

Adoption factors and dynamics of fruit flies regional IPM

Area wide IPM of fruit flies has proven benefits and is supported by continuous research and outreach efforts. Yet, adoption levels are still low, especially in the developing world. Adoption factors were analyzed in two different case studies in Israel and Kenya.

Israeli case study: Medfly (*Ceratitis capitata*) regional IPM in deciduous:

1. Regional monitoring and advisory
2. Mass trapping in most of the area
3. Aerial trap spraying, if necessary
4. Compulsory sanitation

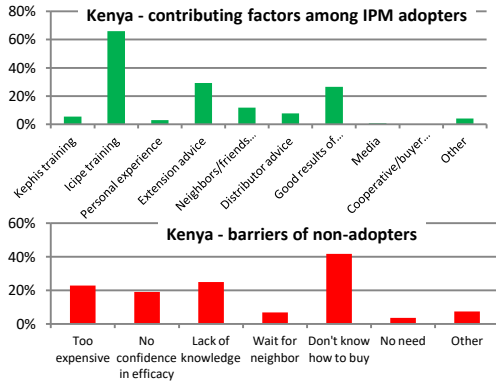


Kenyan case study: Oriental fly (*Bactrocera dorsalis*) regional IPM based on ICIPE IPM package:

1. Males mass trapping
2. Parasitoids dispersal
3. Sanitation



A major barrier in both cases is farmers' fear of additional risk, attention and labour, in addition to optional profitability loss. Adoption rate and farmers' collaboration can benefit from continuous monitoring based advisory after the initial training, and strengthening of collective action mechanisms. Adoption factors might vary between local communities, and project design should relate to it.



Collective action principles	Israel	Kenya
Clearly defined boundaries	√	-
Rules adapted to local conditions	√	-
participation in rules' modification	√	√
Continuous monitoring	√	-
Graduated sanctions	√	-
Conflict resolution mechanisms	√	√
Authorities recognize local rights	√	√
Layered organization of activities	√	√

Gradual transition and project oriented leadership were also found contributing to regional IPM collective action

Major extrinsic adoption factors	Israel	Kenya
Shortage of IPM experts	-	√
Apparent benefits of pesticides	-	-
Shortage of funding	-	√
Need for collective action	√	√
IPM requires more labour	√	√
Low farmers' capabilities	-	-
Incentives	-	√
Access to training and inputs	-	√
Pesticide industry interference	-	-

	Fear of profit decline	Higher risk & attention	Innovation resistance	Sufficient knowledge / proficiency	Trust in project team	Reduce pesticide dependence	Improve health & environment
2012	3.5	3.8	2.5	2.7	3.2	3.9	4.1
2017	2.2	2.4	1.2	1.8	4.2	4.3	4.3

Major intrinsic adoption factors	Israel	Kenya
Fear of lower profitability	√	√
Fear of more risk and attention	√	√
Resistance to innovation	-	-
Environmental awareness	√	√
Personal ego	√	√

*Average level of farmers' perceptions on a 0-5 scale