



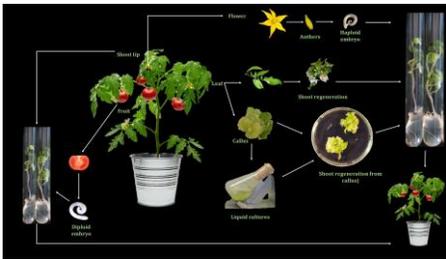
WORKSHOP

Plant conservation by plant cloning

EDUCATIONAL LECTURES

Basics of plant cloning

Micropropagation simplified represents plant reproduction by plant cloning. The technic for plant cloning is often referred to as culture in vitro since plants are cultivated within glass containers (in vitro). As a result of plant cell totipotency it is possible to induce plant regeneration from every plant tissue: leaves, fruits, flowers, stems, roots etc.



Process of micropropagation comprises of four stages: Initiation, Multiplication, Rooting and Acclimatization.

Initiation stage:



In this stage suitable plant tissue is selected and sterilized for aseptic cultivation in prepared medium. The medium contains all necessary mineral salts for plant growth, sucrose as a carbon source and usually are solidified with agar. Aseptic culture method is applied during cultivation, this means all glassware and tools as well as media has to be sterilized in autoclave. Plant material is surface sterilized using commercial

bleach and working area is sterilized using 70% ethanol.

Multiplication stage:

During cultivation of explants it is possible to induce adventive shoot formation by supplying the medium with cytokinins and auxins, for shoot formation ratio of phytohormones must be in favor of cytokinins. The shoot regeneration can be directly from explant or indirectly via callus formation.



Rhizogenesis:

Developed shoots are transferred on media containing higher concentration of auxins in order to stimulate root development.

Acclimatization:

Plants with fully developed roots are further transferred into the soil. In order to acclimatize plants, plants are covered with plastic cups for moisture maintenance in the first two weeks of acclimatization. Cups are daily removed for limited amount of time, increasing the exposure time each day.



Biodiversity

Before learning basics of plant micropropagation, high school students were present for educational lecture regarding Biodiversity by Aldin Boskailo, MSc. from University of Mostar.



Plant cloning

Second lecture was regarding the basic concept of plant cloning and necessary steps for micropropagation of endemic plants using in vitro techniques by Erna KARALIJA, PhD



POZIVNICA ZA SUDJELOVANJE U RADIONICI

KONZERVACIJA BILJAKA Kloniranjem

02.02.2018

Pozivamo vas da učestvujete u radionici "Konzervacija biljaka kloniranjem" te naučite koje su to tehnike kloniranja biljaka i na koji način možemo spasiti ugrožene biljke kloniranjem.

Prijave za učesnike možete slati na e-mail: erna.karalija@gmail.com (ime i prezime, razred i škola koju pohađate).



https://www.rufford.org/projects/erna_karalija_1

Educirajte se o metodama kloniranja!

Naučite osnovne tehnike kloniranja!

Saznajte više o biljnom biodiverzitetu

MJESTO I VRIJEME:
VISOKA ZGRADA PRIRODNO-MATEMATIČKOG FAKULTETA
Zmaja od Bosne 33-35
Prostorija 805/VIII

02.02.2018. godine u 10.00 sati



