Recent insecticide resistance literature for rotations and wos papers

#### Gassmann 2009 fitness costs in Bt

A review of 65 experimental studies of the costs of resistance to Bt toxins [**???**] showed that resistance indicated by mortality declined by a factor of 10 in seven generations in unexposed lab populations.

#### Carriere 2018

Compared observed and simulated changes in resistance. *todo: work out better what they did!* The fitness costs of resistance to Bt toxins within the pink bollworm have been shown to be sufficient to reduce the frequency of resistance in the absence of the toxin but they are almost completely recessive. [1]

#### Carriere 2001

Simple equation for whether resistance is expected to increase or decrease based on benefits and costs [2]. Be good for us to indicated how our model differs from this.

They found some similar things to us, e.g. resistance not increasing when dominance of resistance low and dominance of cost high.

## References

1. Carrière Y, Williams JL, Crowder DW, Tabashnik BE. Genotype-specific fitness cost of resistance to Bt toxin Cry1Ac in pink bollworm. Pest Management Science. 2018;0–1. doi:[10.1002/ps.4928](https://doi.org/10.1002/ps.4928).

2. Carriere Y, Tabashnik B. Reversing insect adaptation to transgenic insecticidal plants. Proceedings of the Royal Society B: Biological Sciences. 2001;268:1475–80. doi:[10.1098/rspb.2001.1689](https://doi.org/10.1098/rspb.2001.1689).