

C - Chemical Espionage!

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The background is a solid orange color. In the top-left corner, there are three vertical bars of varying heights, each composed of several overlapping semi-transparent orange circles. In the bottom-right corner, there are four vertical bars of varying heights, also composed of overlapping semi-transparent orange circles.

Preface And Introductions

Pieris Brassicae

- Cabbage Moths
- Avg. 20 eggs per oviposition bout
- Have a unique mating process



Tricogramma Evanescens

- Parasitic
- Responds to the mating process of Pieris Brassicae
- Larva feeds on their prey's eggs



The Question At Hand:

**What is the best balance
for this system and what
is likely to happen in the
long run?**

Total Population:

$$n = .4(2g_0) + 2x_0 - .5(N_0)$$

n = Total Population per Year

g = eggs per year of the anti-aphro. using butterflies

x = eggs per year of the b.flies that don't use anti-aphro.

Total Population:

$g = .4(2g_0)$	$x = 2x_0$	$n = (g + x)/2$
80000	20000	50000
64000	40000	52000
51200	80000	65600
40960	160000	100480
$g_z = 0$	$x = n$	$n = x$

$n =$ Total Population per Year

$g =$ eggs p. year of the anti-aphro. using butterflies where $g = .4(2g_0)$

$x =$ eggs p. year of the b.flies that don't use anti-aphro.

Getting Deeper

Suppose that the female butterfly could detect a male butterfly's propensity to use the anti-aphrodisiac prior to mating. What should her strategy be in choosing a mate?

Thank You!

