

71512-3

8/13/2010

1 of 14



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460

OFFICE OF
CHEMICAL SAFETY AND
POLLUTION PREVENTION

Mr. Michael A. Peplowski
ISK Biosciences Corporation
7470 Auburn Road, Suite A
Concord, OH 44077
Dear Mr. Peplowski:

AUG 13 2010

Subject: Ranman 400SC
EPA Reg. No. 71512-3 (associated Petition 9E7615)
Amended Labeling – Adding Crop Group 5 Brassica (Cole) Leafy Vegetables;
Hops, Spinach; Turnip Greens
EPA Decision Number 420980
Your Application Dated August 26, 2009

The application referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide and Rodenticide Act, as amended, is acceptable, provided:

1. You submit by 7/31/2012, as part of the new 40 CFR §158 Guidelines, a functional immunotoxicity study in rats and/or mice as required (Guideline 870.7800).
2. You submit by 7/31/2012, as part of the new 40 CFR §158 Guidelines, a subchronic neurotoxicity study as required (Guideline 870.6200).

One copy of the label (your version "100813") stamped "Accepted" is enclosed for your records. This label includes the recently accepted changes to the container section as required per PR Notice 2007-4. This label version supersedes all labels previously accepted for this product. Please submit one copy of this letter, and the final printed label before the product is released for shipment.

If you have any questions, please contact Janet Whitehurst by phone at (703) 305-6129 or via email at whitehurst.janet@epa.gov.

Sincerely,

Tony Kish
Product Manager (22)
Fungicide Branch
Registration Division (7504P)

Enclosure: Stamped label



RANMAN® 400SC

AGRICULTURAL FUNGICIDE

ACTIVE INGREDIENT: Cyazofamid*	34.5%
OTHER INGREDIENTS:	65.5%
Total	100.0%

*4-chloro-2-cyano-*N,N*-dimethyl-5-(4-methylphenyl)-1*H*-imidazole-1-sulfonamide (CA)

Contains 3.33 pounds Cyazofamid Per Gallon (400 grams per liter)

KEEP OUT OF REACH OF CHILDREN

CAUTION

See side panel for additional precautionary statements.

Read entire label carefully and use only as directed.

ISK Biosciences Corporation
7470 Auburn Road, Suite A
Concord, Ohio 44077 U.S.A.

EPA Reg. No. 71512-3 EPA Est. No.

Manufactured in France

Net Contents: 2.5 Gallons

FIRST AID	
If on skin	<ul style="list-style-type: none"> Take off contaminated clothing. Rinse skin immediately with plenty of soap and water for 15-20 minutes. Call a poison control center or doctor for treatment advice.
If in eyes	<ul style="list-style-type: none"> 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 a poison control center or doctor for treatment advice.
If swallowed	<ul style="list-style-type: none"> Call a 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	<ul style="list-style-type: none"> 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 a poison control center or doctor for further treatment advice.
Have the product container or label with you when calling a poison control center or doctor, or going for treatment.	
HOT LINE NUMBER	
For 24-Hour Medical Emergency Assistance (Human or Animal) Call 1-888-484-7546.	
For Chemical Emergency, Spill, Leak, Fire or Accident, Call CHEMTREC 1-800-424-9300.	

ACCEPTED

 AUG 13 2010

 Under the Federal Insecticide,
 Fungicide, and Rodenticide Act,
 as amended, for the pesticide
 registered under
 EPA Reg. No. 71512-3

20114

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS CAUTION

Harmful if absorbed through skin. Avoid contact with skin, eyes or clothing. Avoid breathing spray mist. DO NOT take internally.

Personal Protective Equipment (PPE)

Applicators and other handlers must wear long-sleeved shirt and long pants, socks, shoes, and chemical resistant gloves made of any waterproof material.

Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing. Do not allow contact of contaminated clothing with unprotected skin. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

Engineering Control Statements

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.

IMPORTANT: When reduced PPE is worn because a closed system is being used, handlers must be provided all PPE specified above for "applicators and other handlers" and have such PPE immediately available for use in an emergency, such as a spill or equipment break-down.

User Safety Recommendations

Users should:

- * Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, or using tobacco.
- * Remove and wash contaminated clothing before reuse.

ENVIRONMENTAL HAZARDS

DO NOT apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. DO NOT contaminate waters when disposing of equipment wash waters or rinsate.

AVOIDING SPRAY DRIFT AT THE APPLICATION SITE IS THE RESPONSIBILITY OF THE APPLICATOR. The interaction of many equipment-and-weather-related factors determine the potential for spray

drift. The applicator is responsible for considering all these factors when making decisions. Where states have more stringent regulations, they must be observed.

STORAGE AND DISPOSAL

DO NOT contaminate water, food or feed by storage or disposal. Open dumping is prohibited.

PESTICIDE STORAGE: Store in original container, in a secured, dry place separate from fertilizer, food, and feed.

PESTICIDE DISPOSAL: Pesticide wastes are toxic. Improper disposal of excess pesticide, pesticide spray or rinsate is a violation of Federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

CONTAINER DISPOSAL: Nonrefillable container. DO NOT reuse or refill this container. 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. Then offer for recycling if available, or puncture and dispose of in a sanitary landfill, or by incineration or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

DIRECTIONS FOR USE

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

FAILURE TO FOLLOW THE USE DIRECTIONS AND PRECAUTIONS ON THIS LABEL MAY RESULT IN PLANT INJURY OR POOR DISEASE CONTROL.

Do not use for disease control on fruiting vegetables (other than tomato transplants) or cucurbit vegetables grown for fruit production in greenhouses.

ROTATIONAL CROP RESTRICTIONS

Crops on this label may be planted immediately after the last treatment. Do

Box 14

not plant other crops not registered for this product within 30 days after the last application.

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), 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 twelve (12) hours.

PPE required for early entry to the 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, is: coveralls, chemical resistant gloves made of any waterproof material, shoes plus socks and protective eyewear.

GENERAL INFORMATION

MIXING AND SPRAYING

RANMAN 400SC can be used effectively in dilute or concentrate sprays. Thorough, uniform coverage is essential for disease control.

NOTE: Slowly invert container several times to assure uniform mixture of formulation before adding this product to the spray tank.

Dosage rates on this label indicate fluid ounces of RANMAN 400SC per acre, unless otherwise stated. Under conditions favorable for disease development, the highest rate specified and shortest application interval

should be used. For best product performance in all applications utilizing water volumes up to 60 gallons per acre, an organosilicone surfactant should be added according to the manufacturer's label recommendations in order to improve spray coverage when the disease infection is severe. However, a non-ionic surfactant or a blend of an organosilicone and a non-ionic surfactant may be used according to the manufacturer's label when disease infection is moderate or light. Do not use a surfactant in applications to grapes or tomato greenhouse transplant production.

RANMAN 400SC may be applied with all types of spray equipment normally used for ground and aerial applications.

The required amount of RANMAN 400SC should be added slowly into the spray tank during filling. With concentrate sprays, pre-mix the required amount of RANMAN 400SC in a clean container and add to the spray tank as it is being filled. Keep agitator running when filling spray tank and during spray operations. DO NOT allow spray mixture to stand overnight or for prolonged periods. Prepare only the amount of spray required for immediate use. Spraying equipment should be thoroughly cleaned immediately after the application.

Apply RANMAN 400SC in sufficient water to obtain adequate coverage of the foliage. Gallonage to be used will vary with crop and amount of plant growth. Spray volume will usually range from 20 to 100 gallons per acre (200 to 1000 liters per hectare) for dilute sprays, and 5 to 10 gallons per acre (50 to 100 liters per hectare) for concentrate ground and aerial sprays. For aerial applications, apply RANMAN 400SC in a minimum of 5 gallons of water per acre. Application through sprinkler irrigation systems is not recommended unless specific directions are given for a crop. See application and calibration instruction below.

TANK MIX COMPATIBILITY

RANMAN 400SC is physically compatible (no nozzle or screen blockage) with many products recommended for control of diseases and insects on vegetable crops. Read and follow all manufacturer's label recommendations for the tank mix companion product. It is the applicator's responsibility to ensure that the companion product is EPA approved for use on the intended crop. RANMAN 400SC is generally compatible with other insecticides, fungicides, fertilizers and micronutrient products provided sufficient free water is available for dispersion of all the tank mix products. However, the physical compatibility of RANMAN 400SC with tank mix partners must be

4/14/14

evaluated before use. Conduct a jar test with intended tank-mix pesticides prior to preparation of large volumes. Use the following procedure: 1) Pour the recommended proportions of the products into a suitable container of water, 2) Mix thoroughly and 3) Allow to stand 5 minutes. If the combination remains mixed or can be re-mixed readily, it is considered physically compatible. Any physical incompatibility in the jar test indicates that RANMAN 400SC should not be used in the tank-mix.

RANMAN 400SC is physically compatible (no nozzle or screen blockage) with the following list of products:

<u>Product</u>	<u>Active Ingredient</u>
Acrobat	dimethomorph
Applaud	buprofezin
BT (several)	Bacillus thuringiensis
Chlorothalonil (several)	chlorothalonil
Curzate	cymoxanil
Decis	deltamethrin
EDBC (several)	mancozeb
Guthion	azinphos-methyl
Headline /Cabrio	pyraclostrobin
Karate	lambda-cyhalothrin
Lannate	methomyl
Mineral oils	
Monitor / Tamaron	methamidophos
Omega	fluazinam
Previcur	Propamocarb hydrochloride
Provado	imidacloprid
Quadris /Abound	azoxystrobin
Thiodan	endosulfan
Trigard	cyromazine

CROP RESPONSE

RANMAN 400SC is not phytotoxic to the crop or succeeding crops when applied according to label instructions.

INTEGRATED PEST MANAGEMENT

RANMAN 400SC is an excellent disease control agent when used according to label directions for control of several Oomycete fungi. Although RANMAN 400SC has limited systemic activity, it should be utilized as a protectant fungicide and applied before the disease infects the crop. Depending upon the level of disease pressure, good protection of the crop against disease can be expected over a period of 7 to 10 days. RANMAN 400SC is recommended for use as part of an Integrated Pest Management (IPM) program, which may include the use of disease-resistant crop varieties, cultural practices, crop rotation, biological disease control agents, pest scouting and disease forecasting systems aimed at preventing economic pest damage. Practices known to reduce disease development should be followed. Consult your state cooperative extension service or local agricultural authorities for additional IPM strategies established in your area. RANMAN 400SC may be used in State Agricultural Extension advisory (disease forecasting) programs that recommend application timing based upon environmental factors that favor disease development.

RESISTANCE MANAGEMENT

Some plant pathogens are known to develop resistance to products used repeatedly for disease control. RANMAN 400SC's mode/target site of action is complex III of fungal respiration: ubiquinone reductase, Qi site, FRAC code 21. A disease management program that includes alternation or tank mixes between RANMAN 400SC and other labeled fungicides that have a different mode of action and/or control pathogens not controlled by RANMAN 400SC is essential to prevent disease resistant pathogens populations from developing. RANMAN 400SC should not be utilized continuously nor tank mixed with fungicides that have shown to have developed fungal resistance to the target disease.

Since pathogens differ in their potential to develop resistance to fungicides, follow the directions outlined in the "Directions For Use" section of this label for specific resistance management strategies for each crop. Consult with your Federal or State Cooperative Extension

50814

Service representatives for guidance on the proper use of RANMAN 400SC in programs that seek to minimize the occurrence of disease

resistance. RANMAN 400SC is not cross-resistant with other classes of fungicides that have different modes of action.

DIRECTIONS FOR USE

Crop	Diseases	Use Rate Fl. Oz. Product Per Acre (lb. ai/A)	Instructions
<p>BRASSICA (COLE) LEAFY VEGETABLES: CROP GROUP 5</p> <p>Broccoli; Chinese broccoli (gai lon); broccoli raab (rapini); Brussels sprouts; cabbage; Chinese cabbage (bok choy); Chinese cabbage (napa); Chinese mustard (gai choy); cauliflower; cavalo broccolo; collards; kale; kohlrabi; mizuna; mustard greens; mustard spinach; rape greens; turnip greens</p>	<p>Club root (Plasmodiophora brassicae)</p> <p>Downy mildew (<i>Peronospora parasitica</i>)</p>	<p>Transplant Soil Drench:</p> <p>12.9 to 25.75 (0.333 to 0.665 per 100 gallons</p> <p>Soil Incorporation: 20 / A (0.52)</p> <p>Foliar: 2.75 / A (0.072)</p>	<p>Resistance Management: DO NOT apply more than six (1 soil + 5 foliar) applications of RANMAN 400SC per crop. Alternate foliar sprays of RANMAN 400SC with a fungicide with a different mode of action. DO NOT make more than three consecutive applications of RANMAN 400SC followed by at least three applications of fungicides having different modes of action before applying additional RANMAN 400SC.</p> <p>Application Instructions: Transplant Soil Drench for control of club root: Immediately after transplanting, make a single application within the rate range listed and apply 1.7 fluid ounces of solution per plant as transplant water. Use the lowest rate for fields with low soil infestation and increase to the higher rates when fields have a history of moderate to high soil infestation.</p> <p>Soil Incorporation: Alternatively, if desired and for soil with low infiltration rates, apply 20 fl oz per acre in a minimum bandwidth of 9 inches along the planting row and incorporate to a soil depth of 6 to 8 inches with a precision incorporator in the same operation. Apply in a water volume of at least 50 gallons per acre. Transplant the seedlings into the treated band. If planting into a bed, a broadcast application can be made prior to forming the bed.</p> <p>Foliar sprays for downy mildew: Make fungicide applications on a 7- to 10-day schedule beginning when disease is first seen or weather and downy mildew disease pressure are expected to initiate a disease epidemic. Use the longest interval for preventative applications or very low disease pressure. Shorten the interval as disease pressure and/or fast crop development increases, down to the shortest interval.</p> <p>RANMAN 400SC should be tank-mixed with an organosilicone surfactant when the disease infection is severe, or a non-ionic surfactant or a blend of organosilicone and a non-ionic surfactant when disease infection is moderate or light, at the manufacturer's label recommendation for water volumes up to 60 gallons per acre. Normal water volumes are 30 to 60 gallons per acre.</p> <p>RANMAN 400SC may be applied through sprinkler irrigation equipment. See calibration directions elsewhere on the label.</p> <p>Restrictions: DO NOT apply more than 39.5 fl oz per acre per crop growing season. [1 soil application at a maximum of 25.75 fl. oz./A and 5 foliar applications at 2.75 fl. oz./A (13.75 fl. oz./A) per application] The Pre-Harvest Interval (PHI) for these listed crops is 0 days. Crops on this label may be planted immediately after the last treatment. Do not plant other crops not registered for this product within 30 days after the last application.</p>

Deleted: CROP GROUP 5

60814

Crop	Diseases	Use Rate Fl. Oz. Product Per Acre (lb. ai/A)	Instructions
Carrot	Cavity spot, Root Dieback, Forking <i>(Pythium ultimum,</i> <i>P. violae,</i> <i>P. sulcatum,</i> <i>P. irregular,</i> <i>P. splendens)</i>	6 (0.156)	<p>Resistance Management: DO NOT apply more than 5 sprays of Ranman 400SC per crop. Alternate sprays of Ranman 400SC with a fungicide with a different mode of action.</p> <p>Application Instructions: Pre-plant incorporated (broadcast or band): Apply in sufficient water to obtain adequate coverage within 3 days of planting and mechanically till into the soil to a depth of at least 2 inches or incorporate with at least 1/4 inch of water.</p> <p>Surface applications (broadcast or band): Subsequent applications may be made beginning at 14 days after plant emergence and continue on a 14-21 day schedule. Apply in sufficient water to obtain adequate coverage with the applications directed to the base of the plant. Ranman 400SC should be incorporated into the soil with 1/2 to 1 inch of water. If irrigation is not immediately available after the application, then the application should be made in sufficient water to allow penetration into the soil.</p> <p>Ranman 400SC may be applied via any overhead irrigation system. Follow directions outlined in the Application and Calibration Techniques For Sprinkler Irrigation section of the label. Ranman 400SC should be applied during the last 2 hours of the irrigation cycle to allow for adequate soil penetration.</p> <p>For banded applications a 6 to 8 inch band is recommended (See formula to calculate amount required in the band).</p> <p>Calculate the amount of Ranman 400SC needed for band treatments by the formula:</p> $\frac{\text{band width in inches}}{\text{row spacing in inches}} \times \text{broadcast rate per acre} = \text{amount needed per acre of field}$ <p>Restrictions DO NOT use more than 30 fl oz per growing season. DO NOT use any adjuvant when applying to carrots. DO NOT apply within 14 days of harvest. Crops on this label may be planted immediately after the last treatment. Do not plant other crops not registered for this product within 30 days after the last application.</p>

7/10/14

Crop	Diseases	Use Rate Fl. Oz. Product Per Acre (lb. ai/A)	Instructions
GRAPES East of the Rocky Mountains	Downy mildew <i>(Plasmopara viticola)</i>	2.1 to 2.75 (0.054 to 0.071)	<p>Resistance Management: DO NOT apply more than six sprays of RANMAN 400SC per crop. Alternate sprays of RANMAN 400SC with a fungicide with a different mode of action. DO NOT make more than three consecutive applications of RANMAN 400SC followed by at least three applications of fungicides having different modes of action before applying additional RANMAN 400SC.</p> <p>Application Instructions: For Downy mildew control, make fungicide applications on a 10- to 14-day schedule beginning when warning systems forecast disease infection periods or when disease conditions are favorable for disease development. Use the lowest rate and longest interval for preventative applications or very low disease pressure, increasing the rate and shortening the interval as disease pressure and/or fast crop development increases up to the maximum rate and shortest interval. Do not use any surfactant with this application.</p> <p>Application water volumes for ground applications should be at least 100 gallons per acre.</p> <p>RANMAN 400SC may be applied via aerial application using a minimum of 5 gallons of water volume per acre.</p> <p>Restrictions DO NOT apply more than 16.5 fluid ounces (0.43 lb. AI) per acre per growing season. The Pre-Harvest Interval (PHI) for this crop is 30 days.</p>
HOPS	Downy mildew <i>(Pseudoperonospora humuli)</i>	2.1 to 2.75 (0.054 to 0.071)	<p>Resistance Management: DO NOT apply more than six applications of RANMAN 400SC per crop. Alternate foliar sprays of RANMAN 400SC with a fungicide with a different mode of action. DO NOT make more than three consecutive applications of RANMAN 400SC followed by at least three applications of fungicides having different modes of action before applying additional RANMAN 400SC.</p> <p>Application Instructions For downy mildew control, make fungicide applications on a 7- to 10-day schedule beginning when disease is first seen or weather and downy mildew disease pressure are expected to initiate a disease epidemic. Use the lowest rate and longest interval for preventative applications or very low disease pressure, increasing the rate and shortening the interval as disease pressure and/or fast crop development increases up to the maximum rate and shortest interval. Use water spray volume of at least 100 gallons per acre.</p> <p>Restrictions: DO NOT apply more than 16.5 fl oz per acre per crop growing season. The Pre-Harvest Interval for this listed crop is 3 days. Crops on this label may be planted immediately after the last treatment. Do not plant other crops not registered for this product within 30 days after the last application.</p>

9/24/14

Crop	Diseases	Use Rate Fl. Oz. Product Per Acre (lb. ai/A)	Instructions
SPINACH	White rust (<i>Albugo occidentalis</i>)	2.1 to 2.75 (0.054 to 0.071)	<p>Resistance Management: DO NOT apply more than five applications of RANMAN 400SC per crop. Alternate foliar sprays of RANMAN 400SC with a fungicide with a different mode of action. DO NOT make more than three consecutive applications of RANMAN 400SC followed by at least three applications of fungicides having different modes of action before applying additional RANMAN 400SC.</p> <p>Application Instructions For white rust control, make fungicide applications on a 7- to 10-day schedule beginning when disease is first seen or weather and white rust disease pressure are expected to initiate a disease epidemic. Use the lowest rate and longest interval for preventative applications or very low disease pressure, increasing the rate and shortening the interval as disease pressure and/or fast crop development increases up to the maximum rate and shortest interval.</p> <p>RANMAN 400SC should be tank-mixed with an organosilicone surfactant when the disease infection is severe, or a non-ionic surfactant or a blend of organosilicone and a non-ionic surfactant when disease infection is moderate or light, at the manufacturer's label recommendation for water volumes up to 60 gallons per acre. Normal water volumes are 30 to 60 gallons per acre.</p> <p>RANMAN 400SC may be applied through sprinkler irrigation equipment. See calibration directions elsewhere on the label.</p> <p>Restrictions: DO NOT apply more than 13.75 fl oz per acre per crop growing season. The Pre-Harvest Interval for this listed crop is 0 days. Crops on this label may be planted immediately after the last treatment. Do not plant other crops not registered for this product within 30 days after the last application.</p>

100814

Crop	Diseases	Use Rate Fl. Oz. Product Per Acre (lb. ai/A)	Instructions
Potato	<p data-bbox="296 237 432 310">Late blight (<i>Phytophthora infestans</i>)</p> <p data-bbox="296 829 432 902">Pink Rot (<i>Phytophthora erythroseptica</i>)</p>	<p data-bbox="537 237 684 310">Foliar 1.4 to 2.75 (0.036 to 0.071)</p> <p data-bbox="537 824 684 995">At Planting: 0.42 fl. oz./ 1000 linear ft [Equivalent to 6.1 fl. oz./A on 36" row spacing] (0.158)</p> <p data-bbox="537 1027 684 1101">Lay-by/Hilling: 2.75 fl. oz. /A (0.071)</p>	<p data-bbox="709 237 1619 358">Resistance Management: DO NOT apply more than 10 sprays of RANMAN 400SC per crop. Alternate sprays of RANMAN 400SC with a fungicide with a different mode of action. DO NOT make more than three consecutive applications of RANMAN 400SC followed by at least three applications of fungicides having different modes of action before applying additional RANMAN 400SC.</p> <p data-bbox="709 383 1650 553">For pink rot control, do not use RANMAN 400SC at reduced rates as incomplete control may occur promoting potential for development of resistant strains. Rotate other fungicides with a different mode of action or tank-mix these fungicides with RANMAN 400SC to reduce the chance of resistance occurring. Development of resistance cannot be predicted. If a treatment of RANMAN 400SC is not effective, a resistant strain of fungi may be present. Accordingly, neither RANMAN 400SC nor other fungicides with a similar mode of action will effectively control the disease. Consult your local State University for alternative recommendations.</p> <p data-bbox="709 578 1629 732">Application Instructions: For Late blight control, make fungicide applications on a 7- to 10-day schedule beginning when warning systems forecast disease infection periods, generally at row closure or when conditions are favorable for disease development. Use the low rate and longest interval for preventative applications or very low disease pressure, increasing the rate and shortening the interval as disease pressure and/or fast crop development increases up to the maximum rate and shortest interval.</p> <p data-bbox="709 756 1608 805">For Late blight tuber rot control, make the last 2 to 3 applications prior to desiccation with RANMAN 400SC at 2.75 fl. oz. applied weekly.</p> <p data-bbox="709 829 1650 976">For pink rot control at planting, apply 0.42 fluid ounces product per 1000 linear foot of row in-furrow at planting using a minimum of 5 gallons of water per acre. Apply RANMAN 400SC using a 6 to 8 inch band directly over the seed pieces prior to furrow closure. A side dressing of RANMAN 400SC applied at hilling may be necessary for additional control. Where mefenoxam-resistant strains of <i>Phytophthora erythroseptica</i> are not present, a full rate of RANMAN 400SC can be tank-mixed with mefenoxam containing fungicides for additional control.</p> <p data-bbox="709 1000 1650 1122">For additional control of Pink Rot in combination with an at-planting, in-furrow, RANMAN 400SC application, apply RANMAN 400SC as a broadcast spray at 2.75 fluid ounces in a minimum of 20 gallons of finished spray solution per acre at hilling. Additional applications may be needed depending on susceptibility of potato varieties to pink rot disease, environmental conditions conducive to favor severe disease development, or fields located in long growing season areas, etc.</p> <p data-bbox="709 1146 1629 1268">Follow the guidelines for disease resistance management listed above. RANMAN 400SC should be tank-mixed with an organosilicone surfactant when the disease infection is severe, or a non-ionic surfactant or a blend of an organosilicone and a non-ionic surfactant when disease infection is moderate or light, at the manufacturer's label recommendations for water volumes up to 60 gallons per acre. Normal water volumes are 20 to 50 gallons per acre.</p>

110814

Crop	Diseases	Use Rate Fl. Oz. Product Per Acre (lb. ai/A)	Instructions
Potato (continued)			<p>RANMAN 400SC may be applied through sprinkler irrigation equipment. See calibration directions following this section.</p> <p>Restrictions DO NOT apply more than 27.5 fluid ounces per acre per year. DO NOT apply within 7 days of harvest. Crops on this label may be planted immediately after the last treatment. Do not plant other crops not registered for this product within 30 days after the last application.</p>
<p>FRUITING VEGETABLES (Crop Group 8) and OKRA, includes: Tomato; Ground Cherry; Tomatillo; Pepper (includes Bell, Chili, Cooking, Pimento, and Sweet Peppers); Eggplant; and Pepino</p>	<p>Late blight (<i>Phytophthora infestans</i>)</p> <p>Phytophthora blight (<i>Phytophthora capsici</i>)</p>	<p>2.1 to 2.75 (0.054 to 0.071)</p> <p>2.75 (0.071)</p>	<p>Resistance Management: DO NOT apply more than six sprays of RANMAN 400SC per crop. Alternate sprays of RANMAN 400SC with a fungicide with a different mode of action. DO NOT make more than three consecutive applications of RANMAN 400SC followed by at least three applications of fungicides having different modes of action before applying additional RANMAN 400SC.</p> <p>Application Instructions: For Late blight control, make fungicide applications on a 7- to 10-day schedule beginning when warning systems forecast disease infection periods, generally at flower initiation or when conditions are favorable for disease development. Use the lowest rate and longest interval for preventative applications or very low disease pressure, increasing the rate and shortening the interval as disease pressure and/or fast crop development increases up to the maximum rate and shortest interval.</p> <p>For Phytophthora blight control, apply RANMAN 400SC to the base of the plants at the time of transplanting. Alternatively, RANMAN 400SC may be applied in transplant water at the time of transplanting. Apply 2.75 fl oz per acre in the transplant water. It is recommended that the water volume for this initial application be at least 50 gallons per acre. Additional applications should be made on a 7- to 10-day schedule beginning when conditions are favorable for disease development.</p> <p>RANMAN 400SC should be tank-mixed with an organosilicone surfactant when the disease infection is severe, or a non-ionic surfactant or a blend of an organosilicone and a non-ionic surfactant when disease infection is moderate or light, at the manufacturer's label recommendations for water volumes up to 60 gallons per acre. Normal water volumes are 30 to 60 gallons per acre.</p> <p>RANMAN 400SC may be applied through sprinkler irrigation equipment. See calibration directions following this section.</p> <p>Restrictions DO NOT apply more than 16.5 fluid ounces (0.43 lb a.i.) per acre per crop growing season. The Pre-Harvest Interval (PHI) for these listed crops is 0 day. Crops on this label may be planted immediately after the last treatment. Do not plant other crops not registered for this product within 30 days after the last application.</p>

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Tomato Greenhouse Transplants (Soil Drench)	Pythium Damping-off (<i>Pythium spp.</i>)	3 fl oz/100 gallons water (0.078 lb a.i./ 100 gallons water)	Tomato Greenhouse Transplant Production: For control of damping-off caused by <i>Pythium spp.</i> make a single fungicide application to the seedling tray at the time of planting or at any time thereafter up until 1 week before transplanting. Apply the fungicide solution as a drench to thoroughly wet the growing medium. This results in the use of approximately 1 pint of solution per square foot if the growing medium is 4 inches deep. Do not use any surfactant with this drench application.
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APPLICATION AND CALIBRATION TECHNIQUES FOR SPRINKLER IRRIGATION

Apply this product only through center pivot, motorized lateral move, traveling gun, solid set or portable (wheel move, side roll, end tow, or hand move) irrigation system(s). DO NOT apply this product through any other type of irrigation 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, you should contact State Extension Service specialists, equipment manufacturers or other experts.

DO NOT apply RANMAN 400SC through irrigation systems connected to a public water system. "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 daily at least 60 days per year.

Controls for both irrigation water and pesticide injection systems must be functionally interlocked, so as to automatically terminate pesticide injection when the irrigation water pump motor stops. A person knowledgeable of the irrigation system and responsible for its operation shall be present so as to discontinue pesticide injection and make necessary adjustments, should the need arise.

The irrigation water pipeline must be fitted with a functional, automatic, quick-closing check valve to prevent the flow of treated irrigation water back toward the water source. The pipeline must also be fitted with a vacuum relief valve and low-pressure drain, located between the irrigation water pump and the check valve, to prevent back-siphoning of treated irrigation water into the water source.

Always inject RANMAN 400SC into irrigation water after it discharges from the irrigation pump and after it passes through the check valve. Never inject pesticides into the intake line on the suction side of the pump.

Pesticide injection equipment must be fitted with a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump. Interlock this valve to the power system, so as to prevent fluid from being withdrawn from the chemical supply tank when the irrigation system is either automatically or manually turned off.

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 irrigation line or water pump must include a functional pressure switch that will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.

Spray mixture in the chemical supply tank must be agitated at all times, otherwise settling and uneven application may occur. DO NOT apply when wind speed favors drift beyond the area intended for treatment.

RANMAN 400SC may be used through two basic types of sprinkler irrigation systems as outlined in Sections A and B below. Determine which type of system is in place, then refer to the appropriate directions provided for each type.

A. Center Pivot, Motorized Lateral Move and Traveling Gun Irrigation Equipment

For injection of pesticides, these continuously moving systems must use a positive displacement injection pump of either diaphragm or piston type, constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock and capable of injection at pressures approximately 2-3 times those encountered within the irrigation water line. Venturi applicator units cannot be used on these systems.

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Thoroughly mix recommended amount of this product for acreage to be covered into the same amount of water used during calibration and inject into system continuously for one revolution or run. Mixture in the chemical supply tank must be continuously agitated during the injection run. Shut off injection equipment after one revolution or run, but continue to operate irrigation system until this product has been cleared from the last sprinkler head.

B. Solid Set and Portable (Wheel Move, Side Roll, End Tow, or Hand Move) Irrigation Equipment

With stationary systems, an effectively designed in-line venturi applicator unit is preferred which is constructed of materials that are compatible with pesticides; however, a positive-displacement pump can also be used.

Determine acreage covered by sprinkler. Fill tank of injection equipment with water and adjust flow to use contents over a 30 to 45 minute period. Mix desired amount of RANMAN 400SC for acreage to be covered with water so that the total mixture of this product plus water in the injection tank is equal to the quantity of water used during calibration.

Agitation is recommended. RANMAN 400SC can be injected at the beginning or end of the irrigation cycle or as a separate application. Stop injection equipment after treatment is completed and continue to operate irrigation system until this product has been cleared from last sprinkler head.

WARRANTY AND LIMITATION OF DAMAGES

Seller warrants to those persons lawfully acquiring title to this product that at the time of first sale of this product by Seller that this product conformed to its chemical description and was reasonably fit for the purposes stated on the label when used in accordance with Seller's directions under normal conditions of use. To the extent consistent with applicable law, Buyers and users of this product assume the risk of any use contrary to such directions. **EXCEPT AS PROVIDED ELSEWHERE IN WRITING CONTAINING AN EXPRESS REFERENCE TO THIS WARRANTY AND LIMITATION OF DAMAGES, SELLER MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OR GUARANTY, INCLUDING ANY OTHER EXPRESS OR IMPLIED WARRANTY OF FITNESS OR OF MERCHANTABILITY, AND NO AGENT OF SELLER IS AUTHORIZED TO DO SO.** In no event shall Seller's liability for any breach of warranty or guaranty exceed the purchase price of the product as to which a claim is made. To the extent consistent with applicable law, Buyers and users of this product are responsible for all loss or damage from use or handling of this product which results from conditions beyond the control of Seller, including, but not limited to, incompatibility with other products unless otherwise expressly provided in Directions for Use of this product, weather conditions, cultural practices, moisture conditions or other environmental conditions outside of the ranges that are generally recognized as being conducive to good agricultural and/or horticultural practices.

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