belong on the National List because:

Are there any restrictions or limitations that should be placed on this material by use or application on the National List?

Any additional comments or references?

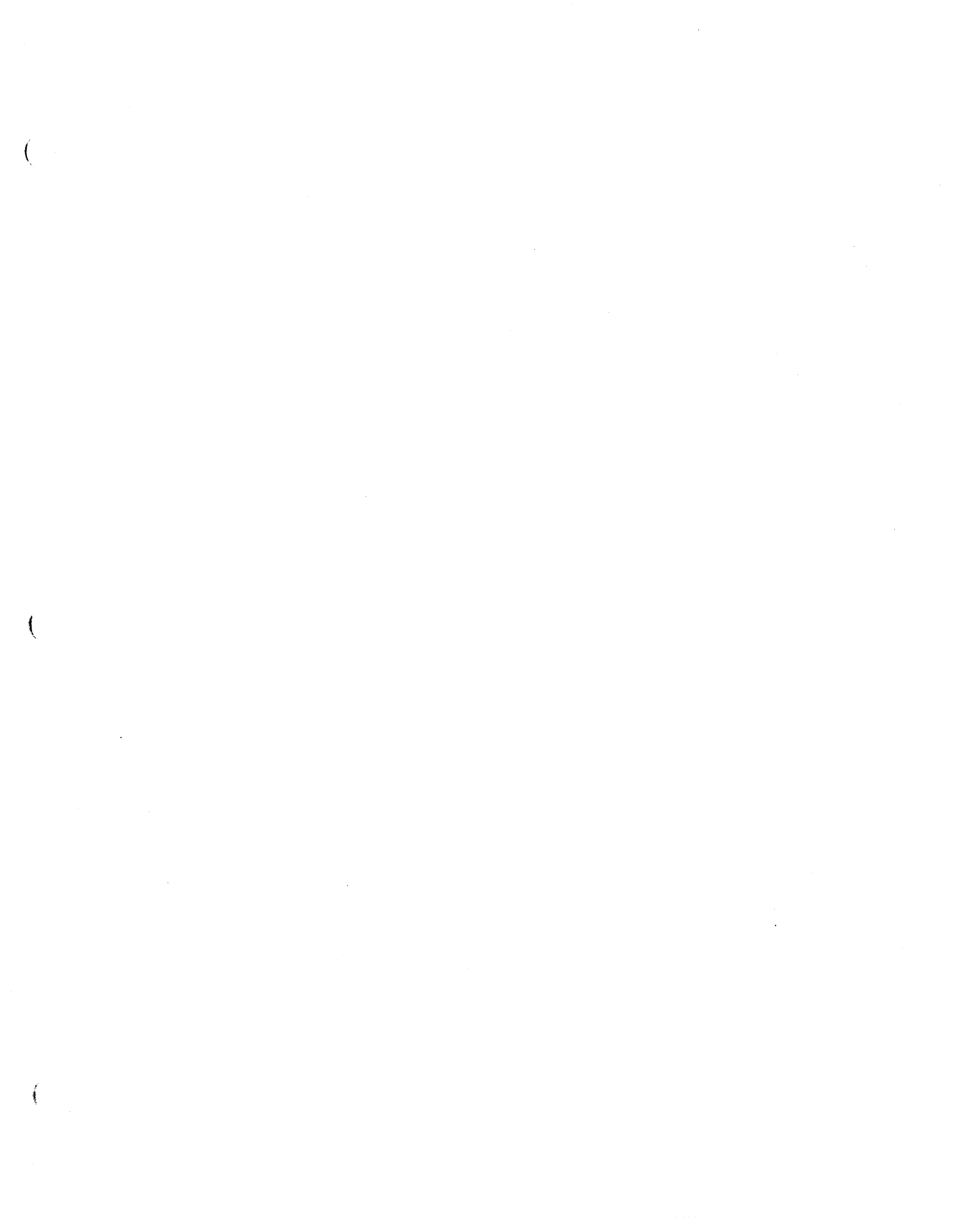
Signature

Don Blakemey

Date

2/1/95

ORGANIC FOOD PRODUCTION ACT/NATIONAL LIST SECTIONS



NOSB Materials Database

Identification

Common Name **Aquatic Plant Extracts** **Chemical Name**
Other Names Seaweed Spray, FoliaGro Plant Food, Vitalize 3-2-2 Fish and Kelp, maxicrop
Code #: CAS **Code #: Other**
N. L. Category unknown

Chemistry

Composition Proteins, Lipids, Glucides, Amino Acids, Vitamins **Family** Organic Fertilizer
Properties brownish/black powder with a mild marine odor

How Made Seaweed is dehydrated after harvest by sun drying, then ground into a meal.
Seaweed Extract is produced from fresh, live plants which are processed into a soluble powder or liquid.
May be fortified or stabilized with synthetic acids and ingredients.

Use/Action

Type of Use Crops
Use(s) -Foliar Fertilizer: May be used on all crops.
-Soil Conditioner. mix into the first two inches of soil
Action Absorbed into plant: acts as growth promotor (see biology)

Combinations Apply as foliar/soil feed, transplant solution and seed treatment.

Status

OFPA

N. L. Restriction

EPA, FDA, etc N/A

Registration

Directions

Safety Guidelines

State Differences

Historical status Allowed by a wide majority of certification groups (seaweed)

International status OCIA: kelp extracts acceptable; ground sea weed acceptable. CODEX and EU ok

NOSB Materials Database

OFPA Criteria

2119(m)1:chem. inter. -Non flammable
-100% solubilization in water
-Product becomes sticky when exposed to water.
-small amounts of SULFURIC ACID are given off during processing.

2119(m)2: toxicity

2119(m)3:manufacture Concern may arise from over harvest of kelp fields.

2119(m)4:humans Inhalation of powder can cause lung irritation (ie. coughing).
Commonly eaten by humans and used as a livestock feed supplement (BS).

2119(m)5: biology -Source of micronutrients, plant growth promoters and potash.
-Rooting solution for transplants and cuttings
-Phytotoxic if applied at high concentration to foliage of sensitive plants resulting in burn. (BS disagrees with phytotoxic statement, no reason given).
- Cold hardiness in tomato plants, citrus fruits, cabbage
- Pest damage reduced (nematode in tomato & okra; mites in strawberries, peaches, apples)

2119(m)6:alternatives Good soil management including green manures, rotation etc.
Fish compost.

2119(m)7:compatible Yes.

References

- Chemical Free Year and Garden 1991. Emmus, PA. Rodale Press. pp87, 88-90, 104, 156.
Farm Chemical Handbook 1994 pp B19, B29, Meister Co. Willoughby, OH
Fish and Kelp News. Oct. 1989. UC Cooperative Ext. Santa Rosa, CA 707/527-2621.
Chapman, V.J.; Whitton, J.S.; Goh, K.. 1976. Kelp extract as fertilizer. NZJ Sci. 19(2): 213-214.
Goh, K.M. and J.S. Whitton. 1975. Kelp extract as fertilizer. 2. Effect on chemical composition and element uptake of white clover. NZJ Sci. 18(3): 391-403.
Belco Res.: 274 White Plains Rd. Tuckahoe, NY 914-961-8408
Agrimar Corp: 1-800-638-6673
Necessary Trading Co: P.O. Box 305 8312 Salem Ave. New Castle, VA 1-800-447-5354

& see attached.

SEAWEED EXTRACT REFERENCES

AU: Plotkin,-J

TI: Seaweed: manure, mulch and fertilizer free from the sea

SO: Org-Gard-Farming, Sept 1977, 24 (9): 148-149.

CN: DNAL 57.8-OR32

AU: LeMon,-I

TI: Our New England soils and salt water farming [Seaweed and salt marsh grasses as fertilizer and mulch]

SO: New-Engl-Gard-Mag, Aug 1976, 3 (6): 13-15.

CN: DNAL SB1.N4

AU: Blunden,-G

TI: The effects of aqueous seaweed extract as a fertilizer additive. [Horticultural crops, foliar application]

SO: In International Symposium on Seaweed Research, 7th, Sapporo, 1971. Proceedings, 1972, p. 584-589. Ref.

CN: DNAL QK564.I52-1971

AU: Kuisma,-P.

TI: The effect of foliar application of seaweed extract on potato.

SO: J-Agric-Sci-Finl-Maataloustieteellinen-Aikak. Helsinki : The Scientific Agricultural Society of Finland. 1989. v. 61 (5) p. 371-377.

CN: DNAL S16.F5J68

AU: Featonby-Smith,-B.C.; Staden,-J.-van

TI: Effects of seaweed concentrate on grain yield in barley.

SO: S-Afr-J-Bot-Off-J-S-Afr-Assoc-Botan-S-Afr-Tydskr-Plantkd-Amptelike-Tydskr-S-Afr-Genoot-Plantkd. Pretoria, S. Africa : Bureau for Scientific Publications. Apr 1987. v. 53 (2) p. 125-128.

CN: DNAL QK1.S69

AU: Fryer,-Lee, 1908-; Simmons,-Dick.

TI: Food power from the sea : the seaweed story.

SO: New York : Mason/Charter, 1977. 220 p. : ill.

CN: DNAL S661.2.M3F78

AU: Featonby-Smith,-B.C.; Van-Staden,-J.

TI: The effect of seaweed concentrate and fertilizer on growth and the endogenous cytokinin content of *Phaseolus vulgaris*.

SO: S-Afr-J-Bot-S-Afr-Tydskr-Plantkd. Pretoria, S. Africa : Bureau for Scientific Publications. Dec 1984. v. 3 (6) p. 375-379. ill.

CN: DNAL QK1.S69

AU: Abetz,-P.; Young,-C.L.

TI: The effect of seaweed extract sprays derived from *Ascophyllum nodosum* on lettuce and cauliflower crops [Fertilizer supplements made from algae, yield increases and quality].

SO: Bot-Mar. Berlin, W. Ger. : W. de Gruyter. Oct 1983. v. 26 (10) p. 487-492.

CN: DNAL 450-B6582

AU: Featonby-Smith,-B.C.; Van-Staden,-J.

TI: The effect of seaweed concentrate and fertilizer on the growth of *Beta vulgaris* [Swiss chard, *Eklonia maxima*, Algae].
SO: Z-Pflanzenphysiol-Int-J-Plant-Physiol. Stuttgart, W. Ger. : Gustav Fischer. 1983. v. 112 (2) p. 155-162. ill.
CN: DNAL 450-Z32

AU: Abetz,-P.; Young,-C.L.
TI: The effect of seaweed extract sprays derived from *Ascophyllum nodosum* on lettuce and cauliflower crops [Fertilizer supplements made from algae, yield increases and quality].
SO: Bot-Mar. Berlin, W. Ger. : W. de Gruyter. Oct 1983. v. 26 (10) p. 487-492.
CN: DNAL 450-B6582

AU: Featonby-Smith,-B.C.; Van-Staden,-J.
TI: The effect of seaweed concentrate and fertilizer on the growth of *Beta vulgaris* [Swiss chard, *Eklonia maxima*, Algae].
SO: Z-Pflanzenphysiol-Int-J-Plant-Physiol. Stuttgart, W. Ger. : Gustav Fischer. 1983. v. 112 (2) p. 155-162. ill.
CN: DNAL 450-Z32

AU: Jarrett,-G.
TI: The calcified seaweed story *Lithothamnium calcareum*, fertilizer for pastures.
SO: Soil-Assoc. Stowmarket, Eng., The Association. Sept 1979. v. 6,i.e.5 (3) p. 2-5.
CN: DNAL S605.5.S6

AU: Senn,-T.-L.
TI: Seaweed and plant growth. 1st ed.
SO: Clemson, S.C. : T.L. Senn, 1987. xv, 181 p. in various pagings : ill.
CN: DNAL S661.2.M3S34-1987

Laboratoire GOEMAR S.A.
Z.A.C. La Madeleine
B.P. 55

Product : GA 14
N° lote :
N° control :

F - 35403 SAINT MALO

TECHNICAL DOCUMENT



PHYSICO-CHEMICAL CHARACTERISTICS :

- Physical form	.....	liquid
- Density	.....	1.10
- pH	.....	3.5
- Dry matter (%)	.....	10.0
- Resistance at 25° C Ohm/cm	.....	80 +/-5

SOLUBILITIES :

- Water	.....	soluble
- ETOH 95 degrees	.....	soluble

CHARACTERISTICS :

- Odour	[sul generic
- Colour	[Pantone 378 C

(Reference Pantone Matching System)
17 Edition 1983 - 1984

ORGANIC ANALYSIS (% DM) :

- Proteins	.....	0.95 %
- Lipids	.....	0.89 %
- Glucides (equivalent glucose)	.....	2.7 %

AMINO ACIDS : 10 - 3330µmoles/l

- Ac. glutamic
- Alanine
- Ac. aspartic
- Methionine
- Glycine
- X.RT 3.9
- Ethanolamine
- Lysine
- Cystine
- Threonine
- Serine
- XRT 61.8
- Proline
- Phenylalanine
- Valine
- Leucine
- Isoleucine
- Arginine
- XRT 7.0
- XRT 27.3
- Tyrosine

VITAMINS : traces at 40 mg/Kg HR

- Carotene
- Fucoxanthin
- B1 (thiamine)
- B2 (riboflavine)
- Pantotenic acid
- Niacin
- B12
- C
- D3
- E
- K

Action = physiological action, nutrition, protection of chlorophyl

PHYTOHORMONES : trace at 200 µg / l

- Cytokinins in reserve in the form of glycosyl - cytokinins
- Auxins and gibberellins in reserve in the associated form

Action = regulation of formation of plant and their functions

POLYSACCHARIDES : 50 % / DM

- Alginates
- Fucofane
- Ascophyllane
- Laminarine

Action = stickers

BETAINAS : traces at 140 µg/l

- Acid - aminobutyric
- Alanine betaine

Action = cytokinin, osmotic control, maintenance of chlorophyl

Concern[®]

1995 FACT SHEET

Vitalize 3-2-2 Fish & Kelp

- Description:** *Concern Vitalize 3-2-2 is an all-natural liquid plant food.*
- For Use On:** *Flowers, vegetables, lawns, trees and shrubs.*
- How To Use:** *Dilute concentrate (3 tablespoons per gallon of water) and water in, spray onto foliage or run through an irrigation system. Apply every 2-4 weeks for best results.*
- Formulation:** *With a 3-2-2 analysis, it is a liquid blend of kelp and fish.*
- Ingredients:** *Fish & kelp.*
- Packaging:** *Easy-pour sturdy plastic jug is made from recyclable plastic. The mix-with-water concentrate makes 16 gallons.*
- Retail Price:** *24 fl. oz. concentrate \$4.99*
- Distribution:** *Garden centers, hardware stores and fine catalogs nationwide.*

This product meets the standards for production of organic foods based on the published guidelines of the Organic Foods Production Association of North American (OFPA).

Concern[®]

1995 FACT SHEET *Vitalize 7-5-5 Granular*

- Description:** *Concern Vitalize 7-5-5* is a granular plant food that gives a quick boost of nutrients needed for early growth plus controlled-release nutrients and organic humus to create an ideal growing environment.
- For Use On:** Flowers, vegetables, lawns, trees and shrubs.
- How To Use:** Broadcast onto the soil surface or mix into top two inches. It can be applied to new plantings and won't burn seeds and seedlings when used as directed.
- Formulation:** With a 7-5-5 analysis, it is a blend of the finest natural ingredients, including compost, kelp, microorganisms, blood and bone meal.
- Ingredients:** Feathermeal, blood meal, bone meal, sunflower fly ash, composted poultry litter, kelp.
- Packaging:** The 3.6 lb. recycled cardboard box with scoop covers approximately 125 sq. ft., 75 transplants, or 1 cup per 20 sq. ft. of soil.
- Retail Price:** 3.6 lb. box \$4.99
- Distribution:** Garden centers, hardware stores and fine catalogs nationwide.

This product meets the standards for production of organic foods based on the published guidelines of the Organic Foods Production Association of North America (OFPA).



MATERIAL SAFETY DATA SHEET

FoliaGro Plant Food

1. COMPONENTS:

FoliaGro Plant Food is a wettable powder extracted from kelp.

2. PHYSICAL PROPERTIES:

FoliaGro Plant Food is a brownish/black powder with a mild marine odor. It is non-flammable, stable and not subject to hazardous polymerization. It is 100% soluble in water.

3. HAZARD DATA: 29CFR 1910.1200

The components of FoliaGro Plant Food pose no known health hazards.

NFPA HAZARD SIGNAL:

Health	Flammability
0	0
0	slippery when wet

HAZARDS CODE

- 0 Insignificant
- 1 Slight
- 2 Moderate
- 3 High
- 4 Extreme

Stability Specific Hazard

DOT HAZARD CLASS: None.

EPA HAZARD WASTE CLASS: Does not apply.

4. SAFE USAGE DATA:

PROTECTIVE EQUIPMENT: Not normally necessary. Dust masks only when handling customized grinds of less than 100 mesh.

VENTILATION:

General Mechanical: Special ventilation not normally necessary.

Local Exhaust: Not normally necessary.

PRECAUTIONS:

Handling & Storage: Avoid loose product on floor in damp areas as product becomes very slippery when wet.

Other: Product becomes sticky when exposed to moisture.

5. EMERGENCY RESPONSE:

FIRE:

Extinguishing Media: Non-flammable solid, use proper media for primary cause of fire. Chars in the presence of flames.

Special Procedures: Those appropriate for primary cause of fire.

Unusual Hazards: Beware of slippery floors if spillage occurs. Small amounts of sulfuric acid are given off when product is charring.

EXPOSURE:

First-Aid Measures: Remove from exposure, wash with water.

SPILLS & WASTE DISPOSAL METHOD:

Handle spillage and waste disposal in the same manner as with any dry vegetable product. Spills are easily cleaned by removing as much solid product as possible and then washing the remaining spill with water. FoliaGro Plant Food is bio-degradable.

6. HEALTH HAZARD INFORMATION:

EFFECTS OF OVER-EXPOSURE: No known adverse effects.

EMERGENCY TREATMENT: Does not apply.

7. MANUFACTURER:

Necessary Trading Company
One Nature's Way
New Castle, Virginia 24127-0305

EMERGENCY PHONE #: 703/864-5103

DATE: 12/1/91

SIGNATURE: *T. Coleman*

The information presented above is believed to be correct and is the most accurate information available to us at this time. However, Necessary Trading Company makes no warranty, express or implied, and assumes no liability for this information and the product described herein.



"From the Earth—for the Earth™"

MATERIAL SAFETY DATA SHEET

FoliaFish Fertilizer

1. COMPONENTS:

FoliaFish Fertilizer is a powder derived from enzyme-digested ocean fish solubilized by a special hydrolysis process.

2. PHYSICAL PROPERTIES:

FoliaFish Fertilizer is a light tan powder with a strong marine and fish odor. It is non-flammable, stable and not subject to hazardous polymerization. It is 83% soluble in neutral pH water.

3. HAZARD DATA: 29CFR 1910.1200

The components of FoliaFish Fertilizer pose no known health hazards.

NFPA HAZARD SIGNAL:

Health	Flammability	HAZARDS CODE
0	0	0 Insignificant
0	0	1 Slight
		2 Moderate
		3 High
		4 Extreme

Stability Specific Hazard

DOT HAZARD CLASS: None.

EPA HAZARD WASTE CLASS: Does not apply.

4. SAFE USAGE DATA:

PROTECTIVE EQUIPMENT: Not normally necessary.

VENTILATION:

General Mechanical: Special ventilation not normally necessary.

Local Exhaust: Not normally necessary.

PRECAUTIONS: Does not apply.

5. EMERGENCY RESPONSE:

FIRE:

Extinguishing Media: Non-flammable solid, use proper media for primary cause of fire.

Special Procedures: Those appropriate for primary cause of fire.

EXPOSURE:

First-Aid Measures: Remove from exposure, wash with water.

SPILLS & WASTE DISPOSAL METHOD:

Handle spillage and waste disposal in the same manner as with any dry vegetable product. Spills are easily cleaned by removing as much solid product as possible and then washing the remaining spill with water. FoliaFish Fertilizer is bio-degradable.

6. HEALTH HAZARD INFORMATION:

EFFECTS OF OVER-EXPOSURE: No known adverse effects.

EMERGENCY TREATMENT: Does not apply.

7. MANUFACTURER:

Necessary Trading Company
One Nature's Way
New Castle, Virginia 24127-0305

EMERGENCY PHONE #: 703/864-5103

DATE: 12/1/91

SIGNATURE: *Colleen Calomanno*

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MATERIAL SAFETY DATA SHEET

SeaCrop Plant Food

1. COMPONENTS:

SeaCrop Plant Food is a liquid extract of kelp.

2. PHYSICAL PROPERTIES:

SeaCrop Plant Food is a brownish/black liquid with a marine odor. It is non-flammable, stable and not subject to hazardous polymerization. It is 100% soluble in water and will boil at 218 °F.

3. HAZARD DATA: 29CFR 1910.1200

The components of SeaCrop Plant Food pose no known health hazards.

NFPA HAZARD SIGNAL:

Health	Flammability
0	0
Stability	Specific Hazard

HAZARDS CODE

- 0 Insignificant
- 1 Slight
- 2 Moderate
- 3 High
- 4 Extreme

DOT HAZARD CLASS: None.

EPA HAZARD WASTE CLASS: Does not apply.

4. SAFE USAGE DATA:

PROTECTIVE EQUIPMENT: Not normally necessary.

VENTILATION:

General Mechanical: Special ventilation not normally necessary.

Local Exhaust: Not normally necessary.

PRECAUTIONS: Does not apply.

5. EMERGENCY RESPONSE:

FIRE:

Extinguishing Media: Non-flammable, use proper media for primary cause of fire.

Special Procedures: Those appropriate for primary cause of fire.

EXPOSURE:

First-Aid Measures: Remove from exposure, wash with water.

SPILLS & WASTE DISPOSAL METHOD:

Handle spillage and waste disposal in the same manner as with any liquid vegetable product. Remove and wash with water. SeaCrop Plant Food is bio-degradable.

6. HEALTH HAZARD INFORMATION:

EFFECTS OF OVER-EXPOSURE: No known adverse effects.

EMERGENCY TREATMENT: Does not apply.

7. MANUFACTURER:

Necessary Trading Company
One Nature's Way
New Castle, Virginia 24127-0305

EMERGENCY PHONE #: 703/864-5103

DATE: 12/1/91

SIGNATURE: *Allen Coleman*

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"From the Earth—for the Earth"

MATERIAL SAFETY DATA SHEET

SeaMix Liquid Fertilizer

1. COMPONENTS:

SeaMix Liquid Fertilizer is a mixture derived from kelp extract and fish solubles.

2. PHYSICAL PROPERTIES:

SeaMix Liquid Fertilizer is a brown liquid with a marine and fish odor. It is non-flammable, stable and not subject to hazardous polymerization. It is 100% soluble in water and will boil at 220 °F.

3. HAZARD DATA: 29CFR 1910.1200

The components of SeaMix Liquid Fertilizer pose no known health hazards.

NFPA HAZARD SIGNAL:

Health	Flammability
0	0
0	0

Stability Specific Hazard

HAZARDS CODE

- 0 Insignificant
- 1 Slight
- 2 Moderate
- 3 High
- 4 Extreme

DOT HAZARD CLASS: None.

EPA HAZARD WASTE CLASS: Does not apply.

4. SAFE USAGE DATA:

PROTECTIVE EQUIPMENT: Not normally necessary.

VENTILATION:

General Mechanical: Special ventilation not normally necessary.

Local Exhaust: Not normally necessary.

PRECAUTIONS: Does not apply.

5. EMERGENCY RESPONSE:

FIRE:

Extinguishing Media: Non-flammable, use proper media for primary cause of fire.

Special Procedures: Those appropriate for primary cause of fire.

EXPOSURE:

First-Aid Measures: Remove from exposure, wash with water.

SPILLS & WASTE DISPOSAL METHOD:

Handle spillage and waste disposal in the same manner as with any liquid vegetable product. Remove and wash with water. SeaMix Liquid Fertilizer is bio-degradable.

6. HEALTH HAZARD INFORMATION:

EFFECTS OF OVER-EXPOSURE: No known adverse effects.

EMERGENCY TREATMENT: Does not apply.

7. MANUFACTURER:

Necessary Trading Company
One Nature's Way
New Castle, Virginia 24127-0305

EMERGENCY PHONE #: 703/864-5103

DATE: 12/1/91

SIGNATURE: *Allen Coleman*

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