pain, sore throat, cough or wheeze and eye irritation being highest on day 1. Urinary DAP levels varied 20-fold between farmers with (geometric) mean levels of 51.1 and 122 mg/g creatinine and a moderate correlation was found between loge-transformed DREAM scores and DAP levels. Detectable DAP levels were found in children at levels on average 0.34% of farmers' levels and 38% of spouses' levels.

**Conclusions** Farmers in Thailand and their families are exposed to pesticides in the spraying season and dermal exposure is an important route. Exposure for farmers' families seems to occur through transfer from the farmer or contamination of the home environment rather than family members helping or playing on the farm.

## P143 EXPOSURE TO ORGANOPHOSPHATE PESTICIDES IN THAI FARMERS AND THEIR FAMILIES

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**Objectives** Pesticide use in the agricultural sector in Thailand is widespread, potentially leading to pesticide exposure and adverse health effects amongst farming populations. The aim of this study was to examine the extent of dermal exposure to pesticides and the nature of self-reported acute ill-health among Thai farmers.

**Methods** A pilot study was conducted in Pak-Chong district, Nakhon-ratchasima province in Thailand. Urine samples were collected during a pesticide spraying week from 16 vegetable and fruit farmers' families and analysed for dialkylphosphate (DAP) metabolites. Information on exposure, lifestyle and acute ill-health was also collected. Dermal exposure was assessed using a semi-quantitative observational method (DREAM).

**Results** All farmers applied insecticides during the spraying season, and most used mixtures of pesticides. Seven different symptoms were reported by the farmer with muscle or joint



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