# King Sheep: Overview

What do we know about the game?

→ Perfect information, zero-sum game

→ Symmetric map

→ The first player is going to win (if both use the same algo)


Some more observations:

→ Never ever let your sheep aim for the same food (corner) as your opponent does in the beginning

→ Some times a detour (passing by grass fields instead of going straight to rhubars) saves you a lot running in a zigzag course


**How to solve this: A***

# King Sheep: My Approach in Detail

**1a.** If food available: evaluate the map to find a goal and costs
- High costs for fields with fences, friendly wolf, enemy sheep and enemy wolf (with security margin of 1 field in each direction)
- Low cost for rhubarb, grass and free field (<u>weight food according to distance</u>)

**1b.** Else: escape from enemy wolf

**2.** Pass goal to A*

**3.** Calibrate weights (with several self made, tricky maps)

**1.** evaluate the map to find a goal (the enemy sheep)
- High costs for fields with fences, friendly sheep and enemy wolf
- Low cost for enemy sheep and free field

**2.** Pass goal to A*