



## **Effect of green manure in soil quality and nitrogen transfer to cherry tomato in the no tillage system on corn straw**

Edmilson Ambrosano (1), Fabricio Rossi (2), Fabio Dias (1), Paulo Trivelin (3), Takashi Muraoka (3), Silvio Tavares (1), and Glauzia Ambrosano (4)

(1) Piracicaba, Brazil (ambrosano@apta.sp.gov.br), (2) Pirassununga, FEZEA/USP, Brazil, (3) Piracicaba, CENA/USP, Brazil, (4) Piracicaba, FOP/UNICAMP, Brazil

The objective of this study was to quantify the contribution of green manure in on soil quality and nitrogen transfer to cherry tomatoes using the N-15 abundance method. The experiment was carried out in Piracicaba, APTA/SAA, SP, Brazil. The IAC collection accesses 21 of cherry tomatoes were used. Each Plot consisted of six plants spaced 0.5 m and 0.9 m between rows, conducted in a randomized block with eight treatments and five repetitions. The treatments were as green manures intercropping or not on cherry tomato, namely: jack bean (*Canavalia ensiformis*), sunn hemp (*Crotalaria juncea* L.), dwarf mucuna (*Mucuna deeringiana*), mung bean (*Vigna radiata* (L.) Wilczek), white lupine (*Lupinus albus* L.) and cowpea (*Vigna unguiculata* (L.) Walp). Besides two witnesses, one without corn straw and another with corn straw. Five leaves with petiole of each plant part during the first ripe fruit and a bunch of fruits per plant are harvested. Samples of leaf and fruit were weighed and dried in an oven of forced air and its dry weight measured. A subsample was ground in a knife mill type Willy and brought to the mass spectrometer (ANCA GSL) on the Stable Isotopes Laboratory of CENA/USP for the analysis of  $\delta\text{N-15}$ . It measured the percentage of transfer of N green manure for tomato, the tomato plants grown as monocropped were considered a control and came to the result that 27