

FF-IPM EU team develops a novel, highly automated, non-destructive system that reliably identifies fruit fly-infested from un-infested fruit. The e-nose system is a combination of chemical sensitive sensors which change their resistance with the presence of gaseous compounds. The signals obtained from these sensors are related to the gas composition currently measured and can be compared with previously stored pattern. Through recognition algorithms gaseous mixtures can be distinguished by their pattern. Benaki Phytopathological Institute (BPI) characterized the volatile profile of fruits infested by fruit flies and determined whether this is fruit fly or host specific. The specific volatile profiles used for the “training” and validation of the e-Nose system that can be deployed as a useful fruit fly detection tool in different conditions (fruit consignments, orchards, warehouses).