8033-23 01/27/2006 1/17

DRAFT November 1, 2005

Nisso

ASSAIL® 70WP Insecticide

For Agricultural Use Only

ACTIVE INGREDIENT: Acetamiprid, (E)- N^1-[(6-chloro-3-pyridyl)methyl]-N^2-cyano-N^1-methyl acetamidine. . . . . 70% by wt.
OTHER INGREDIENTS: . . . . . 30% by wt.

EPA Reg. No. 8033-23 EPA Est. No.

KEEP OUT OF REACH OF CHILDREN

CAUTION

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle.
(If you do not understand the label find someone to explain it to you in detail.)

EMERGENCY TELEPHONE NUMBERS:

CHEMTREC: (800) 424-9300
MEDICAL: (303) 623-5716 Rocky Mountain Poison Control Center

FIRST AID

IF SWALLOWED:	▪ Immediately call a poison control center or doctor for treatment advice. ▪ Do not induce vomiting unless told to do so by a poison control center or doctor. ▪ Have person sip a glass of water if able to swallow. ▪ Do not give anything by mouth to an unconscious person.
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. ▪ Call a poison control center or doctor for treatment advice.
IF ON SKIN OR CLOTHING:	▪ Take off contaminated clothing. ▪ Rinse skin immediately with plenty of water for 15 – 20 minutes. ▪ Call a poison control center or doctor for treatment advice.
IF INHALED:	▪ Move person to fresh air. ▪ If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. ▪ Call a 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.	
NOTE TO PHYSICIAN: There is no specific antidote. All treatment should be based on observed signs and symptoms of distress in the patient. Overexposure to materials other than this product may have occurred.	

ACCEPTED
JAN 27 2006
Under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, for the pesticide registered under EPA Reg. No. 8033-23

Net Contents: _____

Nippon Soda Co., Ltd.
2-1, 2-Chome Ohtemachi
Chiyoda-ku, Tokyo 100-8165
Japan

PRECAUTIONARY STATEMENTS

CAUTION

HAZARDS TO HUMANS (and DOMESTIC ANIMALS)

Harmful if swallowed, inhaled, or absorbed through the skin. Avoid breathing vapors or spray mist. Avoid contact with eyes, skin or clothing. Keep out of reach of children and domestic animals.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and other handlers must wear long-sleeved shirt and long pants, waterproof gloves, shoes plus socks and chemical resistant headgear for overhead exposure. Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturers instructions for cleaning/maintaining PPE. If there are no such instructions for washables, use detergent and hot water. Keep and wash PPE 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 Recommendations

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 PPE 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

This product is toxic to wildlife. This product is toxic to bees exposed to direct treatment. Do not apply this product while bees are actively visiting the treated area. 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. Do not contaminate water used for irrigation or domestic purposes.

SPRAY DRIFT

Avoid spray drift. Do not apply when weather conditions may cause drift. Do not allow this product to drift on to non-target areas. To avoid spray drift, DO NOT apply aerially when wind speed is greater than 10 mph or during periods of temperature inversions. For aerial application, select nozzles and pressure that deliver **MEDIUM** spray droplets as indicated in nozzle manufacturer's catalogs and in accordance with ASAE Standard S-572. AVOIDING SPRAY DRIFT AT THE APPLICATION SITE IS THE RESPONSIBILITY OF THE APPLICATOR.

The interaction of many equipment and weather related factors determines the potential for spray drift. The applicator is responsible for considering all of these factors when making decisions. The following drift management requirements must be followed to avoid off-target movement from aerial applications to agricultural crops. These requirements do not apply to forestry applications, public health uses or to applications using dry formulations.

1. The distance of the outer most nozzles on the boom must not exceed 3/4 the length of the wingspan or rotor.
2. Nozzles must always point backward parallel with the air stream.

Where states have more stringent regulations, they should be observed.
The applicator should be familiar with and take into account the information covered in the Aerial Drift Reduction Advisory below:

AERIAL DRIFT REDUCTION ADVISORY

[: section is advisory in nature and does not supersede the mandatory label requirements].

INFORMATION ON DROPLET SIZE

The most effective way to reduce drift potential is to apply **MEDIUM** droplets. The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. Applying larger droplets reduces drift potential, but will not prevent drift if applications are made improperly, or under unfavorable environmental conditions (See Wind, Temperature and Humidity, and Temperature Inversions).

CONTROLLING DROPLET SIZE

Volume - Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.
Pressure - Do not exceed the nozzle manufacturer's recommended pressures. For many nozzle types lower pressure produces larger droplets. When higher flow rates are needed, use higher flow rate nozzles instead of increasing pressure.
Number of nozzles - Use the minimum number of nozzles that provide uniform coverage.
Nozzle Orientation - Orienting nozzles so that the spray is released parallel to the airstream produces larger droplets than other orientations and is the recommended practice. Significant deflection from horizontal will reduce droplet size and increase drift potential.
Nozzle Type - Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles. Solid stream nozzles oriented straight back produce the largest droplets and the lowest drift.

BOOM LENGTH

For some use patterns, reducing the effective boom length to less than 3/4 of the wingspan or rotor length may further reduce drift without reducing swath width.

APPLICATION HEIGHT

Applications should not be made at a height greater than 10 feet above the top of the target plants unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind.

SWATH ADJUSTMENT

When applications are made with a crosswind, the swath will be displaced downwind. Therefore, on the up and downwind edges of the field, the applicator should compensate for this displacement by adjusting the path of the aircraft upwind. Swath adjustment distance should increase, with increasing drift potential (higher wind, smaller drops, etc.).

WIND
Drift potential is lowest between wind speeds of 2 - 10 mph. However, many factors, including droplet size and equipment type determine drift potential at any given speed. Application should be avoided below 2 mph due to variable wind direction and high inversion potential. NOTE: Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they affect spray drift.

TEMPERATURE AND HUMIDITY
When making applications in low relative humidity, set up equipment to produce larger droplets to compensate for evaporation. Droplet evaporation is most severe when conditions are both hot and dry.

TEMPERATURE INVERSIONS
Applications should not occur during a temperature inversion because drift potential is high. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light variable winds common during inversions. Temperature inversions are characterized by increasing temperatures with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

SENSITIVE AREAS
The pesticide should only be applied when the potential for drift to adjacent sensitive areas (e.g. residential areas, bodies of water, known habitat for threatened or endangered species, non-target crops) is minimal (e.g. when wind is blowing away from the sensitive areas).

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in any manner inconsistent with its labeling.
Read entire label before using this product.

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 S 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 intervals. 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 12 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, is coveralls, waterproof gloves and shoes plus socks.

STORAGE AND DISPOSAL

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

STORAGE
Do not store in or around the home. Store unused product in a cool, ventilated, dry, locked area. Do not allow prolonged storage in areas where temperatures frequently exceed 115° F (46° C). NEVER TRANSFER THIS PRODUCT TO ANOTHER CONTAINER FOR STORAGE.

PESTICIDE DISPOSAL
Contamination with this product will render water, food or feed unfit for human or animal consumption. Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

CONTAINER DISPOSAL
Completely empty container into application equipment, then dispose of empty container in a sanitary landfill or by incineration, or if allowed by State and local authorities by burning. If burned, stay out of smoke.

COMPATIBILITY

ASSAIL 70WP Insecticide, when diluted with an equal volume of water, is physically compatible with a wide range of commonly used spray products, but the full range of compatibilities under local conditions is not known. Therefore, it is essential that before using ASSAIL 70WP Insecticide in any tank mixture the compatibility of the mixture be established. Add a small amount of this prod to an equal volume of water in a small container and then add the other pesticide or spray product and mix thoroughly. DO NOT USE MIXTURES THAT CURDLE, PRECIPITATE, OR GREASE. FOR BEST RESULTS, SPRAY MIXTURES SHOULD BE USED IMMEDIATELY AFTER MIXING WITH ADEQUATE AGITATION.

DIRECTIONS FOR CHEMIGATION
General Instructions

For chemigation use on potatoes only after foliage has emerged and only through overhead sprinkler irrigation systems.

Apply this product only through overhead sprinkler irrigation systems including center pivot, lateral move, side (wheel) roll, solid set, or hand move irrigation systems after potato foliage has emerged. 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. A person knowledgeable of the chemigation system and responsible for its operation or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.

The overhead sprinkler chemigation 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 back flow. 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 pipline must also contain a functional, normal dosed, 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 for materials that are compatible with pesticides and capable of being fitted with a system interlock.

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. 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 out of the year. Chemigation systems connected to public water systems must contain a functional, reduced-pressure zone, back flow preventer (RPZ) of 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 flow 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 pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection. The pesticide injection pipeline must 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, or in cases where there is no water pump, 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.

Application Instructions

Observe the requirements in the System Requirements section above. Apply ASSAIL 70 WP Insecticide only through systems containing anti-siphon and check valves designed to prevent water source contamination or overflow of the mix tank and containing interlocking controls between the metering device and the water pump to insure simultaneous shut-off. Maintain a gentle continuous agitation in mix tank during mixing and application to assure a uniform suspension. Greater accuracy in calibration and distribution will be achieved by injecting a larger volume of a more dilute suspension per unit time. Application of more than recommended quantities of irrigation water per acre may result in decreased product performance. Do not apply when wind speed favors drift, when system connections or fittings leak, when nozzles do not provide uniform distribution or when lines containing the product cannot be flushed and must be dismantled and drained. In a center pivot system, block the nozzle set nearest the well/pivot/injection unit to prevent spray being applied to this area. Use of end guns which deliver uneven distribution of water is not recommended. Where sprinkler distribution patterns do not overlap sufficiently, unacceptable insect control may result. Allow sufficient time for pesticide to be flushed through all lines and all nozzles before turning off irrigation water. ASSAIL 70 WP Insecticide may be applied in conjunction with chemically neutral liquid fertilizers. Application in conjunction with highly alkaline fertilizers, such as aqueous ammonia, may cause a degradation of the pesticide, resulting in reduced performance and should be avoided.

Spray Preparation

Remove scale, pesticide residues, and other foreign matter from the chemical tank and entire injector system. Flush with clean water. Prepare a solution of ASSAIL 70 WP Insecticide in a mix tank. Fill the tank with ½ or ¾ the desired amount of water. Start mechanical or hydraulic agitation. Slowly add the required amount of ASSAIL 70 WP Insecticide and then the remaining volume of water.

...inkler Irrigation – Notes

Observe all System Requirements and Application Instructions above. Set sprinkler system to deliver a maximum of 0.2 inch of water per acre. Volumes of water higher than this may reduce efficacy. Start sprinkler and then uniformly inject the solution of ASSAIL 70 WP Insecticide into the irrigation water line so as to deliver the desired rate per acre. The solution of ASSAIL 70 WP Insecticide should be injected with a positive displacement pump into the main line ahead of a right angle turn to insure adequate mixing. When treatment with ASSAIL 70 WP Insecticide has been completed, do not irrigate the treated area for 24 to 48 hours to prevent washing the chemical off the crop. Do not apply when wind speed favors drift beyond the area intended for treatment. Where sprinkler distributed patterns do not overlap sufficiently, unacceptable insect control may result.

DIRECTIONS FOR AERIAL OR GROUND SPRAY APPLICATION

APPLICATION TIMING

Begin application when insect populations reach recognized economic threshold levels. Consult the Cooperative Extension Service, Professional consultants or other qualified authorities to determine appropriate threshold levels for treatment in your area.

GENERAL INFORMATION

ASSAIL 70 WP Insecticide is a 70% wettable powder for the control of many sucking and chewing insects on the crops listed in this label. The active ingredient in ASSAIL 70 WP Insecticide is acetamiprid, a neonicotinoid insecticide that controls target insects through contact and ingestion. ASSAIL 70WP Insecticide is rapidly absorbed by the plant tissue and quickly moves via systemic translaminar activity to protect the entire leaf. However, thorough spray coverage is essential for optimal performance. ASSAIL 70 WP Insecticide is rainfast once the spray solution has dried.

MIXING INSTRUCTIONS

Recommended Mixing and Application Instructions for ASSAIL 70WP Insecticide

ASSAIL 70WP Insecticide is a dry powder formulation that readily disperses in water to form a spray, which may be applied by ground or air.

1. Plan ahead. Prepare only enough spray mixture as can be applied on the day of mixing.
2. Fill tank ¼ - ½ full with the required amount of total spray volume of water.
3. Begin agitation and add product. The jug should be given a good hard shake to fluff the product before measuring. When pouring into the measuring cone, do not tamp down. The cone is calibrated for the fluffed product.
4. Continue to fill tank while directing a stream of water onto any floating product.
5. Allow mixing in tank for 2 minutes after filling or until thoroughly mixed before applying.
6. Maintain continuous agitation during mixing and application to assure uniform suspension. If mixture sits without agitation for extended periods, agitate the mixture for at least 10 minutes before use.
7. Equip spray system with a 50-mesh inline filter, which will protect nozzles that are typically used. Nozzles may also be equipped with 50-mesh nozzle filters or 25 to 50 mesh (equivalent) slotted nozzle filters.
8. ASSAIL 70WP Insecticide is unstable in water pH below 4 and above 9. If necessary, buffer water to obtain optimum pH range.

Special Instructions for Tank Mixing ASSAIL 70WP Insecticide

When tank mixing ASSAIL 70WP Insecticide with other products, introduce the products into the tank in the following order: (1) water soluble packets (2) wettable powders (such as ASSAIL 70WP Insecticide) (3) water dispersable granules (4) flowable liquids (5) emulsifiable concentrates and (6) adjuvants and/or oils (do not use stickers). Always allow each product to fully disperse before adding the next product.

Recommended Mixing and Application Instructions for ASSAIL WSP Insecticide

ASSAIL™ WSP Insecticide is packaged in a convenient water soluble packet and will dissolve in water. Do not allow packets to become wet before adding to spray tank or handle with wands or gloves. Do not open or subdivide packets. Determine area to be treated and add the appropriate number of soluble packets as determined under crop recommendations based on rate. Reseal the outer container to protect any unused water soluble packets from moisture. Utilize the following mixing instructions to prepare the spray solution.

1. Plan ahead. Prepare only enough spray mixture as can be applied on the day of mixing.
2. Fill tank ¼ to 1/3 full with the required amount of total spray volume of water.
3. Add buffering agent if required.
4. While agitating, add the required number of water soluble packets of ASSAIL WSP Insecticide.
5. Continue agitation until the soluble packets are dissolved and product is fully dispersed, at least 5 minutes.
6. Once the ASSAIL WSP Insecticide is fully dispersed, maintain agitation and continue filling tank with water.
7. Maintain continuous agitation during mixing and application to assure uniform suspension. If mixture sits without agitation for extended periods, agitate the mixture for at least 10 minutes before use.
8. Equip spray system with a 50-mesh inline filter, which will protect nozzles that are typically used. Nozzles may also be equipped with 50-mesh nozzle filters or 25 to 50 mesh (equivalent) slotted nozzle filters.
9. ASSAIL 70 WSP Insecticide is unstable in water pH below 4 and above 9. If necessary, buffer water to obtain optimum pH range.

Special Instructions for Tank Mixing ASSAIL WSP Insecticide

When tank mixing ASSAIL WSP Insecticide with other products, introduce the products into the tank in the following order: (1) water soluble packets (such as ASSAIL WSP Insecticide), (2) wettable powders, (3) water dispersible granules, (4) flowable liquids, (5) emulsifiable concentrates, and (6) adjuvants and/or oils. Always allow each product to fully disperse before adding the next product. Products containing boron will interfere with film solubility of the water soluble packets. If boron products are added to the spray tank, add the ASSAIL WSP Insecticide soluble packets first, making sure they are completely dissolved before adding any boron products.

APPLICATION INSTRUCTIONS

CROPS

Apply a minimum finished spray volume of 2 gallons per acre by air or 5 gallons per acre by ground unless otherwise directed under crop specific directions. Under heavy pest populations or dense foliage, use a minimum spray volume of 5 gallons per acre by air and a minimum spray volume of 10 gallons per acre by ground. For best results, it is important to obtain thorough and uniform spray coverage of the plant. For aerial application, select nozzles and pressure that deliver **MEDIUM** spray droplets as indicated in nozzle manufacturer's catalogs and in accordance with ASAE Standard S-572. The use of spray adjuvants, such as high quality non-ionic surfactants and horticultural oils is recommended to enhance coverage and may improve pest control. The addition of an adjuvant is recommended for all applications made to vegetables and to cotton when controlling whiteflies and to pome fruit when controlling codling moth, oriental fruit moth, and San Jose scale. The use of stickers is not recommended. Some adjuvants can cause adverse affects, such as spotting or burn to fruit or foliage. Follow adjuvant use directions. Consult your local Extension Service, Crop Advisor or Cerexagri representative for additional information. Use higher dosage rates for heavy infestations or dense foliage. The specific length of residual control depends on environmental factors, plant growth, dosage rate, and degree of insect infestation. When banding, determine the amount of chemical to use per acre by dividing the band width by the row width and multiplying by the appropriate broadcast rate.

To clean the sprayer after use, drain and flush with water. Use rinsate on crop according to label instructions or dispose of in an approved manner (See STORAGE AND DISPOSAL).

ORCHARD AND VINEYARD CROPS

To achieve optimum pest control, it is important to obtain thorough and uniform spray coverage. Choose a finished spray volume appropriate for the size of tree or vine and amount of foliage which will provide thorough coverage throughout the canopy. For certain pests, also follow recommendations listed under crop specific directions. For aerial application, select nozzles and pressure that deliver MEDIUM spray droplets as indicated in nozzle manufacturer's catalogs and in accordance with ASAE Standard S-572.

The use of spray adjuvants, such as high quality non-ionic surfactants or horticultural oils, also enhances coverage and may improve pest control. The use of stickers is not recommended. Some adjuvants can cause adverse effects, such as spotting or burn to fruit or foliage. Follow adjuvant use directions. Consult your local Extension Service, Crop Advisor or Nippon Soda representative for additional information.

Use higher dosage rates for heavy infestations or dense foliage. The specific length of residual control depends on environmental factors, plant growth, dosage rate, and degree of insect infestation.

To clean the sprayer after use, drain and flush with water. Use rinsate on crop according to label instructions or dispose of in an approved manner (See STORAGE AND DISPOSAL).

INTEGRATED PEST MANAGEMENT (IPM) USE OF THIS PRODUCT

ASSAIL 70WP Insecticide has ovicidal, larvicidal, and adulticidal activity against many pests which can be effectively utilized in IPM programs. ASSAIL 70WP Insecticide has been shown to leave substantial populations of many beneficial insects and spiders after use. The lower rates allow for maximum beneficial survival and faster rebound of beneficial populations. Control of important pests coupled with retention of beneficial insects and spiders can offer significant benefits to those producers utilizing integrated pest management programs.

RESISTANCE MANAGEMENT

Acetamiprid is the active ingredient in ASSAIL 70WP Insecticide. It is a member of a class of chemicals known as neonicotinoids . Rotating ASSAIL 7OWP Insecticide with pesticides with different modes of action may delay or prevent development of insect resistance. The use of ASSAIL 70WP Insecticide should conform to resistance management strategies established for the use area. Consult your agricultural advisor, university contact or extension service for recommended pest management practices for your area. Use recommended integrated pest management practices so that you are not relying solely on chemical control in your crop production.

To prevent development of insect resistance, do not apply ASSAIL 70 WP Insecticide to crops listed on this label when grown in a greenhouse.

RATE CONVERSION CHART FOR ALL OF THE FOLLOWING CROP USE DIRECTIONS

POUNDS AI PER ACRE	OUNCES PER ACRE	POUNDS ASSAIL 70WP INSECTICIDE PER ACRE	TREATED ACRES PER POUND ASSAIL 70WP INSECTICIDE
0.025	0.6	0.04	28
0.038	0.9	0.05	18.4
0.05	1.1	0.07	14
0.075	1.7	0.11	9.3
0.1	2.3	0.14	7
0.125	2.9	0.18	5.6
0.15	3.4	0.21	4.7
0.2	4.6	0.29	3.5
0.25	5.7	0.36	2.8

COTTON

SPRAY VOLUME FOR COTTON

ASSAIL 70WP Insecticide should be applied in a minimum finished spray volume of 2 gallons per acre by aircraft and 5 gallons per acre by ground equipment. Under extreme pest populations or dense foliage, use a minimum spray volume of 5 gallons per acre by air and a minimum spray volume of 10 gallons per acre by ground.

SITE	PEST	DOSAGE PER ACRE		SPECIFIC DIRECTIONS
		POUNDS ACTIVE	OUNCES ASSAIL 70WP INSECTICIDE	
COTTON	Aphids	0.025 – 0.05	0.6 – 1.1	Aphid species may differ in susceptibility to this product. If you are unsure of the aphid species present and its susceptibility, use the higher rate. Begin applications when treatment thresholds have been reached. Thorough coverage is important to obtain optimum control.
	Whitefly Sweet Potato Silver Leaf	0.075 - 0.1	1.7 - 2.3	Begin applications when whitefly adults appear prior to development of nymphs. Do not wait until heavy populations have become established. For whitefly control, ASSAIL 70WP Insecticide should be applied in a minimum finished spray volume of 5 gallons per acre by aircraft and 15 gallons per acre by ground equipment. Make applications on a minimum 7 day interval as long as pest pressure continues. Use the high rate under heavy pressure. Whiteflies have shown a tendency to develop resistance. For resistance management purposes, alternating applications of different chemical classes reduces the potential for resistance development.
	Plantbugs (Lygus spp.)	0.05	1.1	Begin applications when treatment thresholds have been reached. Some species of plantbugs may be less susceptible and may only be suppressed by applications of this product. Two applications at 7 to 10 day intervals may be required to achieve control. Thorough coverage is important to obtain optimum control.
	Fleahopper	0.025 - 0.05	0.6 - 1.1	Begin applications when treatment thresholds have been reached. Thorough coverage is important to obtain optimum control.
	Thrips	0.05 – 0.075	1.1 – 1.7	Begin applications when thrips damage is first observed or anticipated. Thorough coverage is important. Use of a spray surfactant may improve coverage and control.
FOR USE AS AN OVICIDE ON COTTON	Budworm Bollworm	0.025 - 0.05	0.6 - 1.1	Begin applications when treatment thresholds have been reached. Thorough coverage is important to obtain optimum control. Optimal ovicidal activity when applied within 24 hours of egg lay.
	Whitefly	0.075 - 0.1	1.7 - 2.3	Applications made for ovicidal control will not provide sustained control of migrating adults.

RESTRICTIONS AND PRECAUTIONS: Cotton

- For any of the pests listed above, use the high rate under heavy pest pressure.
- Do not make more than 4 applications per season.
- Do not apply more than once every 7 days.
- Do not apply less than 28 days before harvest (PHI = 28 days).
- Do not exceed a total of 0.4 lbs. active ingredient (9.2 ozs product) per acre per crop.
- There are no rotational crop plantback restrictions for this product.

LEAFY VEGETABLES

SPRAY VOLUME FOR LEAFY VEGETABLES: Apply in a minimum finished spray volume of 5 gallons per acre by air or 20 gallons per acre by ground.

SITE	PEST	DOSAGE PER ACRE		SPECIFIC DIRECTIONS
		POUNDS ACTIVE	OUNCES ASSAIL 70WP INSECTICIDE	
LEAFY VEGETABLES CROP GROUP Such as: Amaranth, Arrugula, Cardoon, Celery, Chinese Celery, Celtuce, Chervil, Chrysanthemum (edible leaved, garland), Corn Salad, Cress (garden, upland), Dandelion, Dock, Endive, Florence Fennel, Lettuce (head, leaf), Orach, Parsley, Purslane (garden, winter), Radicchio, Rhubarb, Spinach (leaf, vine, New Zealand), Swiss Chard	Aphids	0.035 – 0.075	0.8 – 1.7	Aphid species may differ in susceptibility to this product. If you are unsure of the aphid species present or if there are difficult to control species such as lettuce aphid, red aphid, foxglove aphid, etc., use the maximum rate. Begin applications when treatment thresholds have been reached. Thorough coverage is important to obtain optimum control.
	Whitefly Sweet Potato Silver Leaf	0.05 - 0.075	1.1 - 1.7	Begin applications when whitefly adults appear prior to development of nymphs. Do not wait until heavy populations have become established. Make applications on a minimum 7 day interval as long as pest pressure continues. Use the high rate under heavy pressure. Whiteflies have shown a tendency to develop resistance. For resistance management purposes, alternating applications of different chemical classes reduces the potential for resistance development.
	Whitefly Greenhouse (For Outdoor Use Only)	0.075	1.7	

RESTRICTIONS AND PRECAUTIONS: Leafy Vegetables

- For any of the pests listed above, use the high rate under heavy pest pressure.
- Do not make more than 5 applications per season.
- Do not apply more than once every 7 days.
- Do not apply less than 7 days before harvest (PHI = 7 days).
- Do not exceed a total of 0.375 lbs. active ingredient (8.5 ozs product) per acre per season.
- There are no rotational crop plantback restrictions for this product.

COLE CROPS

SPRAY VOLUME FOR COLE CROPS: Apply in a minimum finished spray volume of 5 gallons per acre by air or 20 gallons per acre by ground.

SITE	PEST	DOSAGE PER ACRE		SPECIFIC DIRECTIONS
		POUNDS ACTIVE	OUNCES ASSAIL 70WP INSECTICIDE	
COLE CROPS GROUP Such as: Broccoli, Chinese Broccoli, Brussel Sprouts, Cabbage, Chinese Cabbage, Cauliflower, Collards, Kale, Kohlrabi, Mizuna, Mustard Greens, Mustard Spinach, Rape Greens	Aphids	0.035 – 0.054	0.8 – 1.2	Aphid species may differ in susceptibility to this product. If you are unsure of the aphid species present and its susceptibility, use the higher rate. Begin applications when treatment thresholds have been reached. Thorough coverage is important to obtain optimum control.
	Whitefly Sweet Potato Silver Leaf	0.05 - 0.075	1.1 - 1.7	Begin applications when whitefly adults appear prior to development of nymphs. Do not wait until heavy populations have become established. Make applications on a minimum 7 day interval as long as pest pressure continues. Use the high rate under heavy pressure. Whiteflies have shown a tendency to develop resistance. For resistance management purposes, alternating applications of different chemical classes reduces the potential for resistance development.
	Whitefly Greehouse (For Outdoor Use Only)	0.075	1.7	
	Thrips	0.075	1.7	Begin applications as soon as thrips are seen in the crop and continue applications as needed. Thrips will seek sheltered parts of the plant so using nozzles that produce a fine spray with sufficieint water for thorough coverage is essential for good control. Applications during the "cupping" stage of cabbage may be especially helpful in preventing injury. For resistance management purposes, alternating applications of different chemical classes reduces the potential for resistance development.
	Swede Midge	0.075	1.7	Apply as a preventative spray to control the first generation if swede midge has been found in your area. Preventative applications will decrease the chance of quick population increases later in the season.

RESTRICTIONS AND PRECAUTIONS: Cole Crops

- For any of the pests listed above, use the high rate under heavy pest pressure.
- Do not make more than 5 applications per season.
- Do not apply more than once every 7 days.
- Do not apply less than 7 days before harvest (PHI = 7 days).
- Do not exceed a total of 0.375 lbs. active ingredient (8.5 ozs product) per acre per season.
- There are no rotational crop plantback restrictions for this product.

FRUITING VEGETABLES
(Except Cucurbits)

SPRAY VOLUME FOR FRUITING VEGETABLES: Apply in a minimum finished spray volume of 5 gallons per acre by air or 20 gallons per acre by ground.

SITE	PEST	DOSAGE PER ACRE		SPECIFIC DIRECTIONS
		POUNDS ACTIVE	OUNCES ASSAIL 70WP INSECTICIDE	
FRUITING VEGETABLES CROP GROUP Such as: Eggplant, Groundcherry, Pepino, Pepper (bell pepper, chili pepper, cooking pepper, pimento, sweet pepper), Tomatillo, Tomato	Aphids	0.035 – 0.075	0.8 – 1.7	Aphid species may differ in susceptibility to this product. If you are unsure of the aphid species present or if there are difficult to control species present, use the maximum rate. Begin applications when treatment thresholds have been reached. Thorough coverage is important to obtain optimum control.
	Colorado Potato Beetle	0.025 - 0.05	0.6 - 1.1	
	Whitefly Sweet Potato Silver Leaf	0.05 - 0.075	1.1 - 1.7	Begin applications when whitefly adults appear prior to development of nymphs. Do not wait until heavy populations have become established. Make applications on a minimum 7 day interval as long as pest pressure continues. Use the high rate under heavy pressure. Whiteflies have shown a tendency to develop resistance. For resistance management purposes, alternating applications of different chemical classes reduces the potential for resistance development.
	Whitefly Greenhouse (For Outdoor Use Only)	0.075	1.7	
	Pepper Weevil	0.075	1.7	Begin applications when pepper weevil adults first appear and flower buds and/or fruit are present. Apply on a 7 to 14 day interval. Use a 7-day interval under heavy insect pressure.
	Thrips	0.075	1.7	Begin applications as soon as thrips are seen in the crop and continue applications as needed. Thorough coverage of the plant is important to obtain optimum control. For resistance management purposes, alternating applications of different chemical classes reduces the potential for resistance development.

RESTRICTIONS AND PRECAUTIONS: Fruiting Vegetables (except Cucurbits)

- For any of the pests listed above, use the high rate under heavy pest pressure.
- Do not make more than 4 applications per season.
- Do not apply more than once every 7 days.
- Do not apply less than 7 days before harvest (PHI = 7 days).
- Do not exceed a total of 0.3 lbs. active ingredient (6.8 ozs product) per acre per season.
- There are no rotational crop plantback restrictions for this product.

CITRUS

SPRAY VOLUME FOR CITRUS: For mature trees, apply in a minimum finished spray volume of 100 gallons per acre by ground or a minimum of 20 gallons per acre by air. Ground applications are recommended for optimal control.

SITE	PEST	DOSAGE PER ACRE		SPECIFIC DIRECTIONS
		POUNDS ACTIVE	OUNCES ASSAIL 70WP INSECTICIDE	
CITRUS FRUITS CROP GROUP Such as: Calamondin, Citrus hybrids (chironja, tangelo, tangor), Grapefruit, Kumquat, Lemon, Lime, Mandarin (tangerine), Orange (sour, sweet), Pummelo, Satsuma mandarin	Aphids	0.05 – 0.1	1.1 – 2.3	Aphid species may differ in susceptibility to this product. If you are unsure of the aphid species present and its susceptibility, use the higher rate.
	Citrus Thrips Citrus Leafminer Caribbean Black Scale Glassywinged sharpshooter	0.075 - 0.125	1.7 – 2.9	Begin applications when treatment thresholds have been reached. Thorough coverage is important to obtain optimum control.
	Red Scale Citricola Scale	0.15 - 0.25	3.4 - 5.7	Begin applications when treatment thresholds have been reached. Use of an approved horticultural oil will enhance control. Adjust gallonage to tree size to insure coverage of inside wood and foliage (scales). Optimum gallonage for scale is 750 - 1500 GPA.

RESTRICTIONS AND PRECAUTIONS: Citrus

- For any of the pests listed above, use the high rate under heavy pest pressure.
- Do not make more than 5 applications per season.
- The last application may not exceed 0.25 pounds a.i. per acre.
- Do not apply more than once every 7 days.
- Do not apply less than 7 days before harvest (PHI = 7 days).
- Do not exceed a total of 0.55 lbs. active ingredient (12.5 ozs product) per acre per crop.

POME FRUIT

SPRAY VOLUME FOR POME FRUIT: Apply in a minimum finished spray volume of at least 50 gallons per acre by ground or a minimum of 10 gallons per acre by air. Ground applications are recommended for optimal control.

SITE	PEST	DOSAGE PER ACRE		SPECIFIC DIRECTIONS	GENERAL DIRECTIONS
		POUNDS ACTIVE	OUNCES ASSAIL 70WP INSECTICIDE		
POME FRUIT CROP GROUP Such as: Apple, Crabapple, Loquat, Mayhaw, Quince, Pear	Aphids	0.05 – 0.075	1.1 – 1.7	Aphid species may differ in susceptibility to this product. If you are unsure of the aphid species present and its susceptibility, use the higher rate. Woolly apple aphid may require use of higher rates and repeat applications.	Begin applications before insect populations reach damaging levels. Degree day models are good indicators that can be used to determine application timing and interval for leafminer, codling moth, and certain other insect pests. Thorough spray coverage is important to obtain optimum and extended control. Residual control of labeled pests varies by rate. Use the higher rate for optimal and extended control. The use of spray adjuvants, such as high quality non-ionic surfactants, enhances coverage and may improve pest control. Complete sprays (every row) are recommended. Use of a horticultural oil with ASSAIL 70 WP Insecticide may aid in managing mites, particularly when conditions for mite buildup are favorable. Also, consider the mite population history and the use of other products in the orchard that may predispose a mite population increase.
	Tentiform Leafminer	0.05	1.1	Application(s) for leafminer control must be made before larvae reach the tissue feeding stage.	
	Leafhoppers	0.05 - 0.075	1.1 - 1.7		
	Codling Moth	0.075 - 0.15	1.7 - 3.4	The use of horticultural oil in combination with ASSAIL 70 WP Insecticide has been shown to enhance control of codling moth.	
	Oriental Fruit Moth	0.1 – 0.15	2.3 – 3.4		
	Mealybug Psylla Mullein Plant Bug (Campylomma)	0.075 – 0.15	1.7 – 3.4	Summer applications may not effectively control Psylla. Application to prevent fruit damage from Mullein Plant Bug should be made at pink bud through bloom, prior to petal fall. Do not apply this product when bees are actively visiting the area to be treated.	
	European Apple Sawfly Japanese Beetle	0.1 – 0.15	2.3 – 3.4	For Japanese Beetle: adult beetles will stop feeding after application and mortality will occur within a few days.	

	Apple Maggot Plum Curculio San Jose Scale (suppression)	0.15	3.4	For Apple Maggot, use of baited spheres is a good indicator that can be used to determine spray timing. For optimum control of Plum Curculio, an early petal fall application is necessary followed by one or two cover sprays during the egg-laying period. For best results against San Jose Scale time applications for the crawler stage. The addition of a horticultural oil is recommended for improved performance against San Jose Scale	Consult your local Extension Service, Crop Advisor or Nippon Soda Co., Ltd. representative for additional information.

RESTRICTIONS AND PRECAUTIONS: Pome Fruit

- For any of the pests listed above, use the high rate under heavy pest pressure.
- Do not make more than 4 applications per season.
- Do not apply more than once every 12 days.
- Do not apply less than 7 days before harvest (PHI = 7 days).
- Do not exceed a total of 0.60 lbs. active ingredient (13.5 ozs product) per acre per crop.

GRAPES

SPRAY VOLUME FOR GRAPES: Apply in a minimum finished spray volume of 5 gallons per acre by air or 20 gallons per acre by ground.

SITE	PEST	DOSAGE PER ACRE		SPECIFIC DIRECTIONS
		POUNDS ACTIVE	OUNCES ASSAIL 70WP INSECTICIDE	
GRAPES	Leafhoppers Glassywinged sharpshooter Aphids Mealybug (Grape, Obscure) **EAST of Rocky Mountains Only** Phylloxera (aerial form only) Banded Grape Bug Rose Chafer Japanese Beetle	0.05	1.1 For ASSAIL WSP Insecticide Only: (1 Packet)	Begin applications when treatment thresholds have been reached. Thorough coverage is important to obtain optimum control. For Mealybug control, apply ASSAIL WSP as crawlers/nymphs become active. For Japanese Beetle: Adult beetles will stop feeding after application and mortality will occur within a few days.

RESTRICTIONS AND PRECAUTIONS: Grapes

- Do not make more than 2 applications per season.
- Do not apply more than once every 14 days.
- Do not apply less than 7 days before harvest (PHI = 7 days).
- Do not exceed a total of 0.1 lb. active ingredient (2.3 ozs product) per acre per crop.

TUBEROUS AND CORM VEGETABLES

(Potato, Sweet Potato)

SPRAY VOLUME FOR TUBEROUS AND CORM VEGETABLES: Apply in a minimum finished spray volume of 5 gallons per acre by air or 20 gallons per acre by ground.

SITE	PEST	DOSAGE PER ACRE		SPECIFIC DIRECTIONS
		POUNDS ACTIVE	OUNCES ASSAIL 70WP INSECTICIDE	
TUBEROUS AND CORM VEGETABLES CROP GROUP Such as: Potato, Sweet Potato, Arracacha, Arrowroot, Artichoke (Chinese and Jerusalem), Edible Canna, Cassava (Bitter and Sweet), Chayote (Root), Chufa, Dasheen, Ginger, Leren, Tanier, Tumeric, Yam Bean, True Yam	Aphids*	0.044 – 0.075	1.0 – 1.7	Aphid species may differ in susceptibility to this product. If you are unsure of the aphid species present and its susceptibility, use the higher rate. Use higher rates under conditions of heavy pest pressure or dense foliage. Begin applications when pest treatment thresholds have been reached. Thorough coverage is important to obtain optimum control. *For application via overhead sprinkler chemigation to emerged potato foliage, use a 1.7 ounce / Acre rate to control aphids and leafhoppers. See the Directions for Chemigation section of the label for application details. **For application via overhead sprinkler chemigation to emerged potato foliage, use a 1.0 – 1.7 ounce / Acre rate to control Colorado Potato Beetles. See the Directions for Chemigation section of the label for application details.
	Leafhoppers* Colorado Potato Beetle**	0.025 - 0.075	0.6 - 1.7	
	Flea Beetle	0.025 – 0.05	0.6 – 1.1	
FOR USE AS AN OVICIDE	European Corn Borer	0.05	1.1	

RESTRICTIONS AND PRECAUTIONS: Tuberous and Corm Vegetables

- For any of the pests listed above, use the high rate under heavy pest pressure.
- Do not make more than 4 applications per season.
- Do not apply more than once every 7 days.
- Do not apply less than 7 days before harvest (PHI = 7 days).
- Do not exceed a total of 0.3 lb. active ingredient (7 ozs product) per acre per season.
- There are no rotational crop plantback restrictions for this product.

TOBACCO

SPRAY VOLUME FOR TOBACCO: Apply in a minimum finished spray volume of 5 gallons per acre by air or 20 gallons per acre by ground.

SITE	PEST	DOSAGE PER ACRE		SPECIFIC DIRECTIONS
		POUNDS ACTIVE	OUNCES ASSAIL 70WP INSECTICIDE	
TOBACCO	Leafhoppers	0.05	1.1	Aphid species may differ in susceptibility to this product. If you are unsure of the aphid species present and its susceptibility, use the higher rate. Begin applications when treatment thresholds have been reached. Thorough coverage is important to obtain optimum control.
	Aphids	0.025 – 0.075	0.6 – 1.7	
FOR USE AS AN OVICIDE	Bollworm	0.05	1.1	

RESTRICTIONS AND PRECAUTIONS: Tobacco

- Do not make more than 4 applications per season.
- Do not apply more than once every 7 days.
- Do not apply less than 7 days before harvest (PHI = 7 days).
- Do not exceed a total of 0.3 lb. active ingredient (6.8 ozs product) per acre per crop.

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