STATE OF HAWAII
Department of Agriculture
ACCEPTED
LICENSE NO. 9314.26

Cytoplex® HMS®

A Plant Hormone Supplement

Active Ingredients:
Cytokinin (as kinetin, based on bioassay).....0.010%
Includes:
6-(4-hydroxy-3-methylbut-trans-2-enylamino)-purine
N^6-methylaminopurine,
N^6-dimethylaminopurine,
N^6-isopentenylaminopurine
Auxin:
Indole-3-butyric acid 0.005%
Gibberellin:
Gibberellic acid A_3 .....0.004%
Other Ingredients 99.981%
Total 100.000%

KEEP OUT OF REACH OF CHILDREN
CAUTION

FIRST AID	
If swallowed	Call poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything by mouth to an unconscious person.
If inhaled	Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call poison control center or doctor for further treatment advice.
If on skin or clothing	Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call poison control center or doctor for treatment advice.
If in eyes	Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call poison control center or doctor for treatment advice
Have the product container or label with you when calling a poison control center or doctor, or going for treatment You may also call 1-800-222-1212 24 hours a day for emergency medical treatment information.	

SEE INSIDE THIS LABEL FOR ADDITIONAL PRECAUTIONARY STATEMENTS.

Contains 0.05% aminoindole-3-propionic acid

EPA Registration Number 90930-6 EPA Establishment # 45246-ME-1, 90930-PA-0001

Net Contents: 1 Gallon

Manufactured for Miller Chemical & Fertilizer, LLC
P.O. Box 333 Hanover, Pennsylvania 17331

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PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION: Harmful if swallowed, inhaled or absorbed through skin. Avoid contact with skin clothing or eyes.

Personal Protective Equipment

Applicators and other handlers must wear long-sleeved shirt and long pants and shoes plus socks.
Follow manufacturer's instructions for cleaning/maintaining personal protective equipment. If no such instructions for washables, use detergent and hot water. Keep and wash personal protective equipment separately from other laundry.

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides (40 CFR 170.240(d)(4-6), the handler PPE requirements may be reduced or modified as specified in the WPS.

User Safety Requirements
Users should:

-Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
-Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
-Remove personal protective equipment immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS

For Terrestrial Uses: Do not apply directly to water or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment, washwater or rinsate.

DIRECTIONS FOR USE

It is a violation of federal law to use this product in a manner inconsistent with its labeling. Before using Cytoplex HMS, read and follow the precautions appearing on the label.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), notification to workers and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 4 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water: coveralls, waterproof gloves and shoes plus socks.

Chemigation System

Apply Cytoplex HMS only through the following types of systems: sprinkler, including center pivot, lateral move, end tow, side roll, traveler, big gun, solid set, or hand move; or drip (trickle) irrigation systems. Do not apply this product through any other type of system.

Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from non-uniform distribution of treated water.

If you have questions about calibration, contact State Extension Service specialists, equipment manufacturers or other experts.

Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place. A person knowledgeable about the chemigation systems and responsible for its operation, or under supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.

Public water system means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals at least 60 days out of the year.

Chemigation systems connected to public water systems must contain a functional, reduced-pressure zone (RPZ), back flow preventer or the functional equivalent in the water supply line upstream from the point of pesticide introduction. As an option to the RPZ, the water from the public water system should be discharged into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the outlet end of the fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe.

The system must contain a functional check valve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.

The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.

The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops. The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.

Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock. Do not apply when wind speed favors drift beyond the area intended for treatment.

Supply pesticide tank agitation, especially if product is to sit in tank for over 6 hours.

Cytoplex HMS may be applied continuously for the duration of water application or with the first quarter to one-half of the watering period.

Mixing instructions: Fill supply tank to 1/4 to 1/2 full. Add Cytoplex HMS and complete filling.

STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage or disposal.

Pesticide Storage: Store in a cool, dry place and in such a manner as to prevent cross contamination with other pesticides, fertilizers, food, and feed. Store in original container and out of reach of children, preferably in locked storage area.

Pesticide Disposal: Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

Container Disposal: Non-refillable container. Do not reuse or refill this container. Offer for recycling, if available. Triple rinse container (or equivalent) promptly after emptying.

Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times.

Use Cytoplex HMS in combination with a well-balanced fertility program and good management practices. The Company recommends the use of soil and tissue testing, and additional nutrients and micronutrients as needed.

WARRANTY: The manufacturer warrants that this product shall be of its standard quality and shall conform to the label thereon. Recommendations for use of the product are based on tests believed to be reliable. The use of the product being beyond the control of the manufacturer, no guarantee expressed or implied is made as to the effects of such or the results to be obtained, except as expressly set forth on the label hereon. The BUYER must assume all responsibility if not used in accordance with directions or established safe practices, including injury or damage resulting from its misuse as such or in combination with other materials. The manufacturer's liability shall be limited to the replacement without charge, FOB warehouse, of all product shown to be otherwise than as warranted.

Cytoplex HMS
Suggestions for Use as a Plant Hormone Supplement
APPLICATION INSTRUCTIONS
SHAKE WELL BEFORE USING

Good growing conditions are necessary for the maximum benefits from utilization of Cytoplex. For maximum gain from the use of Cytoplex, a well-balanced plant nutrient program should always be used. Cytoplex, in any of its applications, is not intended to replace fertilizer or to supply nutrients that would normally be added in a conventional fertility program. Timing of the foliar spray application is very important. Always follow directions precisely. Do not apply within eight hours of forecast rain. For best results, Cytoplex should be applied in the early morning or late afternoon, especially when temperature exceeds 95°F (36°C).
TRANSPLANTS: For a quick start, dip roots in a solution of 1 tablespoon Cytoplex HMS per gallon of water prior to transplanting or drench flats with a solution of 1/2 oz. per gallon of water.

SPECIMEN LABEL

CROP USE GUIDELINES

A blanket exemption from the requirement of a tolerance has been issued by the U.S. EPA for the active ingredients in this product. This product is cleared for use on any and all crops.

For local use recommendations for major and minor crops, contact your PCA or local distributor representative.

For maximum benefit, all foliar applications should include Calcium EDTA or other highly available calcium source in the tank mix.

CROP	OZ/ACRE (each application)	TIMING AND FREQUENCY
Cotton	1-2 fl. oz.	Apply in seed furrow.
	2 fl. oz.	Spray in a band at 1 to 3 leaf stage.
	3-4 fl. oz.	Spray at pinhead or match head square.
	6-8 fl. oz.	Spray at early bloom and to late bloom.
Corn (field)	2 fl. oz.	Apply in seed furrow at planting.
	6 fl. oz.	Spray in band at 5 to 7 leaf stage.
	6 fl. oz.	Repeat 2 weeks later.
Corn (sweet, popcorn)	2 fl. oz.	Apply in furrow prior to planting or with seed.
	6 fl. oz.	Spray in a band at 3 to 5 leaf stage (12" to 16").
	6 fl. oz.	Repeat 2 weeks later.
Rice	8 fl. oz.	Spray at 3 to 7 leaf stage.
	8 fl. oz.	Spray at panicle differentiation.
Sorghum (Milo)	2 fl. oz.	Apply in seed furrow at planting.
	4-6 fl. oz.	Banded spray at 5 to 7 leaf stage.
	4-6 fl. oz.	Apply at boot to early bloom.
Soybeans	4 fl. oz.	Broadcast preplant incorporated with herbicide or 1-2 fl. oz./A in furrow with seed.
	4 fl. oz.	Spray at third to fifth trifoliate.
	6 fl. oz.	Spray at pod fill.
Sugar Beets	4 fl. oz.	Banded spray at the 6 to 8 leaf stage.
	8 fl. oz.	30 days after first application
Winter wheat, Barley, Rye	8 fl. oz.	For winter grazing: Apply two weeks after emergence.
	4-8 fl.oz	Make a second application when spring growth begins after vernalization to increase grain production.
Spring wheat, Barley, Rye, Oats	8 fl. oz.	Spray when plants have 3 to 5 true leaves emerged.
Forage crops- Legumes or grasses	8-16 fl. oz.	Treat seed with Arise Seedling Booster. Spray Cytoplex 4 to 6 weeks after emergence and monthly thereafter. Mature Crop: Spray Cytoplex as spring growth begins, 1 week before harvest and again 2 weeks after cutting.

CROP USE GUIDELINES (CONTINUED)

CROP	OZ/ACRE (each application)	TIMING AND FREQUENCY
Seed production	8-16 fl. oz.	On established crops: spray Cytoplex at the beginning of inflorescence development (early tillering) and again 2 weeks later.
		Spray 8 to 16 oz/acre at the beginning of bloom.
Asparagus	12 fl. oz.	Spray fern 2 weeks after last harvest.
	8 fl. oz.	Spray monthly during fern growth.
Beans (all)	3 fl. oz.	Spray banded at the third trifoliate.
	6 fl. oz.	Spray (broadcast) at first bloom.
Broccoli, Cabbage,	2 fl. oz.	Band 2 weeks after transplant.
Cauliflower, Celery	4 fl. oz.	Band 4 weeks after transplant. Repeat biweekly.
Brussels Sprouts		
Carrots, Beets,	8-12 fl. oz.	Apply when seedlings have 3 to 6 leaves.
Other root crops	4-8 fl. oz.	Follow at 2 to 4 week intervals.
Cucurbita: watermelons,	2 fl. oz.	Banded at 2 to 4 leaf stage.
Cantaloupe, cucumbers,	4 fl. oz.	Banded when plants show first signs of running.
Muskmelons	6 fl. oz.	Broadcast two weeks after first application.
Grapes	4-8 fl. oz.	General: Apply Cytoplex at 4 oz. with all foliar nutritional or pesticidal sprays.
		Sizing: Apply as tank mix with all GA sizing sprays.
		Harvest: Apply Cytoplex with high potash fertilizer at 2 to 10 days before harvest to enhance sugar accumulation.
Onions, Garlic	8-16 fl. oz.	Make first application at bulb initiation. Repeat at two week intervals for up to 4 applications.
Peanuts	2 fl. oz.	Two weeks after emergence, banded.
	6 fl. oz.	Apply at bloom and at initial pegging.
Peppers: Bell	2-4 fl. oz.	Banded at the 3 to 5 leaf stage.
Chile, Cayenne,	4-8 fl. oz.	Apply at 7 to 14 day intervals for 4 to 6 applications.
Jalapeno		
Potatoes	4 fl. oz.	Add to fertilizer and incorporate in seed furrow prior to planting.
	6 fl. oz.	Banded at stolonization.
	8 fl. oz.	Broadcast 2 to 4 weeks later.
Spinach, lettuce, and	2-4 fl. oz.	Begin at the 3 leaf stage and apply weekly at 4 to 6 oz.
other leafy vegetables	4-8 fl. oz.	thereafter.
Squash	3 fl. oz.	Band at 2 to 4 leaf stage.
	8 fl. oz.	Broadcast at early bloom.
	8 fl. oz.	Broadcast at 14-day intervals.

SPECIMEN LABEL

CROP USE GUIDELINES (CONTINUED)

CROP	OZ/ACRE (each application)	TIMING AND FREQUENCY
Sugarcane	16 fl. oz.	Planting: In furrow over newly laid cane. Foliar: 1st – At beginning of raton bud extension. 2nd – At beginning of sugar accumulation. 3rd – One to three weeks before harvest.
Strawberries	8 fl. oz.	Broadcast 2 to 3 weeks prior to coming out of dormancy.
	8 fl. oz.	Broadcast at early bloom and at 14-day intervals thereafter.
Tomatoes (processing)	2 fl. oz.	Apply in a band (14") 1 week after transplant or at 6 to 8 leaf stage.
	8 fl. oz.	Broadcast at early bloom and again 2 weeks later.
Tomatoes (fresh market)	2 fl. oz.	Apply in a band (14") 1 week after transplant or 6 to 8 leaf stage.
	4 fl. oz.	Band 3 weeks later.
	8 fl. oz.	Broadcast with calcium or foliar fertilizer every 14 days.
Nut crops - Almonds, Pecans, Pistachios, Filberts, Walnuts, Cashews	16-32 fl. oz.	Apply Cytoplex with 10 lb/acre low-biuret urea at mid-nut fill and again one month later.
	8 fl. oz.	Add to each zinc or calcium spray
	16-32 fl. oz.	Apply prior to flowering Ask your local PCA for specific regional timing.

All Fruits: Apple, Cherry, Citrus (Orange, Lemon, etc.) Banana, Stonefruits (Peach, Plum, etc.), Pear, Mango, Papaya, Pineapple

Transplants: Follow general transplant instructions.

Fruit trees in production: Spray fruit trees with a solution of 1 oz Cytoplex in 4 gallons water (or 1 to 2 pints/A) at the following growth stages:

1. At bud break to increase pollination efficiency. (Cytoplex will not harm bees or pollinating insects);
2. At 1 week after petal fall to promote cell division;
3. At 1 to 2 weeks before fruit drop to reduce physiological stress and reduce fruit drop;
4. At 20 to 30 days after petal fall to increase fruit size;
5. Monthly during fruit growth and development to promote nutrient translocation to produce larger and better quality fruit.

Non-Bearing Use for TREES, FRUITS, NUTS, BERRIES, SHRUBS AND WOODY ORNAMENTALS:

To aid in propagation of trees, fruits, berries, soft wood cuttings, shrubs and woody ornamentals and to reduce transplant shock, to promote growth and vigor and reduce stress in non-bearing fruit trees such as apple, peach; berry and vine crops such as cranberries; evergreen trees such as spruce, fir, pine; deciduous trees such as birch, elm, maple; flowering plants and shrubs such as poinsettia, rose, azalea, rhododendron, crepe myrtle; and for other flowering and non-flowering shrubs

New cuttings: Spray Cytoplex at 1 to 2 pints per acre on the stems, branches, vines or canes to be propagated from 1 to 7days before cutting. After planting, spray Cytoplex at 1/2 to 1 pint or apply through the irrigation system at weekly intervals until the plants are established.

Replant areas: Spray the plants before cutting. Then spray Cytoplex weekly at 1/2 to 1 ounce per 1500 square feet and irrigate in. Continue weekly to biweekly applications until the plants are established.

Established Trees and Shrubs: Spray 1 to 2 pints per acre, or a mixture of 1 oz. Cytoplex to 4 gallons water to thoroughly wet the foliage at any or all of the following growth stages:

1. Early spring to promote bud initiation;
2. At bud break;
3. At terminal calyx;
4. Early to mid fall.

For best results apply Cytoplex with foliar nutrients, micronutrients or secondary nutrient sprays such as calcium, iron, and zinc.

TURF

Spring Application: Make an early application of 1/2 to 1 fl. oz. Cytoplex per 1000 sq. ft. to promote tiller, rhizome or stolon growth, to develop a deep root system, and to give the turf a rapid start once winter dormancy is broken and growth begins. Continue monthly 1/2 fl. oz./1000 sq. ft. applications throughout spring and summer. Spring application is important to develop a deep root system which will condition the turf and reduce the stress of disease and summer heat or low rainfall. Apply Cytoplex with iron sulfate for maximum root growth response.

Fall Application: Two to three applications of Cytoplex (1/2 to 1 fl. oz. per 1000 sq. ft.) should be made in the fall beginning about eight weeks before the turf becomes dormant (eight weeks before first frost date in the northern states) to promote root growth and provide the grass with the vigor to better endure the stress of winter (reduce winter kill) and improve survival of a good healthy turf for the following spring.

Golf Greens, Fairways, Football and Soccer Fields, and Baseball Infields and Outfields: At the beginning of spring growth apply 1 to 2 fl. oz. per 1000 square feet at the breaking of dormancy. Make successive maintenance applications of 1/2 to 1 fl. oz. per 1000 sq. ft. at monthly intervals or as needed to maintain root growth, tillering, appearance and vigor throughout the growing season. During periods of intensive use apply 1/2 to 1 fl. oz. per 1000 sq. ft. weekly to the greens, infield or playing field to maintain root structure and renew growth and vigor between games. Make three applications of 1/2 fl. oz. per 1000sq. ft. at 2 week intervals in the fall beginning about eight (8) weeks before turf becomes dormant to promote root growth and increase winter stamina to reduce winter kill.

Sod: Spray Cytoplex to newly laid sod at 1/2 to 1 fl. oz. per 1000 sq. ft. to promote rooting and increase the rate of sod establishment. Maintain growth and vigor with monthly applications of 1/2 to 1 fl. oz. per 1000 square feet.

Sod Farming: Spray Cytoplex at 1/2 to 1 pint/acre monthly to sod fields to promote root, tiller and rhizome growth and to bring the crop to harvest more quickly. Maintain accelerated growth with Cytoplex applications of 1/2 to 1 pints/acre at 2 to 4 week intervals or as needed. Spray Cytoplex at 1/2 to 1 pints per acre to sod 1 to 4 days before harvesting to initiate new root growth and speed up establishment when sod is laid.

Lawns, Playgrounds, Parks, Recreational Areas, Landscaped Roadways and Cemeteries: Apply 1 fl. oz. per 1000 sq. ft. at the beginning of spring growth to promote a deep root system and tillering to fill sparse areas. Apply at 1/2 to 1 fl. oz. per 1000sq. ft. monthly to maintain health and vigor of the turf. Application can be made more frequently as needed to condition the turf for stress or for periods of heavy use.

Nutritional sprays: For better color response from nitrogen, iron, sulfur, zinc and other nutrient sprays use 1/2 to 1 pt. Cytoplex per acre with nutrient spray solution. For greens or smaller area, add 1/2 to 1 fl. oz. Cytoplex per 3 to 5 gallons spray solution.

NURSERY AND GREENHOUSE USE

To promote bud differentiation, cell division, root induction and growth and to reduce apical dominance. Use Cytoplex HMS in your watering program or as foliar spray.

Propagation of Cuttings: Dip cuttings in rooting hormone powder or solution and stick in rooting medium. Spray or mist cuttings with a solution of 1 fl. oz. Cytoplex to 4 gallons water (1 qt./100 gallons) at weekly intervals until root buds initiate. Then spray at 2 to 4 week intervals.

Transplanting: Add 1 fl. oz. Cytoplex per 4 gallons of transplant solution (fertilizer-water). Drench the root zone. Follow with spray to foliage or add through irrigation system at 2 to 4 week intervals at the rate of 1 quart per 100 gallons.

Production: To increase growth rate, improve quality and resilience of nursery and greenhouse crops, add 1 fl. oz. Cytoplex per 4 gallons (1 qt./100 gallons) of fertilizer or water solution and apply through the irrigation system or via foliar spray.

Nutritional Deficiencies: To promote rapid uptake and correction of nutrient deficiencies in ornamentals and turf, add Cytoplex to iron, nitrogen fertilizers, zinc or other nutrient solutions at the rate of 1 fl. oz. per 4 gallons (1 qt./128 gallons). Apply as a foliar spray or soil drench.

LANDSCAPE MANAGEMENT (see Turf uses also)

Bedding Plants: Spray bedding plants at 2 to 4 week intervals with a solution of 1 fl. oz. Cytoplex per 4 gallons water (1 qt./128 gallons), fungicide or nutrient spray to promote growth, flowering and maximum color development.

Lawn Care: Spray Cytoplex to lawns at the rate of 1/2 fl. oz. per 1000 sq. ft. Cytoplex can be added to liquid fertilizer, insecticide, fungicide, or herbicide sprays.

Transplanting of trees, shrubs or bedding plants: See transplanting instructions under nursery use.

Maintenance: To promote growth and reduce stress from drought, disease or nutrient deficiency. Spray Cytoplex to foliage at the rate of 1 fl. oz. per 4 gallons of water or fertilizer or pesticide solution (1 qt./128 gallons).

Nutritional Deficiencies: To promote rapid uptake and correction of nutrient deficiencies in ornamentals and turf, add Cytoplex to iron, nitrogen fertilizer, zinc or other nutrient spray solutions at the rate of 1 fl. oz. per 4 gallons (1 qt./128 gallons). Apply as a foliar spray or soil drench.

Root Feeding: Mix Cytoplex with root feeding solutions at the rate of 1 fl. oz. per 4 gallons of nutrient solution (1 qt./128gallons).

11/30/2015