

## **Application of O-80/O-organic+/ O-NPK concentrate for grape when mildew grape plants are affected (moldy rot) :**

- 1. Seedlings: dilute 100 ml of O-80 concentrate per 10 liters of water. Soak the cuttings for 2-3 hours before planting.**
- 2. Phase of growing 4-6 leaves: dilute 1,5 liter of O-NPK concentrate in 200 – 250 liters of water and spray per 1 hectare.**
- 3. Phase Before flowering: dilute 1 liter of O-80 and 1 liter of O-organic+ concentrate in 200 liters of water and spray per 1 hectare.**
- 4. The phase of formation of a bunch of grapes: dilute 1-2 liters of O-80 concentrate in 250-300 liters of water and add to the soil and spray per 1 hectare.**
- 5. Berry growth phase: dilute 1 – 1,5 liter of O-80 concentrate in 200-250 liters of water and add to the soil and spray per 1 hectare.**

### **Preparation of the working liquid**

- Shake the container well before opening and measure the required amount of fertilizer.
- Partially fill the spray tank with water (if possible use warm water with a temperature between +18 to +26°C) and pour the measured amount of fertilizer with the stirrer
- While stirring, fill the tank with water to the required volume.
- Use the prepared working liquid immediately after its preparation.
- The fertilizer can be used together with **preparations for the treatment of powdery mildew affecting grape plants (mildew, moldy rot), other** plant protection products and mineral fertilizers, after a prior test of their miscibility, as a result of which no sediment or other insoluble element is formed.

### **Storage conditions**

- Store in a cool and dark place, in original packaging, at the temperature between +5°C and +30°C
- Dispose of unused fertilizer packaging after the expiry date.
- Shelf life: 2 years.

### **Precautions**

- Follow the generally required hygiene and safety rules while working with the fertilizer.
- Wear protective gloves.
- In case of eye contact, rinse with plenty of water and consult your doctor if necessary.
- The product is not suitable for consumption, keep out of the reach of children.

Biological preparations are environmentally safer alternatives to chemical means of combating mildew in the vineyard. They use microorganisms, bacteria or fungi that can compete with the fungal pathogen and prevent its development. Here are some examples of biological drugs:

1. The bacterium *Bacillus subtilis*: This bacterium produces antifungal compounds that can control the growth of mildew. Preparations containing *Bacillus subtilis* may be effective in preventing infection and reducing its spread.
2. *Pseudomonas fluorescens* bacterium: This bacterium also has antifungal properties and can be used to fight mildew. It creates conditions unfavorable for the development of the fungus, and competes with it for resources.
3. *Trichoderma harzianum* fungus: *Trichoderma* is another useful microorganism that can be used to control mildew. It can antagonize the fungal pathogen and help prevent its growth.
4. Plant extracts: Some plant extracts, such as garlic, pepper and neem, have antifungal properties and can be used in the fight against mildew. They can be applied in the form of sprays or infusions for the treatment of plants.

It is important to note that the effectiveness of biological drugs may vary depending on the conditions and type of mildew. It is recommended to contact local specialists or agronomists for specific recommendations and dosages of drugs suitable for your vineyard and region. In case of severe damage to grape plants, in the autumn, after the leaves fall, the bushes are radically pruned.

All the fallen leaves and the cut vine are burned. After pruning, it is necessary to carry out exterminating spraying of the vineyard, that is, the bushes and the ground around them need to be treated with contact preparations of copper, achieving diligent washing of shoots with a solution.

Mildew (moldy rot) can be a problem for vineyards and can cause deterioration of crop quality. Here are some methods that can help in the fight against mildew in the vineyard:

1. Prevention: Regularly inspect the vines and look for signs of mildew infection, such as spots on the leaves, white plaque and damage to the fruit. Remove the affected leaves and fruits to prevent the spread of infection.
2. Removal of affected parts: If signs of mildew are detected, remove the affected leaves, shoots and fruits. Destroy them to prevent the spread of the fungus to the rest of the plants.
3. Suitable pruning: Proper pruning of vines can help improve air circulation and reduce humidity, which can reduce the risk of mildew infection. Remove excess shoots and trim the vines to provide enough space for air circulation.

4. **Treatment with drugs:** Depending on the scale of infection and the recommendations of specialists, chemicals can be used to combat mildew. Contact a professional gardener or agronomist to get recommendations on safe and effective drugs suitable for your region.
5. **Humidity management:** Mildew often develops in high humidity. Try to keep the vineyard dry, avoiding excessive watering and ensuring sufficient ventilation of the air around the vines.
6. **Selection of resistant varieties:** When buying new seedlings, choose grape varieties that are known for their mildew resistance. This can reduce the risk of infection and facilitate the fight against fungal infection.

It is important to note that mildew can be difficult to control, and in some cases professional intervention may be required. It is recommended to contact local specialists or agronomists for specific advice and recommendations based on the conditions of your vineyard and region. There are several chemicals that can be used to combat mildew in the vineyard. Here are some of them:

1. **Copper-based fungicides:** Copper is one of the most common ingredients in mildew control fungicides. Preparations containing copper oxychloride or copper hydroxide can be effective when used in the initial stages of infection.
2. **Sulfur-based fungicides:** Sulfur is also widely used to combat mildew. Fungicides containing sulfur can prevent the development and spread of fungal infection.
3. **Triazoles:** Triazole-based drugs such as tebuconazole, metconazole and others can be used to control mildew. They have a wide spectrum of action and can be effective in fighting fungal infections.
4. **Biological preparations:** Some biological preparations containing bacteria or fungi that act antagonistically on the fungus can be used to control mildew. They may be more environmentally friendly options to fight infection.

It is important to note that the choice of a specific chemical preparation depends on regional recommendations, the type of mildew and the conditions of the vineyard. Before using chemicals, it is important to read the manufacturer's instructions and follow the safety rules. It is recommended to consult with an agronomist or an agricultural specialist for recommendations specific to your vineyard.