Once alfalfa leafcutting bee cells have been placed into incubation trays and the incubator temperature is set at 30°C, count “Day 1” of incubation as the first full day at which the bee cells are at 30°C. This alfalfa leafcutting bee incubation calendar assumes cold storage of bee cells at 5°C prior to incubation at 30°C, with use of dichlorvos resin strips for chalcid parasite control.

Day 1  Alfalfa leafcutting bee cells are at 30°C with bees in the diapausing prepupal stage. UV light - water traps are in place, and a thermostatically-controlled incubator alarm system is operational.

Day 3  Chalcid parasites undergo their final moult into the pupal stage.

Day 7  Place dichlorvos resin strips in the incubator at the recommended rate (3/4 strip per 1000 cubic feet), with fans utilized to distribute dichlorvos vapour evenly throughout the incubator.

Day 8  Leafcutting bees begin to undergo their final moult into the pupal stage. At this stage they are very sensitive to temperature fluctuation, so maintain an even temperature - do not cool at this time.

Day 8 - 9  Chalcid parasites begin to emerge. While many parasites will die in the trays, some parasites will make it to the UV light - water traps.

Day 9 - 12  Chalcid parasites continue to emerge.

Day 10  Alfalfa leafcutting bee pupae begin to show some eye colour (the pink-eyed pupal stage).

Day 12  Alfalfa leafcutting bee pupae continue to darken in colour, in the eyes and over the back.

Day 13  Remove dichlorvos resin strips from the incubator. **Air the incubator thoroughly for 24 - 48 hours**, using an exhaust fan and circulating fans. Maintain the 30°C temperature if possible.

Day 14 - 15  Leafcutting bee pupae continue to darken in colour. If cooling occurred during the airing period following removal of dichlorvos, bring the temperature back to 30°C for continued incubation.

Day 14 - 15  Native leafcutting bees emerge. It is normal for these wild bees to emerge several days earlier than the alfalfa leafcutting bees.

Day 14 - 22  **At any time during this period, if incubation must be slowed due to weather or due to delayed alfalfa bloom, alfalfa leafcutting bee incubator temperature can be lowered to 10 - 15°C for up to two weeks to stop bee development. Once temperature is increased, bee development resumes until emergence is complete. Note: During the cooling period, bee cell temperature within the incubation trays must be 10 - 15°C.**

Day 16  The most advanced alfalfa leafcutting bee pupae (primarily male bees) are completely dark in colour, while the more slowly developing female bee pupae continue to darken.

Day 18 - 19  Male alfalfa leafcutting bees begin to emerge at this time. **Remember that the bees are very susceptible to high temperatures. Make sure that your incubator alarm system is working.**

Day 21 - 22  Female alfalfa leafcutting bees begin to emerge and male bee emergence peaks. Second generation chalcid parasites may begin to emerge.

Day 23 - 24  Female alfalfa leafcutting bee emergence peaks.

Day 23 - 24  Incubation trays are taken to the field for adult bee release once female bees are 75% emerged.

Day 28  Alfalfa leafcutting bee emergence is virtually complete at 30°C.