

Symbiosis: parasitism

Symbiosis

Symbiosis is a **co-evolved intimate** relationship between members of **two different species**.

Two forms of symbiosis

1. Parasitism (+/-)
2. Mutualism (+/+)

Parasitism (+/-)

A **parasite** **benefits** in terms of **energy or nutrients**, while its **host** is **harmed** by the loss of these resources.

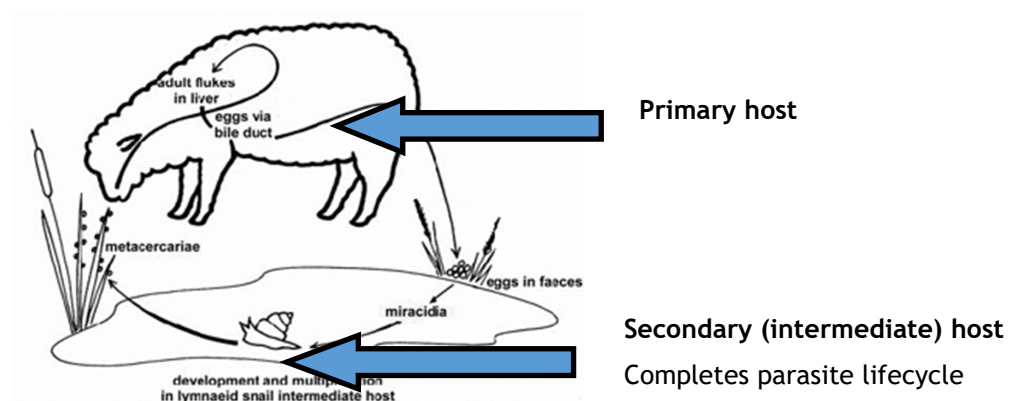
Parasites often have **limited metabolism** and **cannot survive** out of contact with the host.

Parasite Transmission

Parasites can be transmitted using three methods;

1. **Direct contact** e.g. Ticks/head lice pass from contact between hosts e.g. cuddling.
2. **Vectors** e.g. Flying insects actively transmit parasites from host to host by biting host.
3. **Resistant Stages** parasites survive digestive tract of host and **eggs** pass out in host faeces ready to move into a second host.

Parasite Lifecycle



Symbiosis: Mutualism

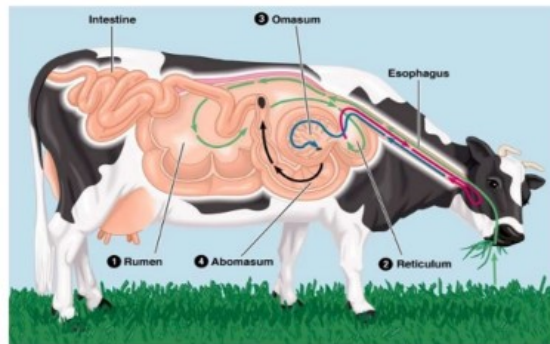
Mutualism

Both species **benefit** from the **interdependent** relationship.

Example 1: Cattle & Bacteria

Cattle - Benefit as bacteria digest cellulose to provide an energy source for the cattle.

Cellulose-digesting Bacteria - provided with a warm, moist habitat in the cattle's gut.



Example 2: Coral & Algae

Algae - Benefit as they are provided with a safe habitat.

Coral - Supplied with glucose/nutrients from the algae.

