

December 6, 2018

Department Approved Pesticide Chemical List

The intent of this technical bulletin is to release a list of departmental approved pesticide chemicals that can be used in the cultivation of marijuana in accordance with the Medical Marijuana Facilities Licensing Act (MMFLA) and the Administrative Rules.

Rule 47(11) (R 333.247) states “the department shall publish a list of approved chemical residue active ingredients for growers to use in the cultivation and production of marijuana plants and marijuana products to be sold or transferred in accordance with the act or these rules.”

Chemical residue active ingredients **NOT** included in this bulletin are forbidden to be used for the cultivation of marijuana in accordance with the MMFLA and Administrative Rules. Use of unauthorized pesticide chemicals will be referred to the LARA-BMR Enforcement Section for investigation and inspection. This may result in sanctions, including, but not limited to, license denial, limitation, fines, revocation, suspension, nonrenewal, administrative holds, and orders to cease operations. The department may issue future pesticide lists that supersede the information contained in this bulletin.

Please note: The Natural Resources and Environmental Protection Act, 1994 PA 451, Part 83 et seq. and Michigan Department of Agriculture & Rural Development (MDARD) regulations apply to all pesticide use; marijuana is no exception. Specifically:

- Any pesticide or pest control companies, obtained by marijuana facilities to apply pesticides, shall obtain a commercial applicator license through MDARD.
- If a product has a label, applicators shall fully adhere to the label. This includes when using pesticide products in marijuana cultivation, applicators must not use a rate that is higher than the rates listed on the label.

The following approved chemical residue active ingredients are organized by the intended target:

Insecticides and Miticides

- Ammonium salts
- Azadirachtin
- Bacillus subtilis GB03
- Bacillus thuringiensis
- Bacillus thuringiensis sub. kurstaki
- Bacillus thuringiensis sub. israelensis
- Beauveria bassiana
- Beauveria bassiana strain ANT-03
- Beauveria bassiana strain GHA
- Horticultural oils (petroleum oil)
- Insecticidal soaps (potassium salts of fatty acids)
- Isaria fumosorosea
- Neem oil
- Nerolidol
- Paecilomyces fumosoroseus
- Paraffinic oil (mineral oil)
- Potassium bicarbonate

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- Burkholderia spp. strain A396
- Capric acid
- Caprylic acid
- Capsaicin
- Capsicum oleoresin
- Chromobacterium sub strain PRAA4-1 cells
- Chromobacterium substugae
- Cinnamon and cinnamon oil
- Citric acid
- Farnesol
- Garlic and garlic oil
- Geraniol
- Potassium sorbate
- Rosemary oil
- Sesame and sesame oil
- Sodium bicarbonate
- Soybean oil
- Sulfur
- Sucrose octanoate
- Sucrose octanoate esters
- Sulfur
- Thyme and thyme oil
- White pepper

Fungicides and Antimicrobials

- Ammonium salts
- Bacillus amyloliquefaciens strain D747
- Beauveria bassiana
- Beauveria bassiana strain ANT-03
- Bacillus pumilus strain GHA 180
- Caprylic acid
- Cloves and clove oil
- Copper hydroxide
- Copper octanoate
- Copper oxychloride
- Corn oil
- Cottonseed oil
- Eugenol
- Fenhexamid
- Gliocladium virens
- Mono and di-potassium salts of phosphorous acid
- Neem oil
- Peppermint and peppermint oil
- Potassium bicarbonate
- Potassium silicate
- Reynoutria sachalinensis extract
- Rosemary and rosemary oil
- Sodium bicarbonate
- Streptomyces lydicus wyec 108
- Trichoderma saperellum strain ICC 012
- Trichoderma gamsii strain ICC 080
- Trichoderma harzianum
- Trichoderma harzianum rifai strain KRL-AG2

Vertebrate Repellants

- Castor oil
- Geraniol

This technical bulletin does not constitute legal advice and is subject to change. It is intended to provide a technical clarification only to the Department of Licensing and Regulatory Affairs' Administrative Rules. Licensees are encouraged to seek legal counsel to ensure their operations comply with the Medical Marihuana Facilities Licensing Act and associated Administrative Rules.

More information on the BMR can be found at the bureau's [website](#)

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