



INHIBITOR

# 1,4Sight®

**Potato Dormancy Enhancer and  
Sprout Inhibitor**

Contains 960 g/ Litre 1,4-dimethylnaphthalene  
in the form of a technical concentrate (DMN)

**WARNING // ECOTOXIC**  
Keep out of the reach of children

Net Contents **10 LITRES**



[agrisource.co.nz](http://agrisource.co.nz)



# READ LABEL COMPLETELY BEFORE USE



**WARNING**  
Causes serious eye irritation and skin irritation.  
**ECOTOXICITY**  
Very toxic to aquatic life with long lasting effects. Do not apply onto or into water. Avoid release to the environment. Collect spillage.

## RECORD KEEPING

Where 3kg or more of the substance is applied within 24 hours, in a place where the substance is likely to enter air or water and leave the application area, a PCBU with management or control of the substance must ensure that a written record is kept of each application of the substance. Refer to Part 4 Clause 48 of the Hazardous Substances (Hazardous Property Controls) notice 2017 for details of information that must be recorded.

## HANDLING PRECAUTIONS - FOR WORKPLACE USE ONLY

**Personal Protection:** Do not handle until all safety precautions have been read and understood. Do not eat, drink or smoke when using this product. When mixing or applying, avoid contact with skin and eyes. Wear full protective clothing, gloves and goggles. Wash hands and face before meals and after work. Wash protective clothing after work. Contaminated work clothing should not be allowed out of the workplace.

**Storage:** Keep out of reach of children. Store in original container tightly closed and in a locked dry, cool, well-ventilated area, away from food stuffs, seeds and fertilisers. Storage must be in accordance with the current version of the New Zealand Standard for the Management of Agrichemicals (NZS8409). Stores containing more than 100 Litres of **1,4 Sight** require signage, secondary containment and an emergency response plan.

**1,4 Sight® will freeze at temperatures below 5°C. Store in a warm (15 - 20°C) store.**

**Shelf Life:** When stored appropriately this product should show no significant degradation for two years from the date of manufacture. Contact your supplier for further information about the use of any product that is older than this.

**Spillage:** Move non-essential people from the area. Wear appropriate protective clothing and prevent material from entering waterways. Absorb spills with inert material and place in waste containers. Sweep up solids without creating dust. Wash area with water and absorb with further inert material. Dispose of waste safely (such as to a suitable landfill).

**Product Disposal:** Ensure disposal of unwanted product is by intended use or by another operator strictly in accordance with label directions.

**Container Disposal:** Triple rinse container and add rinsate to spray tank. Dispose of cleaned container at your local AGRECOVERY container collection site.

**Safety Data Sheet:** Additional information is provided in the SDS available from your supplier or [www.agrisource.co.nz](http://www.agrisource.co.nz)

## FIRST AID

IF SWALLOWED: Rinse Mouth. DO NOT induce vomiting. Call a POISON CENTER or doctor/physician if you feel unwell. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention. For advice, contact the National Poisons Centre 0800 Poison (0800 764 766) or a doctor. If medical advice is needed, have product container or label at hand.

## EMERGENCY RESPONSE

In a transport emergency call 111, Police or Fire Brigade

## GENERAL INFORMATION

The active ingredient (1,4-dimethylnaphthalene – (1,4-DMN)) occurs naturally in potatoes. While it remains present at sufficient levels, sprouting is prevented. This dormancy enhancement mode of action is different to treatment with CIPC which burns the sprouts after dormancy has broken. Over time, potatoes that have been harvested or ground stored, lose 1,4-DMN and sprout production starts. Potatoes treated with **1,4 Sight** have less weight loss and remain more turgid than untreated. If sprouting has already started at the time of treatment, the highest rate recommended for **1,4 Sight** may only slow the rate of sprouting but may not stop it, depending on variety.

By applying **1,4 Sight** to stored potatoes and maintaining the levels of 1,4-DMN, the natural process for controlling sprouting is maintained.

## USE CONDITIONS

When applied to storage areas **1,4 Sight** is absorbed into the potatoes. The level of 1,4-DMN in the potatoes should not be allowed to drop below 1 ppm. This can be checked by periodic (2-4 weekly) residue analysis of the tubers. In the absence of residue analysis regular inspections should be made and retreatment made at the first signs of sprouting ('peeps'). Target inspections to the areas of the store where it is most difficult to get good vapour treatment penetration. Regular inspections should also be made for rotting potatoes as **1,4 Sight** can mask the odour of rotting potatoes. Open only the minimum space required for ingress when making inspections to minimize loss of vapours from the store.

For optimum sprout control, potatoes should be dug immediately on maturity, moved into storage and treated. Suberization will not be impaired.

Potatoes that have been ground stored before harvest will contain low natural levels of 1,4-DMN and may require more frequent treatment of **1,4 Sight** to establish and maintain base levels.

Best results are in Potato stores where there is minimal air exchange and no fresh air into the store for 24-48 hours after treatment. **1,4 Sight** may leak from storage areas that are not well sealed. Such stores will require more frequent re-treatment to maintain levels of **1,4 Sight**. Areas of potential leakage should be minimised for economic control of sprouting. **1,4 Sight** vapours can pass through wood and most plastics. Do not use these materials to repair leaks.

**1,4 Sight** should be applied as a vapour treatment in a cold or hot fog to the air space within the store. Use thermal fogging under cooler temperatures. Application as a spray 'mist' can result in 'spotting' of the potatoes. To assist with penetration into the stack, air vents under the stack are recommended. Where none exist, effective air ducts can be made, by using normal pallets stacked two high and butted open end, to open end. Under stack ducting should be not more than 3 metres apart under the stack.

Best results will be achieved if the storage temperature of the potatoes is maintained at or below 10°C and all other conditions for good long term storage of potatoes are met. There are major differences between variety dormancy properties and sprouting potential. It is important to inspect for the first sign of sprouting at regular intervals. Re-treat if any indications that dormancy has broken.

Do not store Seed Potatoes for immediate planting (5-6 weeks) in any area that shares air space with **1,4 Sight** treated potatoes.

## RATE OF APPLICATION

Apply 10 -20 ml / tonne of Potatoes. Use the high rate for the initial treatment. The low rate should be used for subsequent re-treatments as required to maintain dormancy unless the store is only partially filled, in which case the high rate should be continued. Up to 30 days Sprout Suppression can be expected from each treatment if storage conditions are favourable. **1,4 Sight** can be used repeatedly until potatoes are sold.

## METHODS OF APPLICATION

The following application equipment types are suitable for application:

- Wet fog equipment and Misting equipment feeding into forced aeration systems.
- These should only be used when in-store temperatures are above 10°C. In colder conditions droplets rather than a vapour is formed. Droplets settle on the potato skins and can mark the tubers. Do not allow any liquid **1,4 Sight** to contact the surface of the potato. Do not allow any liquid **1,4 Sight** to contact plastic in the store. Operate the ventilation at as low a volume as reasonable.
- Thermal Fogging equipment capable of generating a dry fog, is the preferred method of application. Do not allow any liquid to contact the surface of the potatoes. Do not allow any liquid to contact plastic in the store. Operate the ventilation at as low a volume as reasonable.

After application the normal store ventilation system should be set to recirculate only and should remain on this setting for 24 – 48 hours to allow the vapours to fill the air space and be absorbed by the tubers. Maintain a gentle air circulation within the store during this 24 - 48 hour period to aid movement of the vapours through-out the whole stack. After 48 hours resume normal ventilation procedures

- Monitor the potatoes regularly at least once a week. If not using analysis to determine periodic DMN levels, monitor potatoes more frequently, particularly close to doors etc where leakage could be expected, and, at the first sign of any eye movement, re-treat the whole store with 10 ml/tonne **1,4 Sight** in the same manner as described above with reference to air movement and ventilation. Resume monitoring after re-treatment.

## RECOMMENDATIONS

**Ground stored potatoes:** Where potatoes have been stored in the ground for four or more weeks after maturity (or top desiccation) treatment should be made as soon as is practical after placement in the store. Suberization will not be impaired.

**Freshly harvested potatoes:** For potatoes that have been harvested or desiccated and then harvested at maturity, treatment may be made as soon as the store is filled or harvest is completed within three or four weeks. Suberization will not be impaired so double handling and grading is not required before treatment. Treatment should be carried out as soon as practical after placement in long term storage.

## TREATMENT OF PACKAGING

It is possible to treat cardboard and multiwall paper packaging with **1,4 Sight** just before packing to maintain dormancy and reduce sprouting of the potatoes within the packaging. Apply a measured dose that corresponds to 0.02 ml/kg of packed Potatoes to an area that is not in direct contact with Potatoes to avoid skin burning.

## CONDITIONS OF SUPPLY

All goods supplied by us are produced under rigid quality control procedures which assure the purchaser that at the time of sale they are physically suitable for use in the manner stated. However, to the extent permitted by law, buyers and/or users of the goods accept that neither the manufacturer, Agri Solutions Ltd as registrant, nor any other distributor have any liability or responsibility whatsoever for any loss, damage or injury whether in contract or tort, whether direct, indirect or consequential

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## REGISTRANT

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## DISTRIBUTOR

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DATE OF  
MANUFACTURE:

BATCH NO:

**24 HOUR EMERGENCY RESPONSE 0800 CHEMCALL (0800 243 622)**