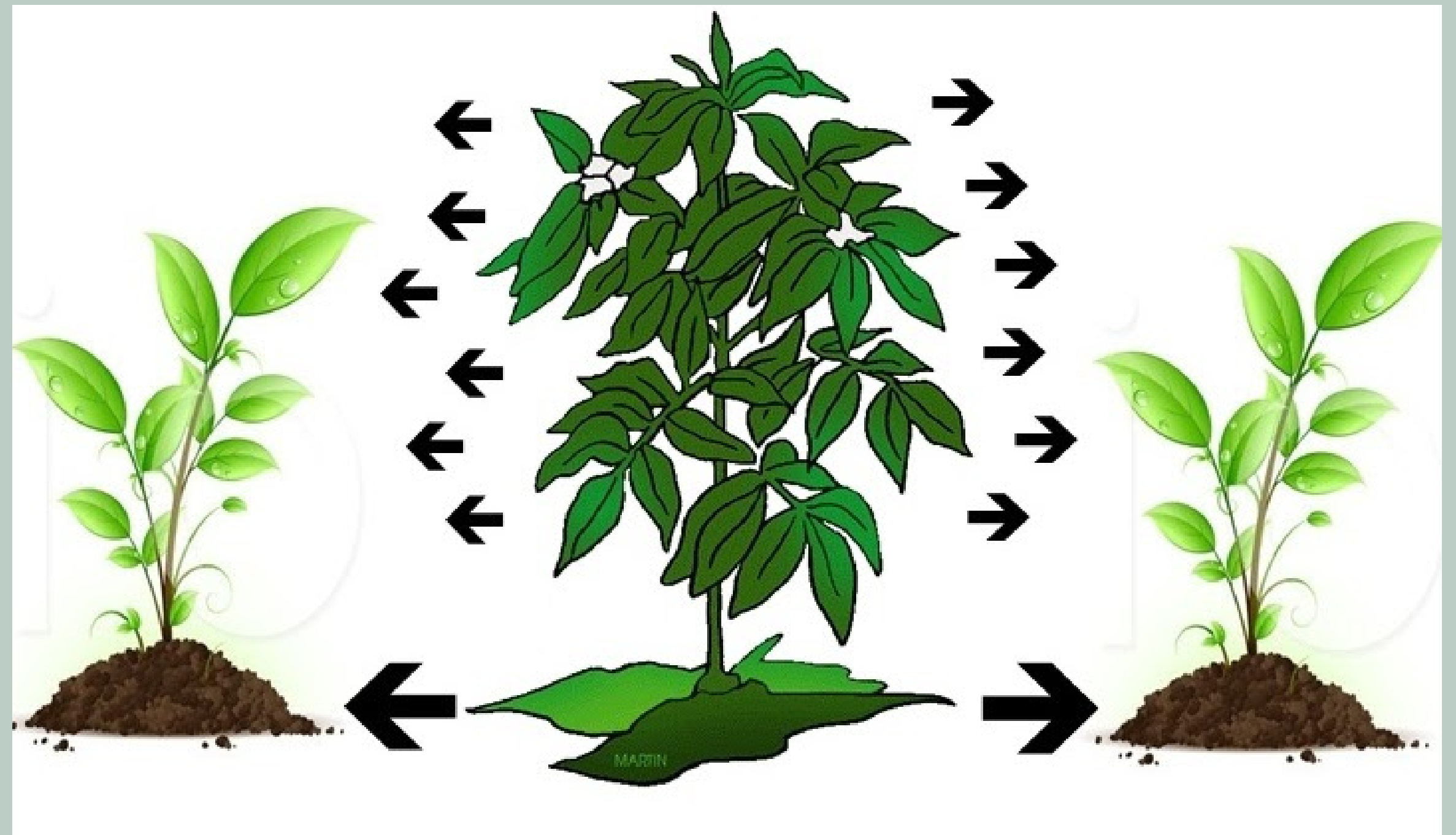


ALLELOPATHY

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What is ALLELOPATHY?

it comes from greek words:
allogenon means "of each other"
pathos means "to suffer"

Allelopathy refers to the chemical inhibition of one species by another. The "inhibitory" chemical is released into the environment where it affects the development and growth of neighboring plants.

Allelopathic chemicals can be present in any part of the plant. They can be found in leaves, flowers, roots, fruits, or stems. They can also be found in the surrounding soil. Target species are affected by these toxins in many different ways. The toxic chemicals may inhibit shoot/root growth, they may inhibit nutrient uptake, or they may attack a naturally occurring symbiotic relationship thereby destroying the plant's usable source of a nutrient.

Types of allelopathy:

1. TRUE ALLELOPATHY

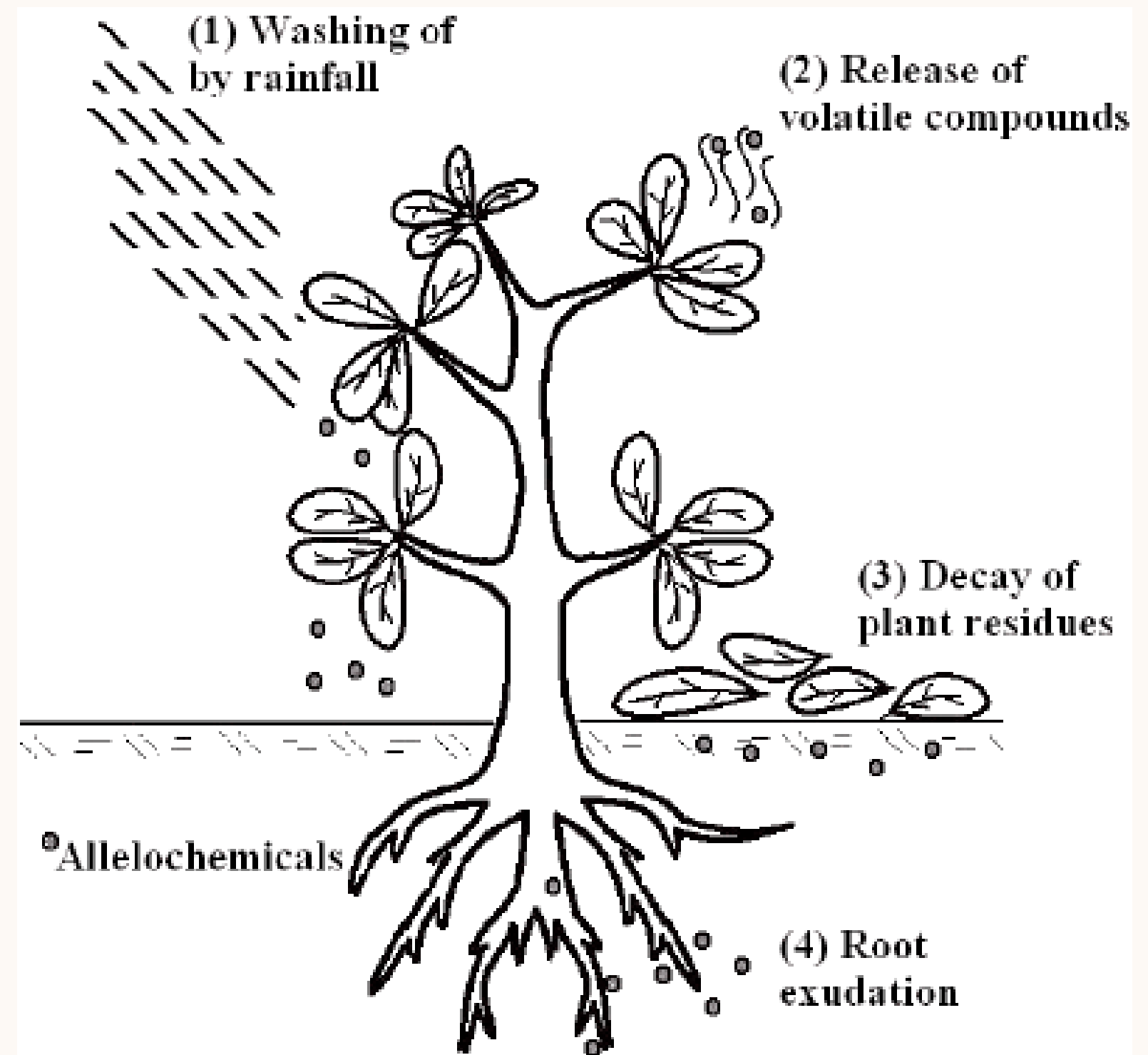
It refers to the release into the environment of chemical compound that are toxic in the forms. produced by the plants.

2. FUNCTIONAL ALLELOPATHY

It refers to the release into the environment of compound that is toxic after chemical modification by micro-organisms.

ROUTES OF RELEASE ALLELOCHEMICALS:

1. **Leaching:** the aerial part of the plant lets go substances by rain effect. Then, they can fall on other plants or on the ground.
2. **Decomposition:** the plants drop their leftovers on the ground, where they decomposed under the microorganisms action, which help the release of the compounds.
3. **Volatilization:** the substances are released by the stomata (structures that allow the exchange of gas and transpiration).
4. **Exudation:** the plants can also release allelochemicals directly by live roots.



Advantages of allelopathy:

- Limit competition for space, light, nutrients, water.
- Autotoxicity (chemical produced inhibits germination of its own seeds).
- Allelopathic weed suppression through the use of cover crops
- Allelopathy can be used for beneficial purposes through using allelochemicals as natural herbicides or pesticides.

Allelopathy vs Competition:

Allelopathy and competition involve two organisms and ensure the survival of the fittest for a particular condition. Allelopathy refers to a relationship between two organisms where one organism secretes allelochemicals. Competition refers to a negative relationship in which two organisms compete for essential requirements such as nutrition, water and territory. So, this is the difference between allelopathy and competition.

Allelopathy vs Competition		
More Information Online WWW.DIFFERENCEBETWEEN.COM		
	Allelopathy	Competition
DEFINITION	Allelopathy defines the relationship between two organisms that is mediated by allelochemicals	Competition is a relationship between two organisms that takes place due to the completion owing to the lack of resources
EFFECT	Both positive and negative	Bring about negative effects on organisms
TYPES	Positive allelopathy and negative allelopathy	Intraspecific competition and interspecific competition
TYPE OF CHEMICALS SECRETED	Allelochemicals	No secretion of chemicals

PRACTICAL USE OF ALLELOPATHY:

The possibility of using allelopathic interactions to improve the condition of crops, increase yield or eliminate pests, weeds and diseases caused by pathogenic microorganisms is an attractive prospect for modern agriculture, for example due to the possibility of replacing chemical plant protection agents that have been used for years.

The effect of allelopathy on plants:

1. watercress with dill



2. watercress with orange peel



3. watercress



RAPORT

EXPERIMENT: "EFFECT OF ALLELOPATHY ON PLANTS"

1. Research problem: Allelopathic interaction between two plants.
2. The purpose of the project: How allelopathy works?
3. Hypothesis: Negative influence of allelopathic substances on plant growth.
4. Course of the experiment:
 - 1:1 cress seeds and dill
 - 1 teaspoon of cress seeds
 - 1 teaspoon of cress seeds and orange peel (1 orange)

observations: dill makes cress impossible to growth and orange peel makes inhibits growth of the crees.

the results of the experiment: there is negative influence of allelopathic between dill and cress, also essential oils have an effect on growth.

Questions:

1. I have chosen subject about allelopathy because I am interested in gardening, also it was helpful for my mom, now she knows why her vegetables didn't grow as good as she wanted.
2. Before the project I didn't know that there is something like allelopathy, thanks to this I broaden my knowledge and now, I can easily start doing gardening stuff.