AIR QUALITY MONITORING OF FUMIGATION APPLICATIONS FOR MODELING FUMIGATION EXPOSURES

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Modeling airborne exposures to fumigants and other pesticides involves two key steps: (1) characterizing flux rates, and (2) modeling the flux to estimate airborne concentrations around the field. Both steps are important. This paper summarizes the state-of-the-art in both areas with the objective of seeking realistic assessment of actual exposures. The focus is not on regulatory applications, but with a broader review.

Sullivan Environmental has worked on approximately 50 Fumigation flux studies regarding alternative fumigants. Modeling methods used in assessing flux from agricultural fumigants is a technique that incorporates using two methods, the IHF method (Integerated Horizontal Flux Method) and AERMOD modeling in order to quantify flux following a fumigation. A review of the modeling methods and applicability of each method to different types of applications and different times following an application are described in this paper. Additionally, sample collection methods and a description of the air sampling equipment and meteorological equipment used in this research are explained in this paper.