

PRECAUTIONARY

STATEMENT

**ENVIRONMENTAL
HAZARDS**

Do not apply directly to water sources. Do not contaminate water when disposing of equipment washwaters.

ACCEPTED
MAR 16
Federal Insecticide, Fungicide and Rodenticide Act
EPA Reg. No. 56437-1

STORAGE

AND

DISPOSAL

STORAGE:

Store in original container only. Keep product from freezing and from excessive heat. Do not contaminate water, food, or feed by storage or disposal.

PRODUCT DISPOSAL:

Wastes resulting from the use of this product may be disposed of on-site.

CONTAINER DISPOSAL:

Offer for recycling or reconditioning, or puncture and dispose of by other procedures approved by state and local authorities.



BIODEGRADABLE ORGANIC

Seed Treatment

(PLANT GROWTH REGULATOR)

Natural polysaccharide that increases yields and reduces lodging by enhanced root and stem development. In addition, decreases lodging due to detrimental effects caused by pseudocercospora herpotrichoides (foot rot) in wheat and barley, and fusarium solani in peas and beans. In soybeans it accelerates emergence, enhances early root and foliar growth, and increases pod setting and yields.

INGREDIENTS:

ACTIVE (POLY-D-GLUCOSAMINE).....	25%
INERT.....	97.5%
TOTAL.....	100.0%

This product contains 0.2 lb. of poly-D-glucosamine per gallon.

**KEEP OUT OF THE REACH OF CHILDREN
CAUTION**

SEE SIDE PANEL FOR ADDITIONAL PRECAUTIONARY STATEMENTS

MANUFACTURED BY:

Natural Ag, a division of Bantech Laboratories, Inc.
1424 SE Industrial Way
Clackamas, OR 97015-9696

Establishment No. 56437-OR401
EPA Registration No. 56437-1

NET CONTENTS

- 5 Gallons
- 55 Gallons

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

NOTE

YEA! is not compatible with other seed treatments, however, seed may be treated consecutively.

FOR SEED TREATMENT

The following treatment rates are recommended in fluid ounces per hundredweight (CWT) of seed for the below listed crops:

<u>CROP</u>	<u>VARIETIES</u>	<u>RATE</u>
Wheat	Stephens	28
Wheat	All others	16
Soybeans	All	16
Peas	All	16
Beans	All	12
Oats	All	8
Barley	All	6

Apply correct amount undiluted YEA! to seed so that YEA! thoroughly coats seeds. A pump (gear type) and auger may be used. In lower than 12 fl. oz. applications, YEA! may be diluted with water to provide more uniform seed coating. Treatment outside recommended rates may adversely effect ultimate yields. Moisture content of treated seed will be increased. Seed should be allowed to dry before planting or storage. If YEA! is too viscous for equipment used, it may be diluted by fractional amounts as long as the agent is increased proportionately. For example, dilute to 50% by adding one part water to one part YEA!, mix well, and treat with twice the recommended amount of solution.

1987

Floyd Koke Kilbourne, IL (309)562-7404	YEA! CHECK	Asgrow	5.0 5.0	47.0 40.0	14,110 12,007	UNK	50 50	moist/several inches rain-no moisture stress
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1988

Melvin H. Wentzel Murdock, MN (612)875-2921	YEA! CHECK	Northrup King s-1346 May 12, '88	1.4894 1.4694	36.7 30.55	3280 2730	TBD	53 53	moist/ 1 x 1" mid June 1 x 2"
Bob Anderson Kerkhoven, MN (612)264-8521	YEA! YEA! CHECK	Evans	.329 .331 361	27.1 29.5 24.0	535 585 520	TBD	60 60 60	moist/ 5-28 0.5" June 0.2"
Dick Bonde Wayne Golden Farms Benson, MN (612)843-4244	YEA! CHECK	Pioneer 9061	.232 .232	25.11 20.64	352 283	TBD	60 60	moist/ 5-23 0.5" 5-28 0.5"
Obert Gjerde Kerkhoven, MN (612)264-5732	YEA! CHECK	Pioneer 9091	.9609 .9609	24.28 22.2	1400 1280	TBD	60 60	moist/ 1 x 0.75" few 0.25"
Daniel Henry Murdock, MN (612)875-2141	YEA! CHECK	Dawson May 9, '88	.9095 .9095	32.80 30.78	1790 1680	TBD	75 75	moist/ Not Re- ported (NR)
Jeff Bauman Kerkhoven, MN (612)264-1221	YEA! CHECK	Dawson May 13, '88	2.37 2.37	34.42 32.70	4895 4650	TBD	60 60	moist/ 0.5' 5-28 2" June
Bill Cain Murdock, MN (612)264-0371	YEA! CHECK	Swift May 20, '88	1.1253 1.1253	34.29 32.88	2315 2220	TBD	80 80	moist/ NR
Rick/Dave Peterson Kerkhoven, MN (612)264-2211	YEA! CHECK	Jacques #88 May 6, '88	2.336 2.336	35.74 34.82	5060 4980	TBD	60 60	moist/ few 0.5"
Gail McNeese Britt, IA (515)843-3015	YEA! CHECK	Thompson Seed T-30	3.8352 3.8352	30.02 29.17	6840 6645	TBD	60 60	moist/stressed
Lloyd Bauman Kerkhoven, MN (612)264-3091	YEA! CHECK	Glenwood May 12, '88	2.4 2.4	25.52 24.9	3675 3590	TBD	60 60	moist/ 0.5" 5-23 0.2" June
Gail McNeese Britt, IA (515)843-3015	YEA! CHECK	Thompson Seed T-15	8.1216 4.0608	41.93 41.27	20320 9990	TBD	60 60	moist/stressed
Melvin H. Wentzel Murdock, MN (612)875-2921	YEA! CHECK	Northrup King B 152 May 12, '88	1.4894 1.4894	38.55 38.38	3445 3430	TBD	53 53	moist/ 1 x 1" June 1 x 2"
Ken Ruka Kerkhoven, MN (612)264-5613	YEA! CHECK	Evans May 10, '88	.829 .829	16.19 15.99	805 795	TBD	63 63	moist/ 1 x 0.75" few 0.25"
Spencer Larsen Kerkhoven, MN (612)264-5165	YEA! CHECK	Pioneer 9091	1.09 1.09	27.33 27.63	1790 1810	TBD	60 60	moist/ very stressed by drought

NOTE: The recommended rate submitted to EPA for registration is 16 oz./CWT.

BENTECH LABORATORIES, INC.

GREENHOUSE TESTING

INVESTIGATOR: R. E. LEWIS

CROP: SOYBEANS
VARIETY: OZZIE
(86% GERMINATION RATE)
LOT #51KHR
86-AP-'89

SEPTEMBER 28, 1988

SOYBEAN SEEDLINGS AT 5 DAYS

Soybean seed were coated at the rate of 16 ounces/CWT with YEA! or water in the case of controls to determine the early effects of growth with YEA!. The YEA! treated seeds germinated on average of 12-24 hours faster which is believed to largely account for the dramatic differences in the sizes, weights, and percentage increases observed with treatments of YEA! on soybean seeds as shown below:

<u>Measurements taken</u>	<u>Reps</u>	<u>YEA!</u>	<u>SD</u>	<u>Control</u>	<u>SD</u>	<u>% of Control</u>
Pretreated seed weights	5	0.75 g dwt*	0.007	0.75 g dwt	0.006	100
Seedling dry weights	5	0.85 g dwt	0.020	0.81 g dwt	0.025	105
Seedling weight increases	5	0.10 g dwt	0.001	0.06 g dwt	0.0015	167
Seedling roots increases	5	0.08 g dwt	0.001	0.05 g dwt	0.0015	160
Average showing brace roots	5	3.8 seedlings	0.447	1.2 seedling	0.447	317
Average tap root length	5	6.14 mm	1.41	4.62 mm	3.56	133
Total tap root length	5	30.73 mm		23.11 mm		
Color on Seedling emergence	5	Dark green		Green		

* "dwt" denotes dry weights at normal moisture levels for seed (about 9-10% in this case) and other measured weights after drying for 96 hours at low heat (90° Fahrenheit).

BENTECH LABORATORIES, INC.

GREENHOUSE TESTING

INVESTIGATOR: R. E. LEWIS

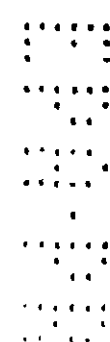
CROP: SOYBEANS
VARIETY: OZZIE
(86% GERMINATION RATE)
LOT #51KHR
86-AP-189

MAY 23, 1988

SEED GERMINATION TRIALS

Soybean seed were coated at the rate of 16 ounces/CWT with YEA! or water in the case of controls to determine the early effects of growth with YEA!. The YEA! treated seeds germinated on average of 24-36 hours faster and with more vigor and better color than the controls. The NPK value of YEA! is zero and therefore is inconsequential to the results. The soil is nutrient rich potting type and seeds were planted into divided flats. Normal upper Midwest Springtime temperatures and moisture conditions were used in these trials. The seed utilized was obtained from FINCO and was a certified seedlot untreated from 1986 growing season from which the following results were obtained:

<u>Treatment</u>	<u>Reps</u>	<u>Actual %</u>	<u>Avg. # Germinated/12</u>	<u>SD</u>	<u>% Control</u>
YEA! @ 16 oz/CWT	6	90.3	10.83	0.40	108
Control	6	83.3	10.00	0.71	100
Increase with YEA!		+7%	0.83 PLANTS/12		+8%



GALE McNEESE FARM
BRITT, IOWA

INVESTIGATORS:
GALE McNEESE
BOB FINSTROM

CROP: SOYBEANS
VARIETY: T-30

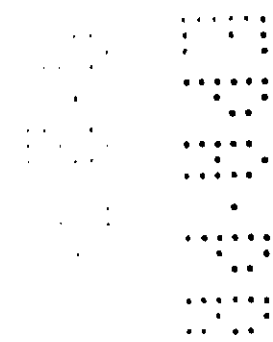
JUNE 10, 1988

EARLY GROWTH MEASUREMENTS

Soybean seed were coated at the rate of 16 ounces/CWT with YEA! or untreated in the case of controls to determine the early effects of growth and ultimate yield enhancing effects with YEA!.

<u>Treatment</u>	<u>Reps</u>	<u># Trifoliates</u>	<u>SD</u>	<u>% Control</u>	<u>Rx</u>	<u>Development*</u>	<u>SD</u>	<u>% Control</u>
YEA!	5	7.2	0.75	138		6.5	0.7	130
Control	5	5.2	0.85	100		5.0	0.0	100
Increase with YEA!		+2.0		+38%		+1.5		+30%

* 1-10 scale (low to high) with controls rated at 5.0 was used by investigators to rate root development in the above trial.



GALE McNEESE FARM
BRITT, IOWA

INVESTIGATOR: GALE McNEESE

CROP: SOYBEANS

SEPTEMBER 20, 1988

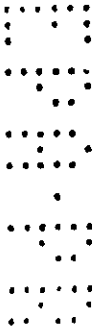
PRE-HARVEST POD COUNTS

VARIETY: T-30

<u>Treatment</u>	<u>Reps</u>	<u>Pod/Plant</u>	<u>SD</u>	<u>% Control</u>
YEA! 16 oz/CWT	10	41.7	3.8	114
Control	10	<u>36.6</u>	<u>5.1</u>	<u>100</u>
Additional pods with YEA!		+5.1		+14%

VARIETY: T-15

<u>Treatment</u>	<u>Reps</u>	<u>Pod/Plant</u>	<u>SD</u>	<u>% Control</u>
YEA! 16 oz/CWT	10	45.7	5.9	127
Control	10	<u>36.0</u>	<u>3.6</u>	<u>100</u>
Additional pods with YEA!		+9.7		+27%



MELVIN WENTZEL FARMS
MURDOCK, MN

INVESTIGATORS:
NORRIS AUSTVALD
BOB FINSTROM

CROP: SOYBEANS
VARIETY: NORTHRUP KING S-1346

JULY 15, 1988

POST FLOWERING POD COUNTS

RESULTED IN FIELD HARVEST YIELD INCREASE OF +6.15 BU/ACRE ON YEA!
(20% MORE THAN CONTROLS)

<u>Treatment</u>	<u>Reps</u>	<u>Pod/Plant</u>	<u>SD</u>	<u>% Control</u>
YEA! 16 oz/CWT	3	187.3	10.26	146
Control	3	128.6	17.92	100
Additional pods with YEA!		+58.7		+46%