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Insect Production Services

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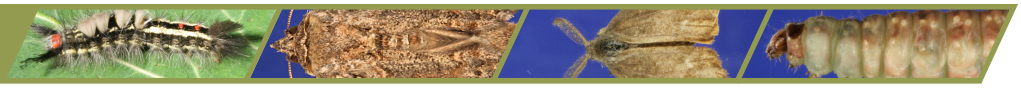
version 2.1



Care Instructions for Western Spruce Budworm (*Choristoneura occidentalis*)

1. Western spruce budworm is shipped as diapausing second-instar larvae in a parafilm-gauze sheet. Artificial diet is not normally included. Unless you have requested otherwise, these insects will have fulfilled their diapause requirement and are ready for use.
2. We recommend that you rear these insects immediately upon receipt, although they may be stored at 2-4 ºC for up to 1 month and still provide adequate results.
3. Cut the parafilm-gauze sheet into patches containing the number of larvae suitable for the size of rearing container that you will use [e.g., 30-40 larvae when using our ¾ oz (22ml) cups of prepared artificial diet. Where possible, cut along the pressed lines on the parafilm to minimize larval injury or mortality. Place the patches on artificial diet for emergence, ensuring that the gauze side is closest to the food source. Turn the rearing containers upside down so that the diet is at the top because the tiny larvae move up towards the light and will be able to find the food. Maintain the larvae at 23ºC, 60% relative humidity and a 16h:8h light:dark cycle.
4. Alternatively, natural foliage may be used for feeding although it is not recommended since it is a potential source of microbial pathogens that may infect these insects. Washing the foliage will reduce this risk. Use large containers and fill them sufficiently with branches (e.g., fir, hemlock, larch or spruce) containing numerous buds that have just begun to flush with new-year's growth. Clean or change rearing containers regularly to avoid frass build-up and add fresh foliage when required. As larvae become larger, fully expanded new-year's buds may be used and the rearing density must be reduced becuase the larvae become cannibalistic.
5. Transfer the larvae to fresh diet when it becomes dry or discoloured (i.e., after about 10-12 days) and remove the parafilm-gauze patch at this time. Reduce the larval rearing density to 6 per cup when using our ¾ oz (22ml) cups of prepared artificial diet.

6. Larvae will start to pupate approximately 3 weeks after the initiation of the rearing process. Pupae should be removed from rearing containers to avoid predation and to provide adequate space for adult eclosion.
7. Adults will emerge 6-8 days after pupation and only require a daily misting of water for survival.

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