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Are there benefits from using Molasses as part of your orchid culture

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Are there benefits from using Molasses as part of your orchid culture?

Many of you will have heard Ray and other orchid society members mention the use of liquid molasses as part of a cultural program for orchids. As we all experience the damage done by caterpillars, and the active season for the black hairy caterpillars is approaching, I thought that the following information might be of interest to those who prefer to avoid using chemical means such as Dipel ® to control caterpillars.

The following text is re-printed from Gardening Australia, Series 26, Episode 20 and was titled 'Costa's suggestion for sweetening up your veggie patch'.

Molasses is a by-product of the refining of sugar. Have a look at this stuff. It's so viscose. I remember eating it as a kid on pancakes and it's really sweet, but it's not just the sweetness - it's also packed with minerals which is great to get those minerals into your garden. And what better way to do it than to add it to your compost. All you have to do is mix molasses up into a watering can and slosh it on. Your compost will love it.

But not everyone loves molasses. There's quite a few different varieties of caterpillars that don't like it at all, so what I want to show you now is a simple recipe and it's a repellent for these caterpillars. All you have to do to start with is get a tablespoon of your molasses - slosh that into a bucket with a litre of lukewarm water. The final ingredient is some liquid soap. Put about a teaspoon of that and mix that up. Take a little sprayer bottle, pour it in and you're ready to go! Spray it all over your susceptible plants - on the tops and under the leaves as well. Spray it on your brassicas - like cauliflower, broccoli, kale, bok choy, tatsoi - and then reapply it after rain.

Molasses Caterpillar Deterrent

1 tablespoon molasses

1 litre lukewarm water

1 teaspoon liquid soap

NOTE: Even the most common foods and products can affect you and your plants. It is good practice with any homemade remedy to first spray a test patch on the target crop and wait 24 hours before checking the sprayed foliage for damage, before proceeding.

However, it appears that Molasses has other properties that can be beneficial in orchid cultural practice.

The WA Department of Primary Industry and Regional Development website at <https://www.agric.wa.gov.au/mechanical-physical-and-cultural/natural-alternatives-synthetic-chemicals?page=0%2C2> makes a strong case for molasses as a preventative to repel insects and caterpillars that otherwise damage our orchids. However, they also caution that many natural remedies have not been scientifically tested or conclusively evaluated. While their popularity suggests they work, the degree of success is unknown, so it is best to treat them as tools to reduce pests and diseases rather than to eradicate them

completely. The following supports the benefits identified on the ABC Gardening Australia program.

Molasses spray for chewing insects

Caterpillars and other chewing insects apparently dislike the taste of leaves treated with this spray. Dissolve one tablespoon of molasses in one litre of warm water and add a teaspoon of liquid soap. Spray both upper and lower surfaces of the leaves.

Some gardeners claim that by doubling the amount of molasses and applying the solution to the soil, they have achieved some success against root knot nematodes.

The Manly-Warringa Orchid Society Bulletin, April 2016 at <http://www.orchidsociety.com.au/wp-content/uploads/2016/04/542-April-Bulletin-2016.pdf> included an article reprinted from a presentation by Ken Russell in July 2013 on the use of non-chemical pest control for orchids. His molasses solution is made by mixing a teaspoon of molasses in 1 to 2 litres of water. Use the mixture to water the plant.

Molasses is a rich source of potassium. He says” you needn’t worry about the molasses attracting bugs -the plants absorb the molasses instantly. Boom it’s gone! The fruit trees just love it.”

“Molasses for Organic Pest Control.

One more benefit of molasses is its ability to be used in the control of some common pests encountered in gardening. The most commonly known use of molasses in NSW is for its ability to help control Fire Ants (Editor’s note - fortunately we do not yet have this pest in WA). When Malcolm Beck was using molasses in the fertiliser spray for his fruit trees he noticed that the fire ants moved out from under the trees. We’ve also found an internet reference to the ability of molasses to control white cabbage moths in the UK. Mix a tablespoon of molasses in 1 litre of warm water and let it cool then spray every week or every two weeks as required for white cabbage moth. They hate it and I think it would be good soil conditioner as well if any drops on your soil. So, molasses could be an effective deterrent in more ways than we think.

Why use molasses on Orchids?

The reason nutrient manufacturers have “discovered” molasses is that it’s a great source of carbohydrates to stimulate the growth of beneficial micro-organisms. ‘Carbohydrate’ is really a fancy name for sugar and molasses is the best sugar for horticultural use. Folks who have read some of our prior essays know that we are big fans of promoting and nourishing soil life and that we attribute a good portion of our growing success to the attention we pay to building a thriving ‘micro-herd’ to work in concert with plant roots to digest and assimilate nutrients. We really do buy into the odd organic adage – ‘Feed the soil not the plant’.

Molasses is a good quick source of energy for the various forms of microbes and soil life in a compost pile of good living soil. As we said earlier, molasses is a carbon source that feeds the beneficial microbes that create natural soil fertility. But, if giving a sugar boost was the only goal, there would be lots of alternatives. We could even go with the old Milly Blunt story of using Coke on plants as a child, after all Coke would be a great source of sugar to feed microbes and it also contains phosphoric acid to provide phosphorus for strengthening roots and encouraging blooming. In our eyes though, the primary thing that makes molasses the best sugar for agricultural use is its trace minerals. In addition to sugars, molasses contains significant amounts of potash, sulphur and a variety of micro-nutrients. Because molasses is derived from plants and because the manufacturing processes that create it are focused on removing the sugars, the majority of the mineral nutrients that were contained in the original sugar cane or sugar beet are still present in molasses. This

is a critical factor because a balanced supply of mineral nutrients is essential for the “beneficial beasts” to survive and thrive. That’s one of the secrets we’ve discovered to really successful organic gardening. The micronutrients found in organic amendments like molasses, kelp and alfalfa were all derived from other plant sources and are quickly and easily available to our soil and plants. This is especially important for the soil ‘micro-herd’ of critters that depend on tiny amounts of those trace minerals as catalysts to make the enzymes that create biochemical transformations. That last sentence was our fancy way of saying – it’s actually the critters in “live soil” that break down organic fertilizers and “feed” our plants.

One final benefit molasses can provide to your garden and orchid media is its ability to work as a chelating agent. That’s a scientific way of saying that molasses is one of those “magical” substances that can convert some chemical nutrients into a form that’s easily available for critters and plants. Chelated minerals can be absorbed directly and remain available and stable in the soil. Rather than spend a lot of time and effort explaining the relationships between chelates and micro-nutrients, we are going to quote one of our favourite sources for explaining soil for scientific laymen. “Micronutrients occur, in cells as well as soil, as part of large, complex organic molecules in chelated form”. The word chelate (pronounced “KEE-late”) comes from the Greek word for “claw” which indicates how a single nutrient ion is held in the centre of the larger molecule. While the finely balanced interactions between micronutrients are complex and not fully understood, we do know that balance is crucial: any micronutrient, when present in excessive amounts, will become a poison, and certain poisonous elements, such as chlorine are also essential micronutrients. For this reason, natural, organic sources of micronutrients are the best means of supplying them to the soil: they are present in balanced quantities and not liable to be over-supplied through error or ignorance. When used in naturally chelated form, excess micronutrients will be locked up and prevented from disrupting soil balance.”

The North Shore Orchid Society June 2020 at <https://northshoreorchidsocietyorg.files.wordpress.com/2020/05/202006-nsos-mb.pdf> has the following to say about molasses.

“Cheap, easy and does it all, but not your kitchen molasses!”

Horticultural molasses does things for your plants like nothing else can and it is cheap, just mix up and start spraying everywhere. You simply can’t overdo it, but you do get to the point of diminishing returns. Molasses can kill insects and does not make your plants sticky, and it also causes a massive micro bloom in the soil.

Sugar Sweet.

Sugars are how plants store energy for rainy days and winter hibernation, so why is this important as a gardener? Aside from giving your plants a power boost, you are stopping bugs. Yes, it stops bugs. Insects are very simple creatures; they can only feed within a narrow window of sugar content. When the sugar content of plants is raised, insects can’t feed on them. They take one bite and move on. The second way molasses controls insects is by being directly ingested by the insect.

What most people don’t know is that only bees and sugar ants can process simple sugars. Insects have no way of expelling the gas that builds up from fermenting sugar and the vegetation in their gut (draw your own mental picture please) plus, they have exoskeletons and can’t get bloated, their delicate internal organs are

crushed from the inside out. All a bug needs to do is walk through or try to feed on a molasses covered plant. As they are constantly cleaning themselves the insects will try to lick the molasses off their feet and swallow it, or if they take a bite of a plant, they will swallow it.

Microbial Bloom.

As microbes go through their life circle, they add organic matter and micro nutrients to the soil, improving the soil and making nutrients more available to your plants. Regularly applying molasses to your soil and plants greatly improves the quality of the soil over time. Mixture 3 tablespoons molasses and 1 tablespoon liquid organic fertilizer (seaweed, fish emulsion etc.) into 4 litres of water spray with abandon every week or two. It also works like a charm on lace bugs on azaleas and lantana for the garden enthusiast. This is the information that I saved about molasses. I have just removed the bit about fire ants as we don't have them in Sydney, but it really sounds good for any garden that needs a boost as well as your orchids and it is safe for bees. We have started to use molasses at 1ml per litre of water in with the fertilizer weekly, but I know of some orchid growers who use up to 5ml per litre, although only using it 3 to 4 times per year.