

Kontrola i zwalczanie zakażeń i zanieczyszczeń bakteryjnych w kulturach roślinnych *in vitro*

¹Teresa Orlikowska, ¹P. Sobiczewski, ¹M. Zawadzka, ²Elżbieta Zenkteler

¹Instytut Sadownictwa i Kwiaciarstwa im. Szczepana Pieniążka, Skierniewice

²Uniwersytet im. Adama Mickiewicza, Zakład Botaniki Ogólnej, Poznań

The control and eradication of bacterial infections and contaminations in plant tissue culture

Summary

Bacterial contamination is a serious problem in plant tissue culture. In *in vitro* cultures, if bacteria are introduced, it is most frequently with the initial explants, but bacterial contamination can also come from the laboratory environment or from the staff themselves. Exogenous bacteria are easier to deal with, but endogenous bacteria remain problematic. Standard sterilization with ethanol, NaOCl or HgCl₂ and with antibiotics can now be enriched with new components (NaDCC, AgNO₃, nano-silver) or sanitation products (PPMTM, ProClin® 300, Biosept 33 SL, Vitrofur®[®], Dekaben). Some of these can be incorporated into a multiplication and rooting medium for one or more passages, if they are not phytotoxic to the plant explants. A special problem is presented by cryptic or viable but not cultivable bacteria which can be unable to multiply during many passages, but finally be disclosed in mass. The issue is, therefore, to find and apply tools for detection of different media and/or molecular markers. The above questions are discussed in the present paper based on the literature and results of our own study.

Key words:

biocides, covert or cryptic bacteria, detection of bacteria, identification of bacteria, disinfection

Adres do korespondencji:

Teresa Orlikowska, Instytut Sadownictwa i Kwiaciarstwa im. Szczepana Pieniążka, ul. Pomologiczna 18, 96-100 Skierniewice