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4	US ENVIRON	MENTAL PROTECTION AG	ENCY -	EPA REGISTRATION NO.	PATEL VIEW	(C) (C)
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3				NAME OF PESTICIDE PROD	UCT	2473 5100
NO.	OTICE OF P	RERE	GISTRATION	DiPel® 2X WDG		
		federal insecticide, Fur enticide Act, as amende		BIOLOGICAL INSE	ECTICIDE	
NAME /	AND ADDRESS	OF REGISTRANT (Include	ZIP code)	<del></del>		•
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	C.A.P.D. 1401 Sher	idan Road				
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		rmstion furnished by the		above named pesticide is here	eby Registered/Rere	gistered under
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- 3. Submit a revised Confidential Statement of Formula (CSF) which correctly reflects the potency of the manufacturing product used to formulate DiPel® 2X WDG, i.e. 70,800 Iu/mg. The revised CSF should also list the potency values of 38,232 Iu/mg; 42,480 Iu/mg; and 32,568 Iu/mg under the percent by weight in columns 13(b), 14(a) and 14(b) respectively for the active ingredient. Column 13(b) should also list the percent pure active ingredient at 7.65%.
- 4. Submit five (5) copies of your final printed labeling before you release the product for shipment.

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6(e). Your release for shipment of the product constitutes acceptance of these conditions. A stamped copy of the label is enclosed for your records.

Note that this acceptance of your product does not relieve you of your obligation to comply with the Worker Protection Standard. If any of your products are covered by this standard, you are required to submit, and receive the Agency's approval by April 21, 1994, a revised label reflecting the required label statements of 40 CFR 156, published in the FEDERAL REGISTER on August 21, 1992 (57FR 38102). Further guidance will be issued. According to 40 CFR 156, subpart K: "No product to which this subpart applies shall be distributed or sold without amended labeling by any registrant after April 21, 1994. Please call 1-800-777-2185 if you have any labeling questions regarding the Worker Protection Standard.

Sincerely,

Phil Hutton

Product Manager 18

Insecticide-Rodenticide Branch Registration Division (H7505C)

Enclosure

## DiPel 2X WDG BIOLOGICAL INSECTICIDE

WATER DISPERSIBLE GRANULE BIOLOGICAL INSECTICIDE

Active Ingredient:

Bacillus thuringiensis, subsp. kurstaki
32,000 International Units of Potency per mg (14.52
Billion International Units per Pound) 6.4%w/w
Inert Ingredients: 93.6%w/w
Total:

Potency units should not be used to adjust use rates beyond those specified in the Directions For Use section.

### KEEP OUT OF REACH OF CHILDREN

CAUTION

ACCEPTED
with COMMENTS
in EPA Letter Duter

EPA Registration No. 275-EPA Est. No. 33762-IA-1 SEP 07 1993

PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS

Under the Federal Insecticide, Fungicide, and Rodenticide Act as amended, for the posticide registered under EPA Reg. No.

Harmful if swallowed, inhaled, or absorbed through the skir May cause eye irritation. Avoid breathing dust or spray mist. Avoid contact with skin, eyes, or clothing. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash before reuse. Do not apply this product in such a manner as to directly or through drift; expose workers or other persons. The area being treated must be vacated by unprotected persons. Mixers, loaders, and applicators must wear a dust mask when handling this product.

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#### RE-ENTRY STATEMENT

Do not enter treated areas without protective clothing until sprays have dried. Because certain states may require more restrictive reentry intervals for various crops treated with this product, consult your State Department of Agriculture for further information. Written or oral warnings must be given to workers who are expected to be in a treated area or in an area about to be treated with this product. warnings should at a minimum include that 1) areas being treated must be vacated by unprotected persons, 2) workers must not enter treated areas without protective clothing until sprays have dried, and 3) in case of contact with eyes or skin, those exposed should immediately flush eyes or skin with plently of water and seek medical attention if irritation persists. When oral warnings are given, warnings shall be given in a language customarily understood by Oral warnings must be given if there is reason to believe that written warnings cannot be understood. warnings must include the following information: "CAUTION. Area treated with DiPel 2X WDG on (date of application). not enter without protective clothing until sprays have If in eyes or on skin - Flush eyes or skin with plenty of water. Get medical attention of irritation persists."

### STATEMENT OF PRACTICAL TREATMENT

In case of contact with eyes or skin, immediately flush eyes or skin with plenty of water. Get medical attention if irritation persists.

### STORAGE AND DISPOSAL

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

Storage: Reclose containers of unused DiPel 2X WDG. Store in a dry place inaccessible to children and out of sunlight.

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:

Plastic Bottle: Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

Metal can: Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

## DIRECTIONS FOR USE

Do not apply this product through any type of irrigation system.

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

Days to Harvest: There are no restrictions on applying DiPel 2X WDG up to the time of harvest. Individual state regulations may vary and should be consulted for allowable pre-harvest application intervals.

Sites: DiPel 2X WDG may be used for any labeled pest in both field and greenhouse use.

DiPel 2X WDG is an insecticide for use against listed caterpillars (larvae) of lepidopterous insects. Close scouting and early attention to infestations is highly recommended. Larvae must eat deposits of DiPel 2X WDG to be affected. Always follow these directions:

- Treat when larvae are young (early instars) before the crop is damaged.
- Larvae must be actively feeding on treated, exposed plant surfaces.
- Thorough spray coverage is needed to provide a uniform deposit of DiPel 2X WDG at the site of larval feeding. Use overhead and drop nozzles to obtain good spray coverage on both sides of foliage. Use sufficient spray volume to insure uniform deposition on all plant surfaces.

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- Under heavy pest population pressure, use the higher label rates, shorten the spray interval, and/or raise spray volume to improve spray coverage.
- Repeat applications at an interval sufficient to maintain control, usually 3 to 14 days depending on plant growth rate, moth activity, rainfall after treating, and other factors. If attempting to control a pest with a single spray, make the treatment when egg hatch is essentially complete, but before crop damage occurs.
- A spreader-sticker which has been approved for use on growing and harvested crops should be added for hard-to-wet crops such as cabbage, or to improve weather-fastness of the spray deposits.
- DiPel 2X WDG is a non-restricted use pesticide and does not require a restricted use permit for purchase and use.
- DiPel 2X WDG may be tank mixed with other labeled insecticides to enhance control. Use of the resulting tank mix must be in accordance with the more restrictive label limitations and precautions. No dosage rates should be exceeded. This product cannot be mixed with any product containing a label prohibition against such mixing. Before tank mixing DiPel 2X WDG with other labeled products, including spreader stickers, check for tank mix compatibility.

After ingesting a lethal dose of DiPel 2X WDG, larvae stop feeding within the hour, and will die within several hours to 3 days. Mortality varies with larval size (instar), lepidopteran species, and dose consumed. Following ingestion, larvae become sluggish, discolor, then shrivel, blacken and die. Smaller larvae die more quickly.

DiPel 2X WDG may be applied in conventional ground or aerial equipment with quantities of water sufficient to provide uniform coverage of infested plant parts The volume of water needed per acre will depend on crop development, relative humidity, spray equipment, and local experience. Usually, selection of moderate to high spray volume will provide the best results in most equipment. For optimal results, use at least 3 gallons of water per acre by air; except in arid areas, where 5 to 10 . gallons are required. Add water to the mix tank and provide. moderate agitation. With agitating, add the required amount of DiPel 2X WDG. Continue agitation, and add other spray materials, if any. Add remaining water, if any, and agitate' until fully mixed. Maintain the suspension with moderate agitation while loading and spraying. Do not mix more DiPel 2X WDG than can be used in a 3 day period.

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## DIRECTIONS FOR USE (Continued)

For Smaller Spray Volumes:

If Rate is	Use This Amount Per Gallon (wt)		
1/4 lb./acre or 100 gals. 1/2 lb./acre or 100 gals. 1 lb./acre or 100 gals. 2 lb./acre or 100 gals.	1/2 tsp. (0.04 oz) 1 tsp. (0.08 oz) 2 tsps. (0.16 oz) 4 tsps. (0.32 oz)		

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## APPLICATION RATE

	Crop Group (Miscellaneous)	Pests Po	ounds/Acre
	Alfalfa (Hay and Seed), Hay and Other Forage Crops	Looper Alfalfa Caterpillar European Skipper (Essex Skipper) Armyworm	1/2 - 1 $1/2 - 1$ $1/2 - 1$ $1 - 2$
)	Berries and Small Fruit such as Grape, Strawberry, and Blackberry	Grapeleaf Skeletonia (ground only) Grape Leafroller Achema Sphinx Moth (Hornworm) Saltmarsh Caterpilla (ground only) Omnivorous Leafrolle (ground only) Looper	1/2 - 1 $1/2 - 1$ $1/2 - 1$ ar $1/2 - 1$
)		Orange Tortrix Oblique Banded Leafroller Armyworm Tobacco Budworm Grape Berry Moth Melonworm Cutworm	1/2 - 1  1/2 - 1  1 - 2  1/2 - 2  1/2 - 1  1/2 - 1  1/2 - 1
)	Bulb such as Garlic and Onion (green and bulb)	Looper Omnivorous Leafrolle Hornworm Imported Cabbageworn Diamondback Moth Green Cloverworm Webworm Saltmarsh Caterpilla Armyworm Cutworm Cross-striped Cabbae worm Heliothis	$   \begin{array}{r}     1/4 - 1 \\     1/4 - 1 \\     1/2 - 1 \\     1/2 - 1 \\     1/2 - 1 \\     1 - 2 \\     1/2 - 1   \end{array} $
)	Cucurbit Vegetables such as Melon, Cucumber and Squash	Looper Melonworm Rindworm <sub>l</sub> complex Armyworm	$   \begin{array}{r}     1/2 \div 1 \\     1/2 - 1 \\     1/2 - 1 \\     1 - 2   \end{array} $

# APPLICATION RATE (Continued)

Crop Group (Miscellaneous)	Pests Por	ınds/Acre
Flowers, Bedding Plants and Ornamentals (Ground application only)*	Looper Tobacco Budworm Omnivorous Looper Omnivorous Leafroller Diamondback Moth Armyworm Ello Moth (Hornworm) Io Moth	1/4 - 1 $1 - 2$ $1/4 - 1$ $1/4 - 1$
	Oleander Moth Azalea Caterpillar	$\frac{1}{4} - 1$ $\frac{1}{4} - 1$
Fruiting Vegetables such as Tomato, Pepper and Eggplant	Looper Hornworm Tomato Fruitworm Variegated Cutworm Saltmarsh Caterpillar Armyworm	1/2 - 1 1/4 - 1 1/2 - 1 1/2 - 1 1/2 - 1 1 - 2
Greenhouse/Shadehouse and Outdoor Nursery Crops such as Leafy, Herbs, Brassica and Fruiting groups	Looper Heliothis	1/2 - 1 1/2 - 2
Herbs, Spices and Mints such as Basil, Chive, Dill, Leek and Peppermint	Looper Saltmarsh Caterpillar Armyworm	1/2 - 1 $1/2 - 1$ $1 - 2$
Leafy and Cole Crops such as Lettuce (head and leaf), Kale, Celery, Spinach, Broccoli, Cabbage, Mustard Greens, Brussels Sprout, Cauliflower, Collard, Chinese Cabbage, Endive Kohlrabi and Parsley	Looper Omnivorous Leafroller Hornworms Imported Cabbageworm Diamondback Moth Green Cloverworm Webworm Saltmarsh Caterpillar Armyworm Cutworm Cross-striped Cabbage worm Heliothis	$\frac{1-2}{1/2-1}$
Legume Vegetables such as Bean, Pea, Lentil and Soybean.  30-Sept-92, Master Labeling	Looper Soybean Looper Green Cloverworm Velvetbean Caterpilla Armyworm Podworm	1/2 - 1 1/2 - 1 1/4 - 1
	-	- 3 -

## APPLICATION RATE (Continued)

Crop Group (Miscellaneous)	Pests	Pounds/Acre
Root and Tuber such as Carrot, Potato, Beet and Sugarbeet	Looper Omnivorous Leafroll Hornworm Imported Cabbageword Diamondback Moth Green Cloverworm Webworm Saltmarsh Caterpill Armyworm Cutworm Cross-striped Cabba worm Heliothis	$   \begin{array}{r}     1/4 - 1 \\     1/4 - 1 \\     1/4 - 1 \\     1/2 - 1 \\     1/2 - 1 \\     1 - 2 \\     1/2 - 1   \end{array} $ age-
Stone Fruit such as Cherry, Plum, Peach, Prune and Nectarine Pome Fruit such as Apple and Pear Tree Nuts such as Almond, Pecan, Walnut and Filbert Pomegranate	Redhumped Caterpill Tent Caterpillar Omnivorous Leafroll Fall Webworm Walnut Caterpillar Cankerworm Gypsy Moth Variegated Leafroll Redbanded Leafroll Tufted Apple Budmot Fruittree Leafroll Oriental Fruit Moth Cutworm Filbert Leafroller Obliquebanded Leaf- roll Codling Moth Armyworm Twig Borer	1/2 - 2 1/2 - 2 1/2 - 2 1/2 - 2 1/2 - 2 1/2 - 2 1/2 - 2 1/2 - 2 1/2 - 2 1/2 - 2 1/2 - 2 1/2 - 2 1/2 - 2 1/2 - 2 1/2 - 2
Small Grains (Ground application only)	Looper Armyworm <sup>1</sup>	1/2 - i 1 - 2
Tropical Fruits	Hornworm Leafroller Omnivorous Looper Looper	$   \begin{array}{r}     1/2 - 2 \\     1/2 - 2 \\     1/2 - 2 \\     1/2 - 2   \end{array} $

<sup>\*</sup> For best results, use a ground applicator, a minimum of 50 gallons total mix per acre, 50-100 psi and 3-7 nozzels per bed.

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## APPLICATION RATE

	OTHER CROPS:	Pests	Pounds/Acre
	Asparagus	Armyworm <sup>1</sup>	1/2 - 2
	Avocado	Amorbia Moth Omnivorous Leafroll Omnivorous Looper Orange Tortrix Spanworm	
	Bananas	Banana Skipper	1/2 - 1
•	Citrus	Fruittree Leafrolle Orangedog Citrus Cutworm <sup>3</sup>	2r 1/2 - 2 1/4 - 1 1/2 - 2
,	Corn (Sweet and Field and Sorghum	Armyworm <sup>1</sup> Headworm European Corn Bore:	$   \begin{array}{r}     1 - 2 \\     1/2 - 1 \\     1/2 - 2   \end{array} $
)	Cotton	Tobacco Budworm <sup>2</sup> Cotton Bollworm2 Looper Saltmarsh Caterpill Armyworm	$   \begin{array}{r}     1/2 - 2 \\     1/2 - 2 \\     1/2 - 1 \\     1 - 2   \end{array} $
	Нор	Looper Armyworm <sup>1</sup>	1/2 - 1 1 - 2
)	Kiwi Fruit	Omnivorous Leafroll	ler 1/2 - 2:.
)	Malanga	Saltmarsh Caterpill Armyworm	lar 1/2 - 1 1 - 2
	Peanut	Looper Velvetbean Caterpil Green Cloverworm Podworm	1/4 - 1
	Pineapple	Gummosos-Batrachedr comosae (Hodges) Thecla-Thecla basilides (Geyr)	$   \begin{array}{r}     1/2 - 1 \\     1/4 - 1/2 \\     1/4 - 1/2   \end{array} $

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### APPLICATION RATE (Continued)

OTHER CROPS	Pests	Pounds/Acre
Rape (Canola)	Looper Armyworm <sup>1</sup> Heliothis	1/2 - 1 $1 - 2$ $1/2 - 2$
Safflower	Looper Saltmarsh Caterpillar Armyworm	1/2 - 1 1/2 - 1 1 - 2
Sunflower (Ground application only)	Looper Head Moth	1/2 - 1 1/2 - 1
Tobacco	Tobacco Budworm Hornworm Looper	1/2 - 1 $1/4 - 1$ $1/2 - 1$
Turf	Sod Webworm	1 - 2

DiPel 2X WDG may be used to control small armyworms and/or podworms (1st and 2nd instar) when populations are light and full coverage sprays are applied. Repeat treatment as necessary. If mature worms or heavy populations are present a contact insecticide should be used to enhance control.

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<sup>&</sup>lt;sup>2</sup>Use to control light to moderate populations of newly hatched worms in integrated pest management conditions. Repeat treatments at 4 to 5-day intervals as long as necessary and results are acceptable. Use in combination with ovicidal rates of labeled Heliothis ovicides.

<sup>&</sup>lt;sup>3</sup>Apply to light to moderate populations of newly-hatched worms.

## APPLICATION RATE

# DiPel 2X WDG for Trees and Forests<sup>4</sup>

Crop	<u>Pest</u>	lbs/100 gallons 5
Forest, Shade, Sugar Maple Trees and Ornamentals	Gypsy Moth Bagworm Redhumped Caterpillar Spring & Fall Cankerworm Fall Webworm	1/4 - 1 1/4 - 1 1/4 - 1 1/4 - 1 1/4 - 1
(Ground application only)	Elm Spanworm Tent Caterpillar California Oakworm Pine Butterfly Spruce Budworm Saddle Prominent Caterpillar Douglas Fir Tussock Moth Western Tussock Moth Fruittree Leafroller Blackheaded Budworm	1/4 - 1 1/4 - 1 1/4 - 1 1/4 - 1 1/4 - 1 1/4 - 1 1/4 - 1 1/4 - 1 1/4 - 1 1/4 - 1 1/4 - 1
	Mimosa Webworm Jack Pine Budworm Saddleback Caterpillar Greenstriped Mapleworm Hemloc' Looper	1/4 - 1 1/4 - 1 1/4 - 1 1/4 - 1 1/4 - 1

<sup>&</sup>lt;sup>4</sup>Forest, Shade, Sugar Maple Trees and Ornamentals.

Note: Inclusion of a suitable spreader-sticker approved for forest insect co is recommenced to improve coverage, rain fastness and/or resist wash-off.

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 $<sup>^{5}\</sup>mathrm{Rate}$  for hydraulic sprayer. For mist blowers, mix the applicable amount (1 gallons of water.

Indian Meal Moth Almond Moth

3/8 lb. 100 bu (undiluted and diluted) \*\*

<sup>6</sup>For the control and prevention of these pests, apply DiPel 2X WDG in a constantly agitated water suspension to the top four inch surface layer of grain in the bin. Use a sprinkler can or sprayer to apply the suspension into the grain stream as the last (top) four inch layer is augered into the bin. Mix 1/20 lb. DiPel 2X WDG per gallon of water. Apply 0.6 pint of this mixture per bushel as grain is augered into storage. Or, sprinkle the suspension onto the surface of the grain in the bin and mix thoroughly with a scoop or rake to the depth of four inches. More thorough coverage may be achieved by dividing the recommended concentration into three applications and mixing the grain between applications.

For the protection of bagged grain including popcorn, apply the suspension to the entire grain mass and mix thoroughly prior to bagging.

Treatments can be applied to stored grain at any time, but for best results, make application immediately after harvest before moth activity occurs. In areas where late fall harvested grain is not subject to infestation because of low temperatures, application can be delayed until late winter or early spring before moth activity begins. Control for a full storage season should normally be expected; however, repeat application if infestation recurs.

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<sup>\*</sup> For all states except California.

<sup>\*\*</sup>As a surface treatment, apply 1/2 lb. DiPel 2X WDG in 5-10 gal. of water per 500 sq. ft of grain surface area, mix into top 4 inches. For commodities coarser than shelled corn, increase depth of treatment according to the habit of the pest.

## APPLICATION RATE (Continued)

DiPel 2X WDG FOR STORED AGRICULTURAL COMMODITIES (Continued) (For all states except California)

GRAINS, SOYBEANS, SUNFLOWER SEED, CROP SEED, CONDIMENTAL SEEDS, SPICES, HERBS, BIRDSEED and POPCORN. (Continued)

This treatment controls the moth larvae. If an infestation is present when the grain is treated, moth emergence may continue for several days. If immediate control of severe infestations is desired, grain should be fumigated prior to application of this treatment. DiPel 2X WDG will not control weevils or other beetles.

### **PEANUT**

**Pest** 

Rate

Indian Meal Moth, Almond Moth

1/4 lb./ton\*

To prevent and control these pests, spray an even coating of DiPel 2X WDG on the farmer stock peanuts while filing the warehouse. To make the spray solution, mix 3-3/4 lbs. DiPel 2X WDG per 5 gallons of water. Apply to 15 tons of commodity. Do not pre-mix more spray solution than will be used within 12 hours. Keep the spray suspension agitated during application, and use pressures and nozzles sufficient to handle this suspension.

Before filling the warehouse, clean thoroughly, then spray interior of the facility with a DiPel 2X WDG suspension at the rate of 1/2 lb. DiPel 2X WDG per 100 gallons water. Spray enough suspenion to wet all cracks and crevices.

For bagged peanuts, treat the entire quantity at the rate indicated above.

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<sup>\*</sup>Apply this rate to the top four to eight feet of nuts when filling the warehouse.

#### APPLICATION RATE

DiPel 2X WDG FOR STORED AGRICULTURAL COMMODITIES (Continued)

FLUE-CURED TOBACCO

<u>Pest</u>

Rate

Tobacco Moth

0.2 oz./100 lbs\*

\*Apply 0.2 ounce (approximately 2 1/2 tsps.) of DiPel 2X WDG in one quart of water per 100 pounds of tobacco as a fine mist spray. Avoid overwetting. Tobacco should have just enough moisture to be handled without shattering at the time of application.

Tobacco to be Stored up to Twelve Months.

Spray loose leaves as the tobacco is being bundled from the curing barn. For tobacco on sticks, treat both sides of leaves.

Stored Tobacco.

For tobacco which is to be carried over, rebundle or restack sticks, fluff up tobacco and spray loose leaves.

For tobacco that has been stored over three weeks, apply at first signs of infestation; promptly open bundles, spray loose leaves, then bundle.

Treatment of Storage Barns.

If tobacco has been treated, or is going to be treated, treatment of the floors and walls may be made to aid in control. Sweep out the area, especially cracks and corners, and all of the loose tobacco pieces in which the moth might breed. Make a spray mixture containing 1/2 oz. (6 tsps.) DiPel 2X WDG per 2 1/2 gallons of water. Apply this at a race of 1/2 gallon per 1000 sq. ft. of surface area Be sure to spray into cracks and between floorboards.

### NOTICE TO USER

Seller makes no warranty, express or implied, of merchantability, fitness or otherwise concerning the use of this product other than as indicated on the label. User assumes all risks of use, storage or handling not in strict accordance with accompanying directions.

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