

# DIY Anti-Fungal Potions - pupil worksheet

## **Guide 1 – cinnamon infusion**

Mix 1 teaspoon of cinnamon in 3 litres of water in a container and leave to infuse until the next day. The following day, strain the infusion and fill spray bottles with it.

You can use a sprayer to apply the solution on plants affected by mould. A similar application will also help plants with white mould growth on the surface of the plant.

Cinnamon contains the active ingredient (essential oil) cinnamaldehyde which is capable of killing moulds and fungi by disrupting their cell wall.

## **Guide 2 – garlic mixture**

Solution prepared from garlic, chilli pepper and mint.

Blend a handful of fresh mint in half a litre of water (if you don't have a blender, cut into small pieces). Put in a pot, add one teaspoon of crushed chilli, and pour in 1 and a half litres of water, bring to boil and set aside to cool. Peel about 30-50 g of garlic (about one large head or two small ones) and cut into small pieces. Add the garlic to the mint and chilli broth, which has been set aside and cooled a little, and leave to infuse until the next day.

The next day, strain the infusion through a cloth and fill the sprayers with it.

The active ingredient in garlic (allicin) protects against fungal diseases (similar to how thymol disrupts the cell walls of moulds and fungi), but in order not to lose its potency garlic must not be cooked. Spraying is used preventively, mainly on cruciferous vegetables, tomatoes, cucumbers and peppers. Spray the leaves every morning and evening, not in direct sunlight, not during rain. It is important to spray the leaves from below as well as from above.

## **Guide 3 - baking soda spray**

Dissolve 3 tablespoons of baking soda in 2-3 litres of water and add 1 teaspoon of vegetable oil. Pour the liquid into the spray bottles.

The baking soda solution uses a different principle than essential oils from plants - it increases the pH of the plant and thus prevents the germination of fungal/mould spores. It is used to protect vegetables, fruits and flowers. The baking soda does not kill fungi, but it does create unfavourable pH conditions for their growth. It works best as a preventative measure but can also be an effective tool in eliminating fungal diseases. Spraying with the solution is recommended every 7 days, particularly after rain as moisture encourages the development of fungal diseases.

Vegetable oil is added to the preparation for better effect; the oil acts as a binder to make the spray stick better.