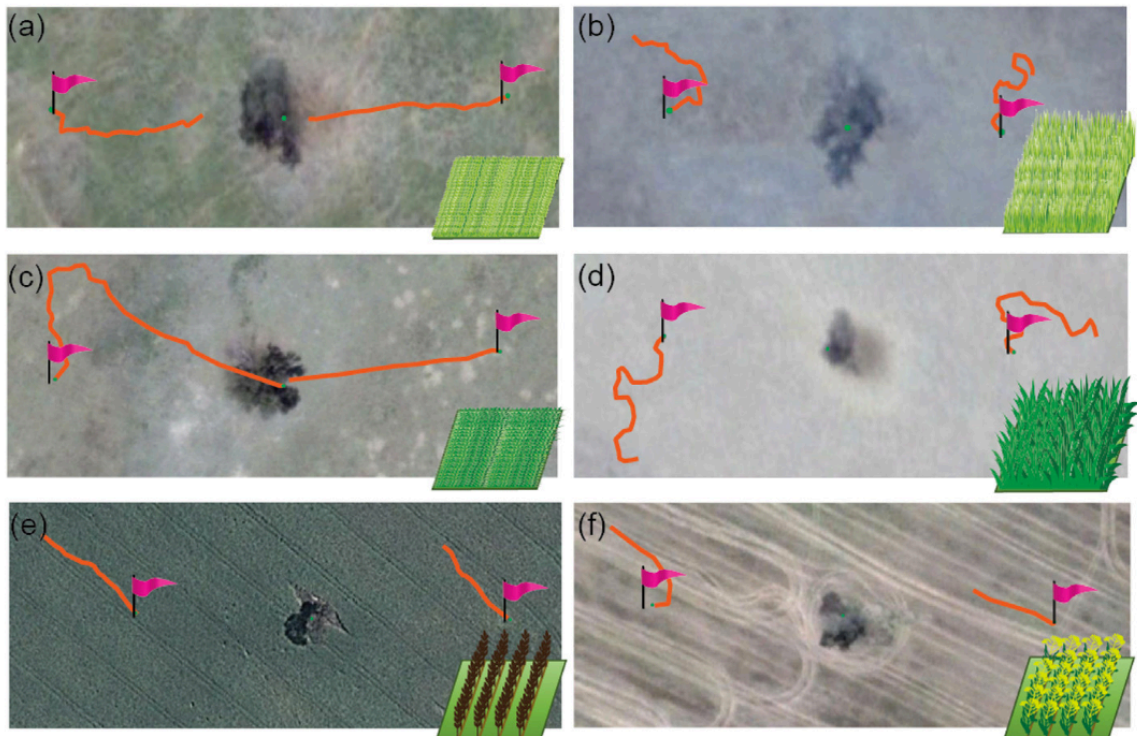


Solutions to Worksheet 3: Understanding Figures

The figure below is from the research paper: '*Pasture height and crop direction influence reptile movement in an agricultural matrix*'.

Work with a partner to answer the questions to the best of your ability.



This figure (labelled **fig.3** in the research study) shows a representation of the tracks of reptiles moving through different types of agricultural pastures:

- a) Short native pasture
- b) Long native pasture
- c) Short exotic pasture
- d) Long exotic pasture
- e) Wheat crop
- f) Canola crop

The tree (reptile home) is in the centre of each image. The red flags mark where reptiles were released. The orange lines show the average path taken by the arboreal geckos who were attempting to return home. Refer to the scientific paper for more information.

Questions with possible solutions:

1. Which landscapes are similar and why?

*Landscapes a) and c) are similar because the pastures are both short.
Landscapes b) and d) are similar because the pastures are both long.
Landscapes a) and b) are both native pastures.*

2. What do landscapes b) and d) have in common?

The pasture height is long for both landscapes.

3. What do you notice about the lizard paths in landscapes a) and c)?

The reptile paths in both diagrams lead back towards the target tree from the point of release.

4. Why might the different landscapes impact the path of reptiles?

Reptiles are small and so the height of a pasture can impact their ability to see where the target tree is. Longer pastures may be more difficult for reptiles to move through.

5. Have a close look at the **DIRECTION** of the crops in landscapes e) and f). What do you notice about the reptile movement through those landscapes?

The direction of the crops are diagonal rows in relation to where the reptiles were released and the target tree. The reptile paths are parallel to the direction of the crops.

6. What conclusions can you make from these images of reptile tracks? Explain.

Reptiles can navigate their way home through short pastures. Reptiles are also able to move through crops along the same direction as the crop orientation. If the crops were orientated towards the target tree, perhaps the reptiles would find their way back to their habitat.