

AB 3: Expert A – Azotobacter

Task:

The following text on *Azotobacter* won't be very easy to understand. But don't worry! Work as follows: First read the text on your own. Just try to understand what the text is about. Then talk to the other experts in German: What did they understand? You can look up some words in a dictionary, but don't get carried away, as you don't need to understand every single word! Finally, read the text together once more and answer the following questions:

- a) What do *Azotobacter* feed on?
- b) How can they help to make our lives more convenient?

You may answer in English or German. Give evidence from the text (name the line you are referring to).

Azotobacter

1 *Azotobacter* is a genus of bacteria that form thick-walled cysts and may produce large quantities of capsular slime. They are aerobic, free-living soil microbes which play an important role in the nitrogen cycle in nature, binding atmospheric nitrogen, which is inaccessible to plants, and releasing it in the form of ammonium ions into
5 the soil, which then can be used by plants. This is why *Azotobacter* are used by humans for the production of biofertilizers. They play an important role in agriculture and forestry.

The first representative of the genus, *Azotobacter chroococcum*, was discovered and described in 1901 by the Dutch microbiologist and botanist Martinus Beijerinck.

10 *Azotobacter* species are found in different types of soil, in water, and in association with some plants which supply them with food in the form of carbohydrates like sugar in exchange for ammonium ions.

Text: S. Reitzenstein, based on en.wikipedia.org/wiki/Azotobacter, 29.07.2015

a) What do *Azotobacter* feed on?

b) How can they help to make our lives more convenient?
