

MODUL OBUKE NA TEMU BOLESTI DRVA VINOVE LOZE - SEKCIJA #1

Materijal za stručne i savjetodavne službe

U nastavku je naveden materijal potreban stručnim i savjetodavnim službama za modul obuke na temu bolesti drva vinove loze.

Podijeljen je na sljedeća tri odjeljka: "Simptomi i epidemiologija bolesti drva", "Preventivna zaštita vinove loze od uzročnika bolesti drva" i "Smanjenje negativnog utjecaja bolesti drva primjenom različitih mjera na simptomatičnim trsovima". Prvi je odjeljak najvažniji za organizaciju sekcije #1, a druga su dva značajna za bolje razumijevanje teme te pripremu za odgovore na pitanja zainteresiranih sudionika obuke.

Sadržaj je prikazan u obliku popisa, gdje su uvodno navedeni videozapisi (za lagano i brzo stjecanje znanja), zatim slijede priručnici, a na kraju se nalaze sažeti pregledi znanstvene literature.

SIMPTOMI I EPIDEMIOLOGIJA BOLESTI DRVA

- Video seminari (trajanje prosječno 30 min.):
 1. Simptomi i epidemiologija bolesti drva vinove loze (Vincenzo Mondello)
<https://youtu.be/YuBs6lrDWgg>
 2. Pregled aktualnih spoznaja na temu bolesti drva vinove loze (Vincenzo Mondello)
<https://youtu.be/RrrjaYrgRnl>
 3. Suzbijanje bolesti drva vinove loze (Laura Mugnai)
<https://youtu.be/dz1ECZrXEck?list=PL7IYC-tfEAUcGyOwFM8RklwiTKxcpQDg>
 4. Fungal trunk diseases: A global threat to grapevine health (David Gramaje)
<https://youtu.be/KWRuN2zvx-k>

- Priručnici
 1. Sveobuhvatni pristup suzbijanju bolesti drva vinove loze
http://www.winetwork-data.eu/en/prirucnici/sveobuhvatni_pristup_suzbijanju_bolesti_drva_vinove_loze_sc_16800.htm
 2. Rezidba kao preventivna mjera suzbijanja bolesti drva vinove loze
http://www.winetwork-data.eu/en/prirucnici/rezidba_kao_preventivna_mjera_suzbijanja_bolesti_drva_vinove_loze_sc_16799.htm

- Sažeti pregled znanstvene literature
 1. http://www.winetwork-data.eu/en/scientific_abstract/the_scientific_basis_for_a_more_efficient_control_of_gtds_from_nursery_to_vineyard_sc_16271.htm (Rezultat pregleda znanstvene literature na temu bolesti drva, provedenog od strane Znanstvene grupe projekta Winetwork)
 2. http://www.winetwork-data.eu/en/scientific_abstract/gtd_-_arthropods_vector_grapevine_trunk_disease_pathogens_sc_15440.htm
 3. http://www.winetwork-data.eu/en/scientific_abstract/gtd_-_development_of_a_monoclonal_antibody_tas-elisa_assay_for_detection_of_phaeomoniella_chlamydospora_sc_15442.htm

4. [http://www.winetwork-data.eu/en/scientific_abstract/gtd -
_fungal_trunk_pathogens_in_the_grapevine_propagation_process_potential_inoculum_sources_d
etection_identification_and_management_strategies_sc_13973.htm](http://www.winetwork-data.eu/en/scientific_abstract/gtd_-_fungal_trunk_pathogens_in_the_grapevine_propagation_process_potential_inoculum_sources_detection_identification_and_management_strategies_sc_13973.htm)
5. [http://www.winetwork-data.eu/en/scientific_abstract/gtd -
_genes_expressed_in_grapevine_leaves_reveal_latent_wood_infection_by_the_fungal_pathogen_
neofusicoccum_parvum_sc_13904.htm](http://www.winetwork-data.eu/en/scientific_abstract/gtd_-_genes_expressed_in_grapevine_leaves_reveal_latent_wood_infection_by_the_fungal_pathogen_neofusicoccum_parvum_sc_13904.htm)
6. [http://www.winetwork-data.eu/en/scientific_abstract/gtd -
_the_status_of_botryosphaeriaceae_species_infecting_grapevines_sc_13906.htm](http://www.winetwork-data.eu/en/scientific_abstract/gtd_-_the_status_of_botryosphaeriaceae_species_infecting_grapevines_sc_13906.htm)
7. [http://www.winetwork-data.eu/en/scientific_abstract/gtd -
_the_wood_discoloration_and_decay_in_grapevines_with_esca_proper_and_their_relationship_w
ith_foliar_symptoms_sc_13898.htm](http://www.winetwork-data.eu/en/scientific_abstract/gtd_-_the_wood_discoloration_and_decay_in_grapevines_with_esca_proper_and_their_relationship_w
ith_foliar_symptoms_sc_13898.htm)
8. [http://www.winetwork-data.eu/en/scientific_abstract/gtd -
_the_distribution_and_symptomatology_of_grapevine_trunk_disease_pathogens_are_influenced
by_climate_sc_13900.htm](http://www.winetwork-data.eu/en/scientific_abstract/gtd_-_the_distribution_and_symptomatology_of_grapevine_trunk_disease_pathogens_are_influenced
by_climate_sc_13900.htm)
9. [http://www.winetwork-data.eu/en/scientific_abstract/gtd -
_the_effects_of_grapevine_trunk_diseases_gtds_on_vine_physiology_sc_13905.htm](http://www.winetwork-data.eu/en/scientific_abstract/gtd_-_the_effects_of_grapevine_trunk_diseases_gtds_on_vine_physiology_sc_13905.htm)

Preventivna zaštita vinove loze od uzročnika bolesti drva

- Video seminari (trajanje prosječno 30 min.):
 1. Pregled aktualnih spoznaja na temu bolesti drva vinove loze (Vincenzo Mondello)
<https://youtu.be/RrrjaYrgRnI>
 2. Suzbijanje bolesti drva vinove loze (Laura Mugnai)
<https://youtu.be/dz1ECZrXEck?list=PL7IYC-tfEAUcGyOwFM8RklwiTKxcjpQDg>
 3. Primjena *Trichoderma* spp. u zaštiti rana od rezidbe [http://www.winetwork-
data.eu/en/video/trichoderma_application_gtd_sc_16036.htm](http://www.winetwork-data.eu/en/video/trichoderma_application_gtd_sc_16036.htm)
 4. Dvostruka rezidba kao preventivna mjera zaštite vinograda od bolesti drva [http://www.winetwork-
data.eu/en/video/double_pruning_technique_gtd_sc_16035.htm](http://www.winetwork-data.eu/en/video/double_pruning_technique_gtd_sc_16035.htm)
 5. Fungal trunk diseases: A global threat to grapevine health (David Gramaje)
<https://youtu.be/KWRuN2zvx-k>
- Priručnici
 1. Zaštita rana od rezidbe primjenom vrsta roda *Trichoderma*
[http://www.winetwork-
data.eu/en/prirucnici/za_tita_rana_od_rezidbe_primjenom_vrsta_rod_a_trichoderma_sc_16798.ht
m](http://www.winetwork-data.eu/en/prirucnici/za_tita_rana_od_rezidbe_primjenom_vrsta_rod_a_trichoderma_sc_16798.htm)
 2. Sveobuhvatni pristup suzbijanju bolesti drva vinove loze
[http://www.winetwork-
data.eu/en/prirucnici/sveobuhvatni_pristup_suzbijanju_bolesti_drva_vinove_loze_sc_16800.htm](http://www.winetwork-data.eu/en/prirucnici/sveobuhvatni_pristup_suzbijanju_bolesti_drva_vinove_loze_sc_16800.htm)
 3. Rezidba kao preventivna mjera suzbijanja bolesti drva vinove loze
[http://www.winetwork-
data.eu/en/prirucnici/rezidba_kao_preventivna_mjera_suzbijanja_bolesti_drva_vinove_loze_sc_16
799.htm](http://www.winetwork-data.eu/en/prirucnici/rezidba_kao_preventivna_mjera_suzbijanja_bolesti_drva_vinove_loze_sc_16799.htm)
 4. Tretman toplom vodom [http://www.winetwork-
data.eu/en/technical_articles/hot_water_treatment_for_gtd_control_sc_13885.htm](http://www.winetwork-data.eu/en/technical_articles/hot_water_treatment_for_gtd_control_sc_13885.htm)

- Sažeti pregled znanstvene literature

1. [http://www.winetwork-data.eu/en/scientific_abstract/gtd -
_potential use of chitosan in the control of grapevine trunk diseases sc 14325.htm](http://www.winetwork-data.eu/en/scientific_abstract/gtd_-_potential_use_of_chitosan_in_the_control_of_grapevine_trunk_diseases_sc_14325.htm)
2. [http://www.winetwork-data.eu/en/scientific_abstract/gtd -
_studies on the effect of water and temperature stress on grapevines inoculated with eutypa lata sc 15437.htm](http://www.winetwork-data.eu/en/scientific_abstract/gtd_-_studies_on_the_effect_of_water_and_temperature_stress_on_grapevines_inoculated_with_eutypa_lata_sc_15437.htm)
3. [http://www.winetwork-data.eu/en/scientific_abstract/gtd -
_ability of pythium oligandrum strains to protect vitis vinifera l by inducing plant resistance against phaeomoniella chlamydospora a pathogen involved in esca sc 13970.htm](http://www.winetwork-data.eu/en/scientific_abstract/gtd_-_ability_of_pythium_oligandrum_strains_to_protect_vitis_vinifera_l_by_inducing_plant_resistance_against_phaeomoniella_chlamydospora_a_pathogen_involved_in_esca_sc_13970.htm)
4. [http://www.winetwork-data.eu/en/scientific_abstract/gtd -
_optimisation of time of application of trichoderma biocontrol agents for protection of grapevine pruning wounds sc 13971.htm](http://www.winetwork-data.eu/en/scientific_abstract/gtd_-_optimisation_of_time_of_application_of_trichoderma_biocontrol_agents_for_protection_of_grapevine_pruning_wounds_sc_13971.htm)
5. [http://www.winetwork-data.eu/en/scientific_abstract/gtd -
_various fungal communities colonise the functional wood tissues of old grapevines externally free from grapevine trunk disease symptoms sc 13978.htm](http://www.winetwork-data.eu/en/scientific_abstract/gtd_-_various_fungal_communities_colonise_the_functional_wood_tissues_of_old_grapevines_externally_free_from_grapevine_trunk_disease_symptoms_sc_13978.htm)
6. [http://www.winetwork-data.eu/en/scientific_abstract/gtd -
_control of eutypa dieback in grapevines using remedial surgery sc 13876.htm](http://www.winetwork-data.eu/en/scientific_abstract/gtd_-_control_of_eutypa_dieback_in_grapevines_using_remedial_surgery_sc_13876.htm)
7. [http://www.winetwork-data.eu/en/scientific_abstract/gtd -
_influence of water stress on botryosphaeriaceae disease expression in grapevines sc 13891.htm](http://www.winetwork-data.eu/en/scientific_abstract/gtd_-_influence_of_water_stress_on_botryosphaeriaceae_disease_expression_in_grapevines_sc_13891.htm)
8. [http://www.winetwork-data.eu/en/scientific_abstract/gtd -
_effects of grapevine cultivar rootstock and clone on esca disease sc 13890.htm](http://www.winetwork-data.eu/en/scientific_abstract/gtd_-_effects_of_grapevine_cultivar_rootstock_and_clone_on_esca_disease_sc_13890.htm)
9. [http://www.winetwork-
data.eu/en/scientific_abstract/gtd hot water treatment to reduce incidence of black foot pathogens in young grapevines grown in cool climates sc 13965.htm](http://www.winetwork-data.eu/en/scientific_abstract/gtd_hot_water_treatment_to_reduce_incidence_of_black_foot_pathogens_in_young_grapevines_grown_in_cool_climates_sc_13965.htm)

Smanjenje negativnog utjecaja bolesti drva primjenom različitih mjera na simptomatičnim trsovima

- Video seminari (trajanje prosječno 30 min.):
 1. Pregled aktualnih spoznaja na temu bolesti drva vinove loze (Vincenzo Mondello)
<https://youtu.be/RrrjaYrgRnl>
 2. Suzbijanje bolesti drva vinove loze (Laura Mugnai)
<https://youtu.be/dz1ECZrXEck?list=PL7IYC-tfEAUcGyOwFM8RklwiTKxcipQDg>
 3. Fungal trunk diseases: A global threat to grapevine health (David Gramaje)
<https://youtu.be/KWRuN2zvx-k>

- Priručnici
 1. Primjena komadića drva inokuliranih vrstama roda *Trichoderma* http://www.winetwork-data.eu/en/technical_articles/technical_datasheet_insertion_of_wood_dowels_inoculated_with_trichoderma_spp_inside_grapevine_trunk_sc_16490.htm
 2. Sveobuhvatni pristup suzbijanju bolesti drva vinove loze
http://www.winetwork-data.eu/en/prirucnici/sveobuhvatni_pristup_suzbijanju_bolesti_drva_vinove_loze_sc_16800.htm
 3. Obnova trsa razvojem bazalnih mladica
http://www.winetwork-data.eu/en/technical_articles/technical_datasheet_trunk_renewal_sc_16306.htm
 4. Injektiranje nanočestica bakra
http://www.winetwork-data.eu/en/technical_articles/technical_datasheet_copper_nanoparticles_sc_16483.htm
 5. Mehaničko uklanjanje simptomatičnog višegodišnjeg drva
http://www.winetwork-data.eu/en/technical_articles/technical_datasheet_trunk_cleaning_sc_16484.htm
 6. Pravovremena obnova trsa razvojem bazalnih mladica
http://www.winetwork-data.eu/en/technical_articles/winetwork_grapevine_trunk_diseases_sc_49.htm

- Sažeti pregled znanstvene literature
 1. http://www.winetwork-data.eu/en/scientific_abstract/gtd_-_first_studies_on_the_potential_of_a_copper_formulation_for_the_control_of_leaf_stripe_diseases_within_esca_complex_in_grapevine_sc_15441.htm
 2. http://www.winetwork-data.eu/en/scientific_abstract/gtd_-_preliminary_trials_on_treatment_of_esca-infected_grapevines_with_trunk_injection_of_fungicides_sc_13967.htm

OSTALI MATERIJALI

- VIDEO MATERIJALI NA TEMU EUTIPOZE

Serija video snimaka o eutipozi: materijali su snimljeni na lokaciji Clear Valley u Australiji. Radi se o kratkim video snimcima posvećenim tematici eutipoze koji prikazuju simptome i neka rješenja u preventivnom suzbijanju smanjenju šteta ove bolesti u proizvodnom vinogradu.

http://www.winetwork-data.eu/en/video/managing_eutypa_dieback_-_introduction_and_identification_video_1_of_10_gtd_sc_16087.htm

http://www.winetwork-data.eu/en/video/managing_eutypa_dieback_-_monitoring_and_surveying_video_2_of_10_gtd_sc_16088.htm

http://www.winetwork-data.eu/en/video/managing_eutypa_dieback_-_decision_making_video_3_of_10_part_1_gtd_sc_16089.htm

http://www.winetwork-data.eu/en/video/managing_eutypa_dieback_-_decision_making_video_4_of_10_part_2_gtd_sc_16090.htm

http://www.winetwork-data.eu/en/video/managing_eutypa_dieback_-_reworking_-_remedial_surgery_and_vineyard_hygiene_video_5_of_10_gtd_sc_16091.htm

http://www.winetwork-data.eu/en/video/managing_eutypa_dieback_-_reworking_-_an_alternative_approach_video_6_of_10_gtd_sc_16092.htm

http://www.winetwork-data.eu/en/video/managing_eutypa_dieback_-_reworking_-_vine_training_7_of_10_gtd_sc_16093.htm

http://www.winetwork-data.eu/en/video/managing_eutypa_dieback_preventing_infection_-_pruning_measures_video_8_of_10_gtd_sc_16094.htm

http://www.winetwork-data.eu/en/video/managing_eutypa_dieback_-_preventing_infection_-_fungicide_spraying_video_9_of_10_gtd_sc_16095.htm

http://www.winetwork-data.eu/en/video/managing_eutypa_dieback_-_the_old_days_video_10_of_10_gtd_sc_16096.htm

- Video isječci (trajanje 5 min.):

http://www.winetwork-data.eu/en/video_isjecci/bolesti_drva_vinove_loze_1_simptomi_i_epidemiologija_sc_16703.htm

http://www.winetwork-data.eu/en/video_isjecci/bolesti_drva_vinove_loze_3_mjere_koje_doprinosu_smanjenju_teta_na_zara_en_im_trsovima_sc_16708.htm

http://www.winetwork-data.eu/en/video_isjecci/bolesti_drva_vinove_loze_2_preventivne_mjere_suzbijanja_sc_16707.htm