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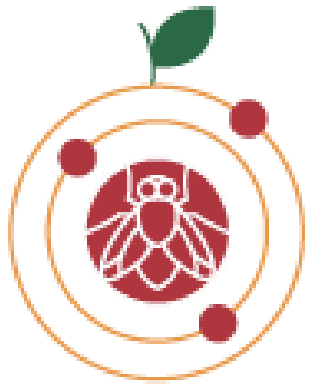
## **Population dynamics of medfly on citrus orchards in Korinthos region, Greece.**

**Dimitrios Papachristos, Spyridon Antonatos, Vasileios Karras, George Partsinevelos,  
Savvina Toufexi, Panagiotis Milonas**





*Ceratitis capitata* (Wiedemann) (Diptera: Tephritidae) is one of the most serious pest for many plants in countries with a warm Mediterranean, tropical or subtropical climate.



**Fruit Flies In-silico**  
Prevention & Management

**FF-IPM**

Pilot site

Demonstration of IPM strategies

Pilot site in Greece.

Characterization of pilot site

- Size,
- Tree species, varieties
- Number of trees
- **Population dynamics**

The aim of this study was to monitor medfly population in citrus orchards using different monitoring devices.





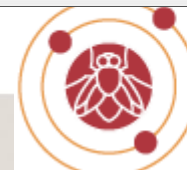
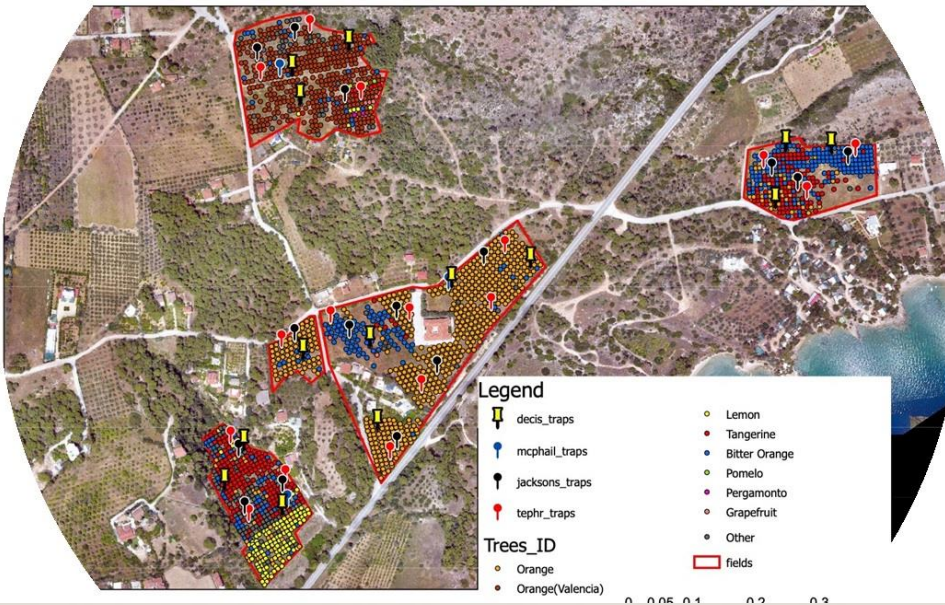
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# Description of pilot site

Location, Kechries,  
Korinthos, Koniario Citrus  
Institute



## Koniareio Citrus Research Institute



**Fruit Flies In-silico  
Prevention & Management**

**FF-IPM**





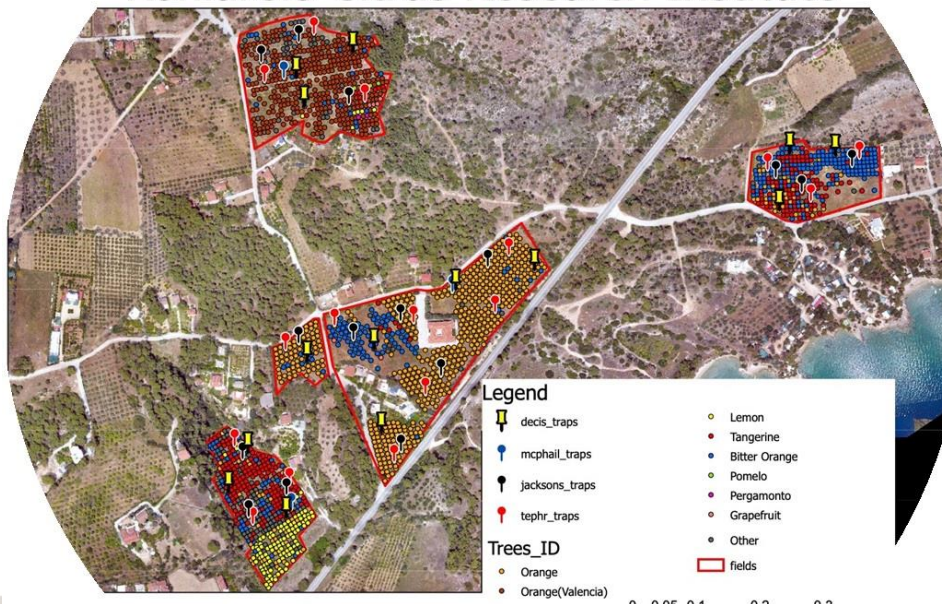


The pilot site is composed by different citrus orchards.

3 Integrated Pest Management (IPM) units (A, B, G)

each 10ha, mixture of citrus species (oranges, tangerines, bitter oranges and mandarins).

Koniareio Citrus Research Institute





In each plot, a network of traps have been deployed consisting of tephritetraps (ammonium acetate, putrescine and trimethylamine), Jackson, and Decis traps).

Traps served weekly  
renewal of attractants for each type  
of trap at regular intervals







**FIELD "A"**

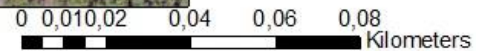


**Legend**

-  mcp\_hail\_traps
-  jacksons\_traps
-  teph\_r\_traps
-  decis\_traps

**Fruit/Tree**

-  Orange (Valencia)
-  Lemon
-  Tangerine
-  Bitter Orange
-  Pomelo
-  Pergamonto
-  Grapefruit
-  Other
-  fields







Field "B"



**Legend**

-  mcpshail\_traps
-  jacksons\_traps
-  tephtr\_traps
-  decis\_traps

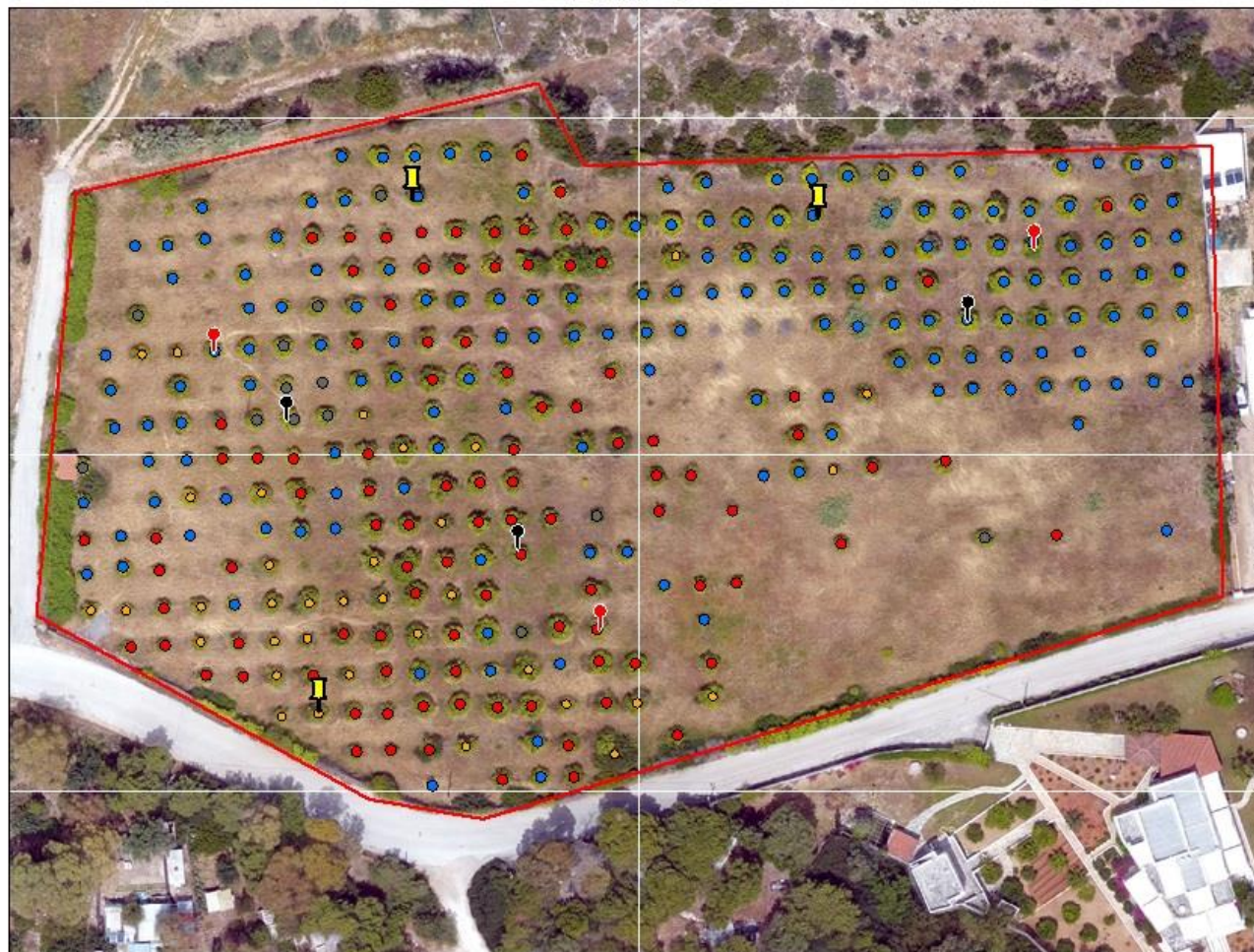
**Fruit/Tree**

-  Orange
-  Lemon
-  Tangerine
-  Bitter Orange
-  other
-  fields





Field "G"

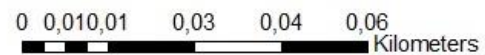


**Legend**

- jacksons\_traps
- tephtr\_traps
- decs\_traps

**Fruit/Tree**

- Orange
- Tangerine
- Bitter Orange
- other
- fields

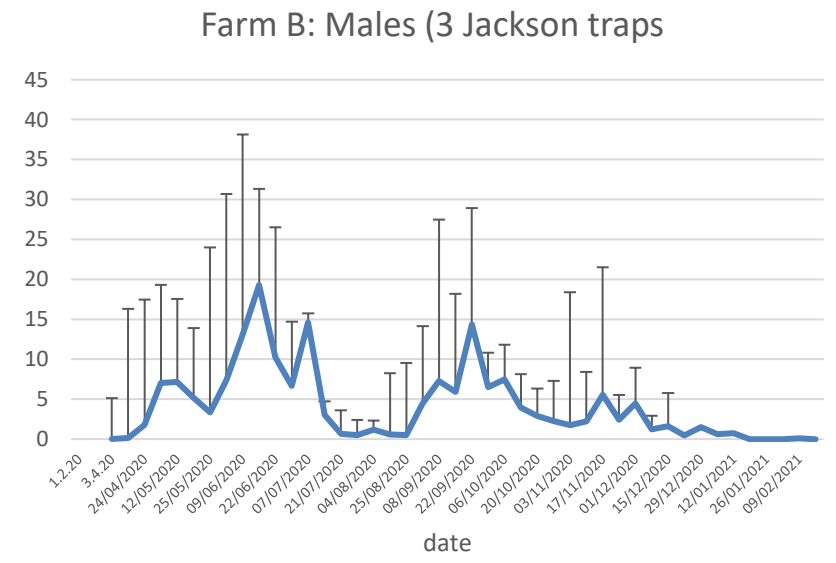
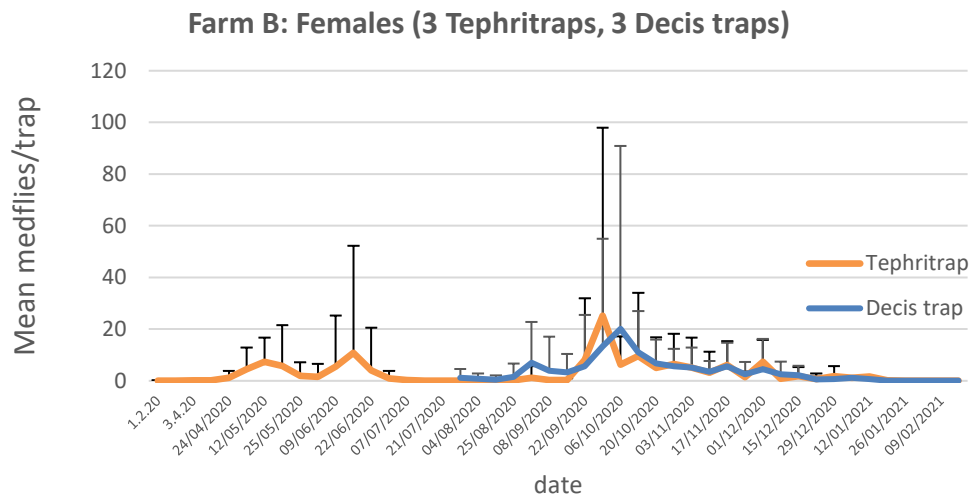
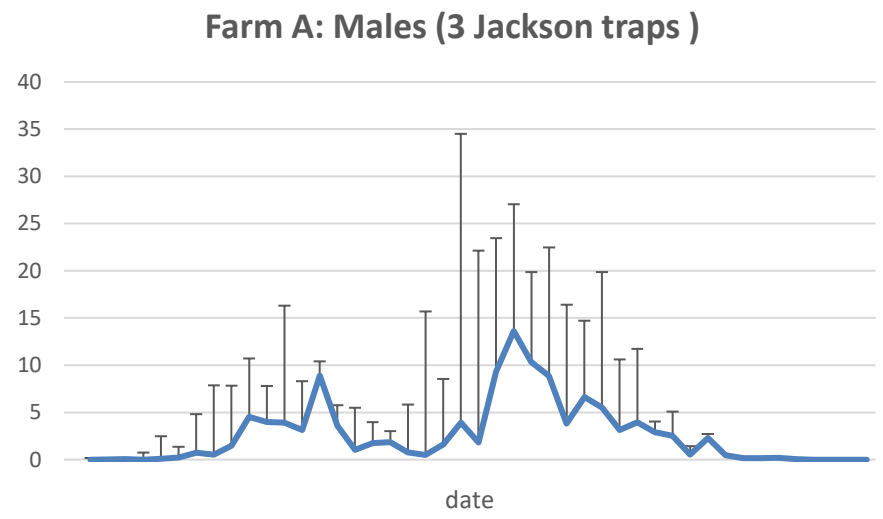
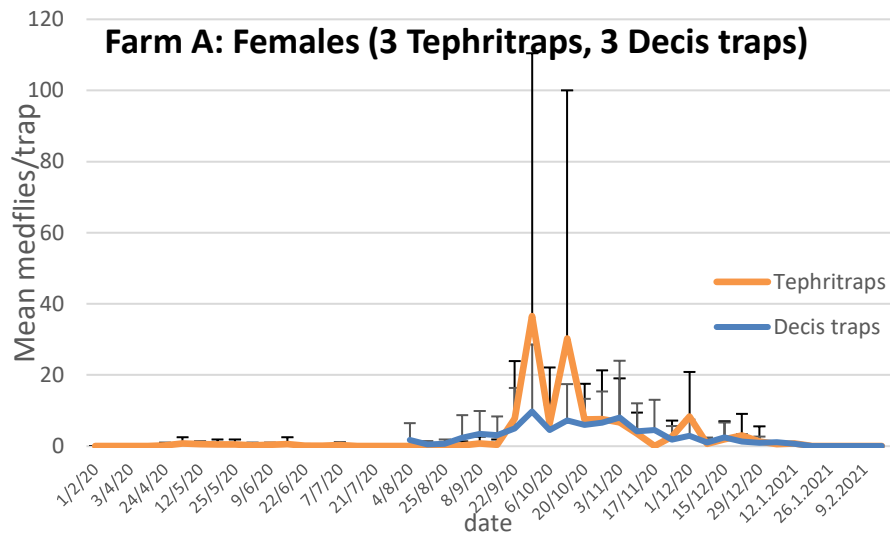






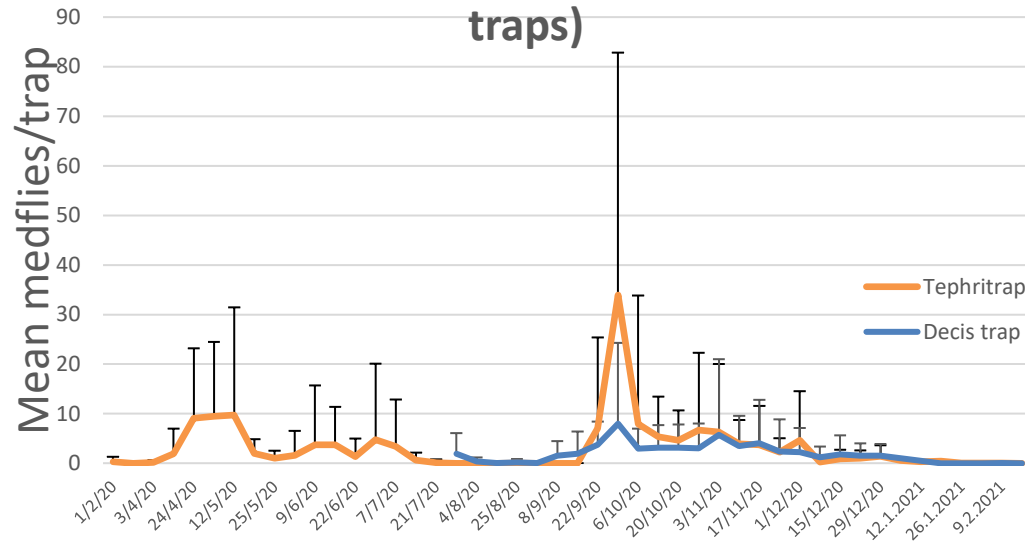
Field "D"



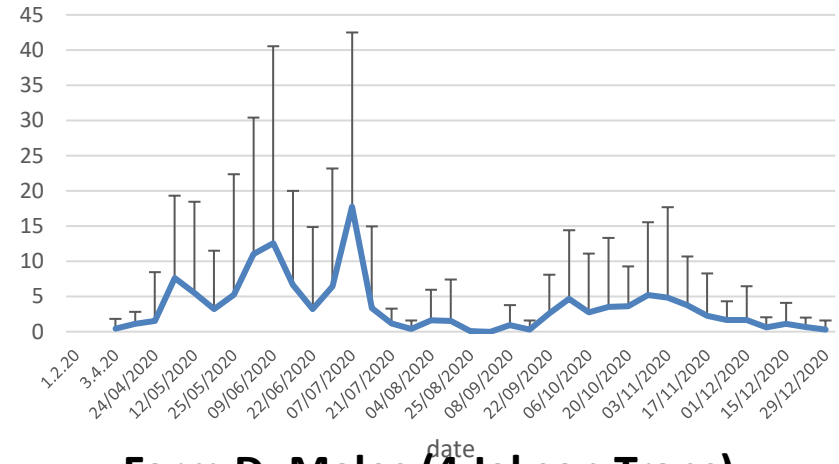




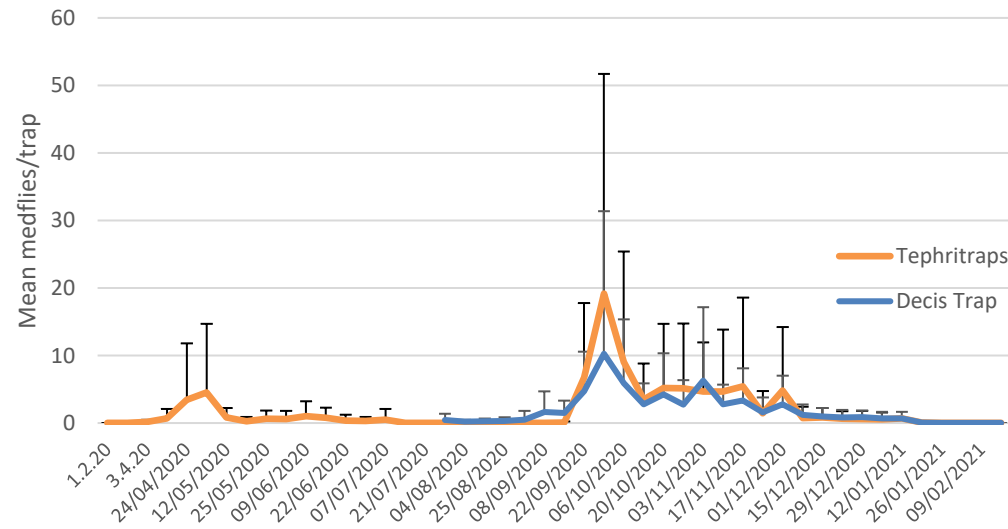
**Farm G: Females (3 Tephritraps, 3 Decis traps)**



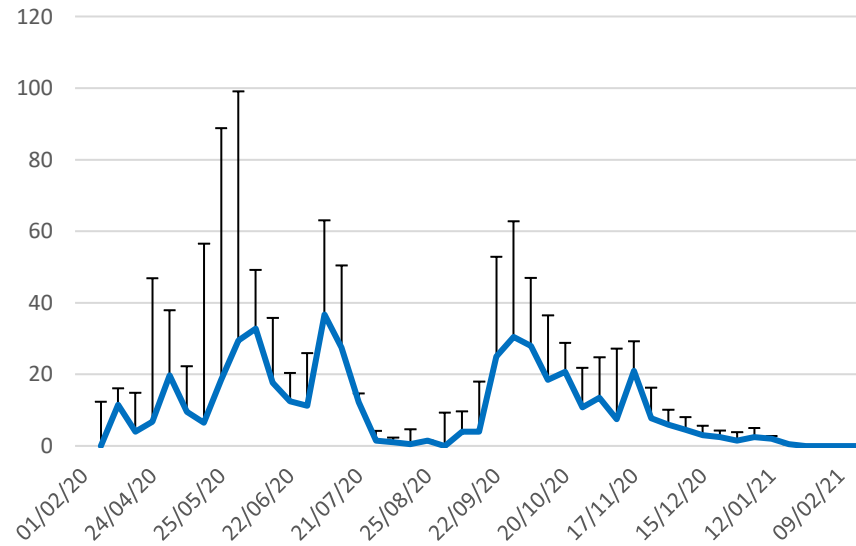
**Farm G: Males (3 Jackson traps)**



**Farm D: Females (5 Tephritraps, 3 Decis Traps)**

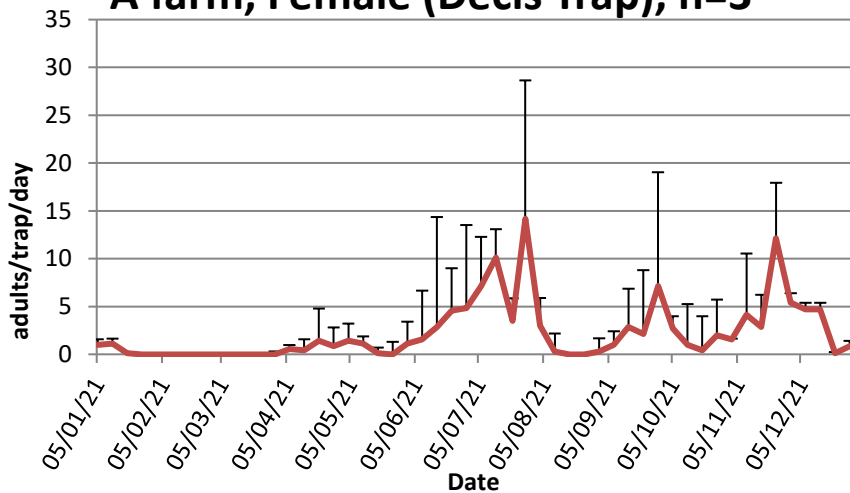


**Farm D: Males (4 Jackson Traps)**

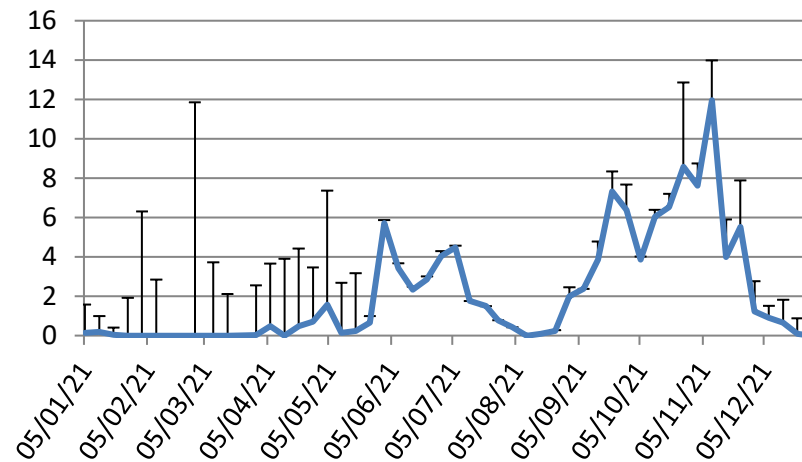




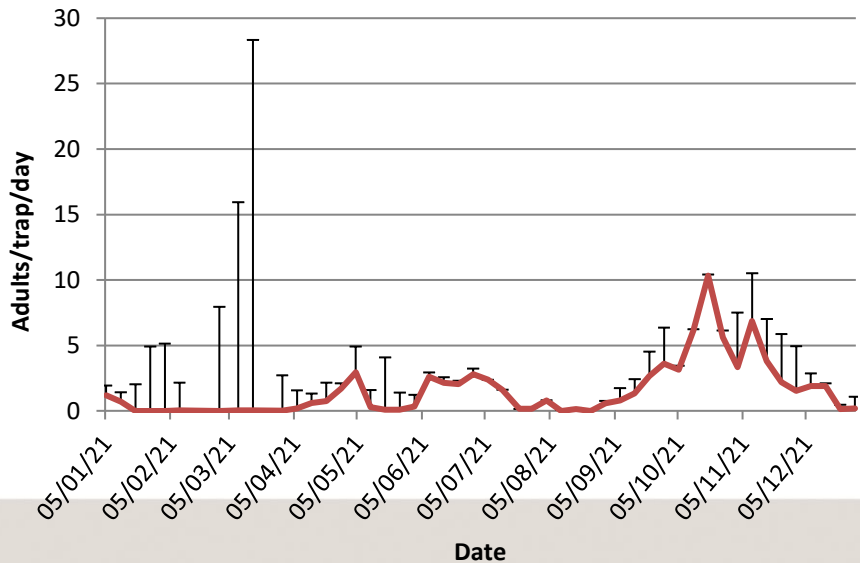
**A farm, Female (Decis Trap), n=3**



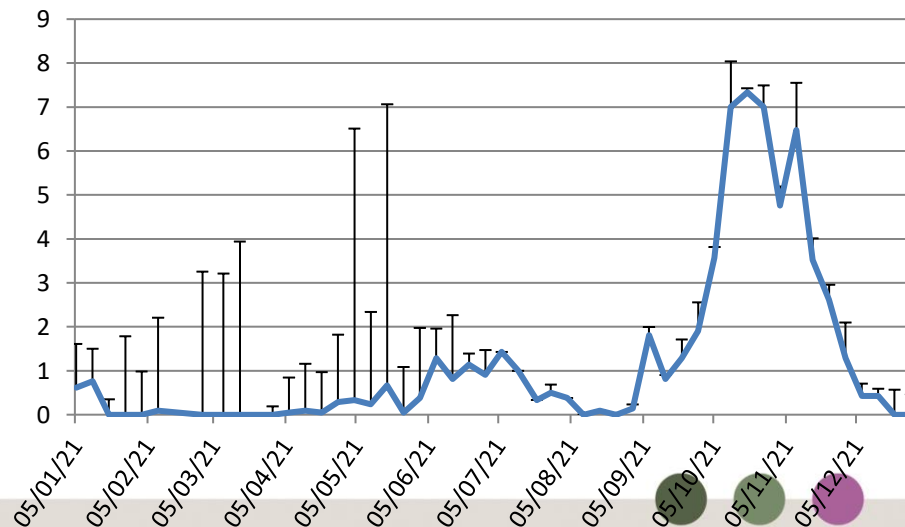
**A Farm, Male (Jackson Trap), n=3**



**B Farm, Female (Decis Trap), n=3**



**B Farm, Male (Jackson Trap), n=3**

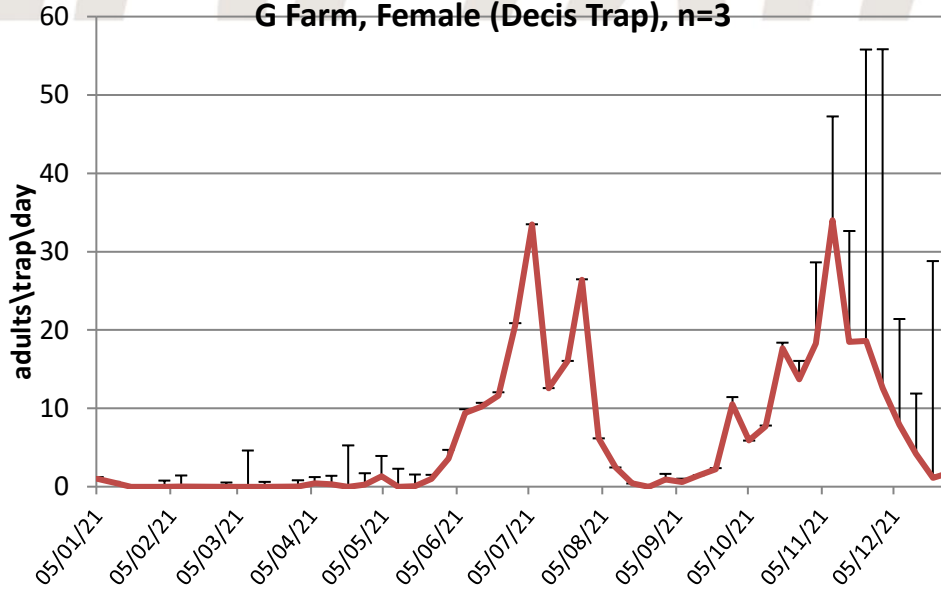




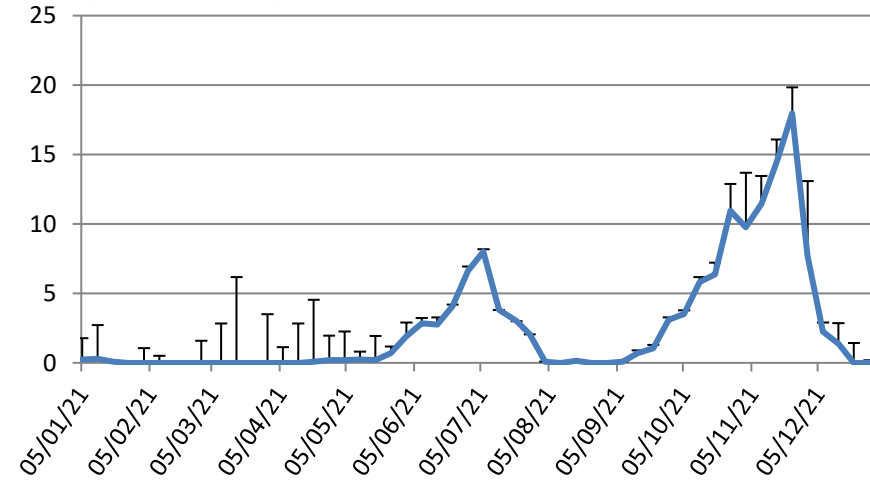


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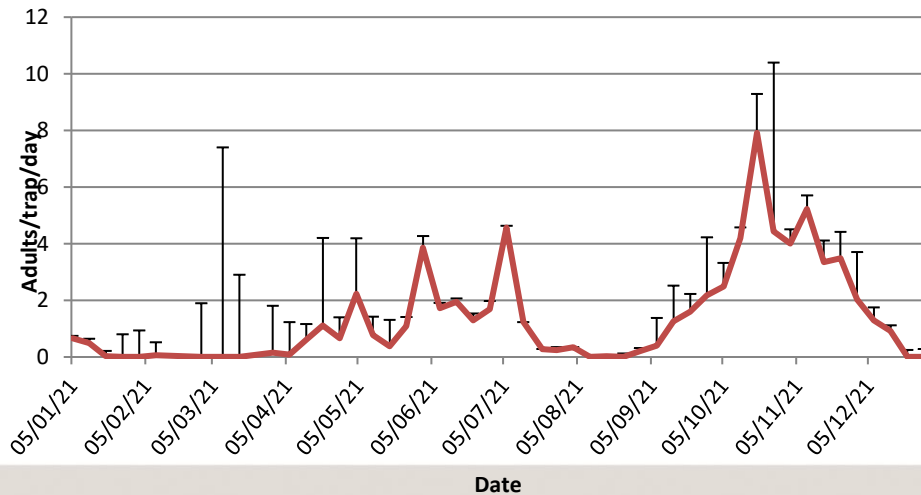
### G Farm, Female (Decis Trap), n=3



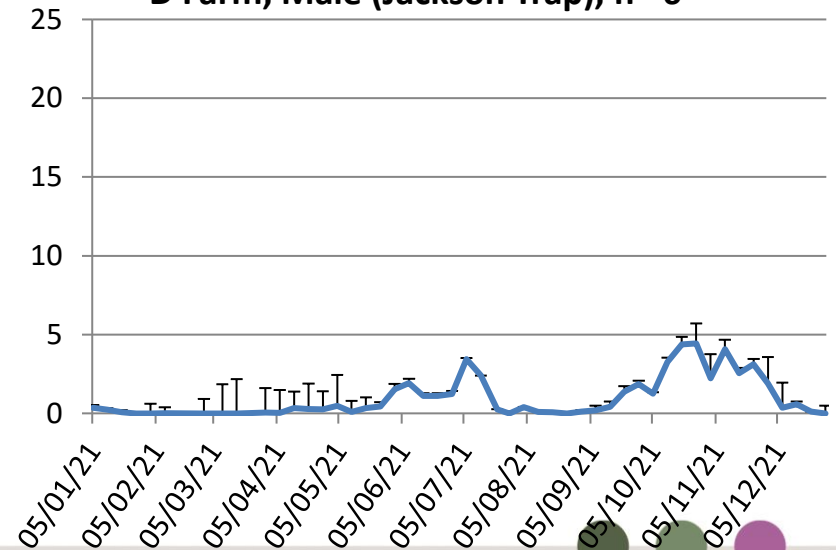
### G Farm, Male (Jackson Trap), n=3



### D Farm, Female (Decis Trap), n=5

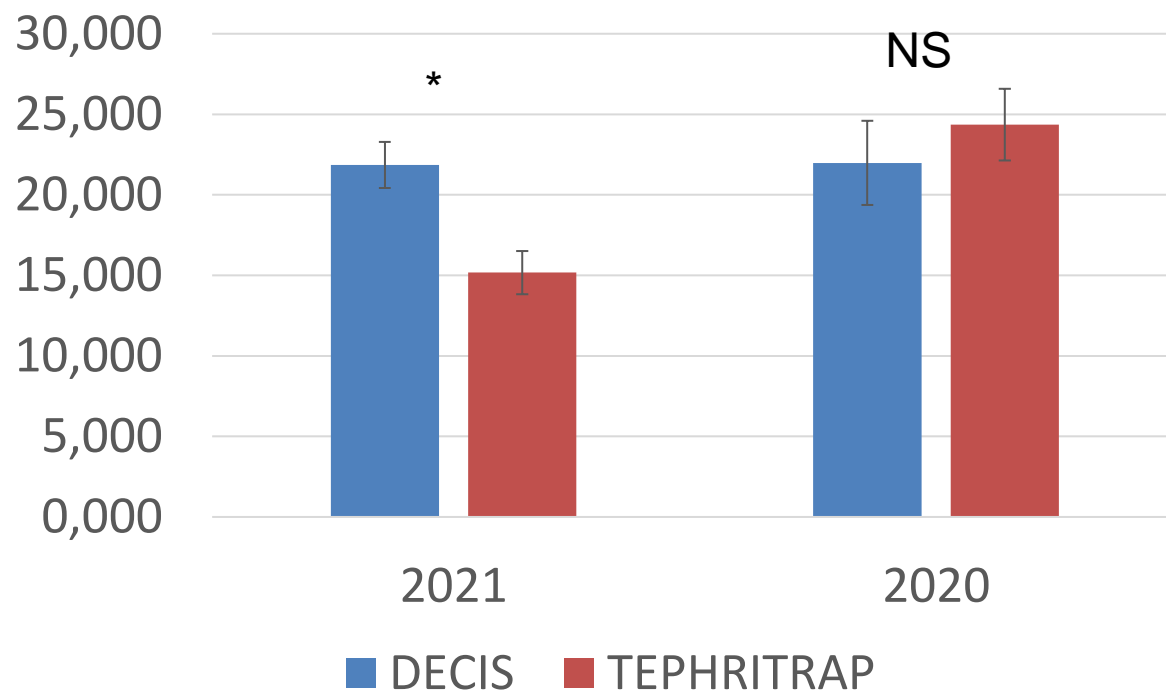


### D Farm, Male (Jackson Trap), n= 6





## Total trap captures







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Jan_2020	Pilot A			
	grapefruit	valencia	mandarin_ensure	
mean stings/fruit	5	1,48	0,38	
infestation in flesh	0,5	0,00	0,00	
No pupae	34	0,00	0,00	
pupae/inf_fruit	4,25		0,00	
Pilot B	bitter orange	Orange	mandarin_page	
mean stings/fruit	0,95	0,77	0,60	
infestation in flesh	0,17	0,00	0,04	
No pupae	43,00	0,00	2,00	
pupae/inf_fruit	10,75	0,00	2,00	
Plot C	orange	mandarin_ensure		
mean stings/fruit	4,00	0,69		
infestation in flesh	0,00	0,03		
No pupae	0,00	3,00		
pupae/inf_fruit	0,00	3		
Plot D	bitter orange	orange (Navelina)	orange (Navelina)ground	mandarin
mean stings/fruit	0,72	7,00	8,86	
infestation in flesh	0,01	0,00	0,05	0,64
No pupae	37,00	0,00	3,00	46,00
pupae/inf_fruit	18,50		3,00	5,11

Mar-20	Pilot A			
	grapefruit	valencia	bitter orange	B. Orange ground
mean stings/fruit	2,29	2,40	0,63	--
infestation in flesh	0	0,08	0,03	0,23
No pupae	0	0,00	1,00	67,00
pupae/inf_fruit			1,00	9,57
Pilot B	bitter orange	B.Orange ground	mandarin_page	mandarin_ensure
mean stings/fruit	0,56	2,40	0,48	0,05
infestation in flesh	0,07	0,60	0,05	0,00
No pupae	27,00	106,00	2,00	0,00
pupae/inf_fruit	13,50	5,89	1,00	
Pilot C	bitter orange	B.Orange ground	mandarin_ensure	
stings/fruit	0,50		0,48	0,30
infestation in flesh	0,08	0,50	0,05	0,00
No pupae	22,00	157,00	2,00	0,00
pupae/inf_fruit	7,33	10,47	1	
Pilot D	bitter orange	orange (Navelina)	orange (Navelina)ground	mandarin_ensure
stings/fruit	0,72	6,77	8,50	0,15
infestation in flesh	0,01	0,00	0,05	0,00
No pupae	37,00	0,00	3,00	0,00
pupae/inf_fruit	18,50		1,50	



Our two years of monitoring showed that adults start to appear in the orchard in beginning of April with the first peak of a spring generation occurring in mid May.

In 2020, trap captures remained low during summer and increased in September-October.

In 2021, high numbers of adults were trapped until mid Summer and then decreased in August to increase again in end of September early October.

In 2021, Decis traps captured more medfly females than Tephritraps, especially during the end of autumn.



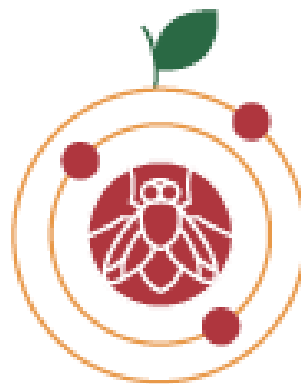




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**Thank you!**



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