

DYMEX Teaching Kit

The DYMEX Teaching Kit provides the academic community with effective tools and resources that support educational curricula and help educators and students succeed in ecological modelling. In addition to the tutorials and the user manual, the teaching kit includes the training material used in the 5 day DYMEX public training course. This material can be used by academic's to develop their own teaching material for students.

In the training course, students investigate the interactions of an insect ('bug') with a perennial plant (a nut tree), and minimise the negative impact of the bug on nut yield. If we were modelling a biological control agent of a weed, we would attempt to maximise the biocontrol agent's impact under field conditions.

The model used includes two lifecycles, which will ultimately be linked. First students develop the insect (bug) model because its lifecycle is a bit simpler, and so making it easier to illustrate general modelling concepts. Then, students will consider the plant, which is somewhat more complex, and finally they link the two lifecycles together so that they can examine their interactions.

Finally, students will add management events and explore their impacts on the two species. Finally, students use the model to see how they can identify optimal management strategies in view of economic issues and expected efficiency.

This training course material was developed by the scientist at Australia's CSIRO who originally developed the CLIMEX and DYMEX software.