

The combat against fruit flies (*Drosophila melanogaster*)



Fall is a busy and hard working time. Next to all the work it is necessary to do a combat against a lot of insects. Especially the fruit fly (*Drosophila melanogaster*) brings a lot of problems. Most of the ways killing the flies are not allowed at rooms where food is processed or are toxic. The natural manner of *Drosophila* comes every year at a lot of houses. Dirty processing steps or simple some fruits, bring a lot of flies into the house. Fruit processing corporations have problems with a lot of those flies. Wineries and wine cellars have loads of them around. Because of hygienic reasons it is necessary to bring the population down with a natural way

The look

Small, 2 to 4 mm long flies with a yellow brown colour. Some types have red eyes and a black body. The maggot is white and has a compact body. The cocoon is brown and around 4 mm.

Life of the fly

The nutriment is fresh fruit, fermenting juices, wine, beer and milk products. The flies take only wet materials, because there it is possible to lay the eggs. Dried fruits will not be contaminated by them. The flies come by the smell of plant parts and flavours of the above named products. Especially the flavour of vinegar brings most of them. The female fly lays around 300 to 400 eggs direct into the substrate. Within one day the maggot will come. After 4 to 5 days the maggots will cocoon. Under best circumstances the flies will be slip after one week. One day later they can lay their own eggs. At 20 °C (68 °F) the generation is around 30 days. At 25 °C (77 °F) it is the half. The flies have a life time of around 45 days. The last generation overwinters at frost free places or under leafs and fruits.

The Problem

Through the transport of bacteria with the flies can wine and other foods be contaminated with wrong bacteria. This can make bad taste at the goods, at the worst case the wine cannot be taken for drinking. Also bitter bacteria, vinegar bacteria and milk acid bacteria can be transported by the flies. Adult flies can come into bottles and bags.

The combat

By an testing system, where some products working well and some had no effect to the population of fruit flies. At the vinegar production place the controlling place was at a window. The controlling was done with an 1 x 1 cm screen. The number of flies was counted

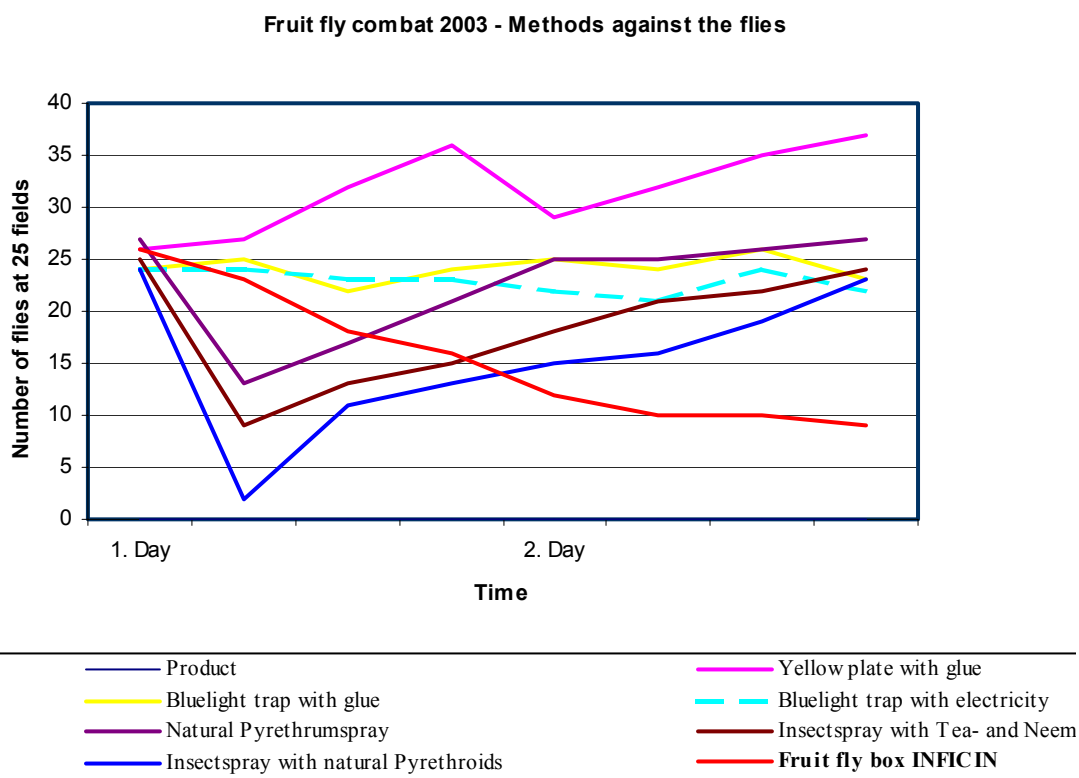
at 25 fields at a time over 2 days. The counting was done all 4 hours after use of the material. Through the new flies within the time, it was possible to compare the chemical products. The temperature was the same during the test.
 beschriebenen Methoden und Mitteln Versuche angestellt.

- Yellow plate with glue
- Blue light with glue plate into it
- Blue light with electricity
- Natural Pyrethrumspray
- Insectenspray with Tea- and Neemoil
- Insectenspray with natural Pyrethrum
- Fly box INFICIN

The products where used as the corporations informed.
 The counting gave the following numbers.

Product	1. day				2. day			
	8.00	12.00	16.00	20.00	8.00	12.00	16.00	20.00
Yellow plate	26	27	32	36	29	32	35	37
Blue light with glue	24	25	22	24	25	24	26	23
Blue light with electricity	24	24	23	23	22	21	24	22
Natural Pyrethrumspray	27	13	17	21	25	25	26	27
Insectenspray with Tea- and Neemoil	25	9	13	15	18	21	22	24
Insectenspray with natural Pyrethrum	24	2	11	13	15	16	19	23
Fly box INFICIN especially against fruit flies	26	23	18	16	12	10	10	9

The diagram shows it much more better.



Conclusion:

All sprays have a short, but good effect against fruit flies. The problem is, that they can only be used at rooms without foods. They can only be used as fast and last help before the food processing work. The best product was the fruit fly box. It requires two days till the box has the optimum work, but then the combat against the fly is a good combat for us.

