## ΓΕΝΙΚΑ ΘΕΜΑΤΑ

### NUTRISENSE: Ένα καινοτόμο σύστημα υποστήριξης αποφάσεων διαθέσιμο μέσω του διαδικτύου

### Για την διαχείριση της υδρολίπανσης σε ανοιχτά και κλειστά υδροπονικά συστήματα

**Βιβλιογραφία**


- Σάββας, Δ., 2012. Καλλιέργειες Εκτός Εδάφους. Υδροπονία - Υποστρώματα. Εκδόσεις Αγροτύπος, Αθήνα, σελ. 525.
- Adams, P. 2002. Nutritional control in hydroponics. In: Savvas, D., Passam, H.C. (eds.). Hydroponic Production of Vegetables and Ornamentals. Embryo Publications, Athens, Greece, pp. 211-261.
- Alsanious, B.W., Wohanka, W., 2019. Root Zone Microbiology Of Soilless Cropping Systems.» In: Raviv, M., Lieth, H.J., Bar-Tal, A., (eds). Soilless Culture: Theory and Practice. Elsevier, Amsterdam, pp. 149-196.
- Ashraf, A., Singh, K.G., Singh, A., 2020. Development and evaluation of nutrient reuse system in soilless media grown cucumber under protected cultivation. J. Plant Nutr. 44, 1241–1257.
- Conversa G, Bonasia A, Lazzizera C, La Rotonda P and Elia A (2021). Reduction of nitrate content in baby-leaf lettuce and cichorium endivia through the soilless cultivation system, electrical conductivity, and management of nutrient solution. Front. Plant Sci. 12:645671.
- De Kreij, C., Voogt, W. and Baas, R. 1999. Nutrient solutions and water quality for soilless cultures. Brochure 196. Naaldwijk, The Netherlands: Research Station for Floriculture and Glasshouse Vegetables (PBG).
- Gruda, N., 2009. Do soilless culture systems have an influence on product quality of vegetables? J. Appl. Bot. Food Qual. 82, 141–147.
- Incrocci, L., Massa, D., Pardossi, A., Bacci, L., Battista, P., Rapi, B., Romani, M., Pardossi, A., 2012. A decision support system to optimise fertigation management in greenhouse crops. Acta Hortic. 927, 115–122.
- Kim, H.J., Kim, W.K., Roh, M.Y., Kang, C.I., Park, J.M., and Sudduth, K.A. (2013). Automated sensing of hydroponic macronutrients using a computer-controlled system with an array of ion-selective electrodes. Comput. Electron. Agric. 93, 46-54.
- Neocleous, D., Savvas, D., 2013. Responses of hydroponically-grown strawberry to different K:Ca:Mg ratios in the supplied nutrient solution. J. Hort. Sci. Biotechn. 88, 293–300.
- Neocleous, D., Savvas, D., 2018. Modelling Ca2+ accumulation in soilless zucchini crops: Physiological and agronomical responses. Agric. Water Manage. 203, 197-206.
- Raviv, M., Lieth, H.J., Bar-Tal, A., 2019. Significance of soilless culture in agriculture. In: Raviv, M., Lieth, H.J., Bar-Tal, A., (eds). Soilless Culture: Theory and Practice. Elsevier, Amsterdam, pp. 1-14.
- Rodrvguez-Ortega, W.M., Martvnez, V., Nieves, M., Simon, I., Lidon, V., Fernandez-Zapata, J.C., Martinez-Nicolas, J.J., Camara-Zapata, J.M., Garcva-Sanchez, F., 2019. Agricultural and physiological responses of tomato plants grown in different soilless culture systems with saline water under greenhouse conditions. Sci. Reports 9:6733.
- Rius-Ruiz, X.F., Andrade, F.J., Riu, J., and Rius, X.F. (2014). Computer-operated analytical platform for the determination of nutrients in hydroponic systems. Food Chem. 147, 92–97.
- Rouphael, Y., Kyriacou, M.C., 2018. Enhancing quality of fresh vegetables through salinity eustress and biofortification applications facilitated by soilless cultivation. Front. Plant Sci. 9:1254.
- Savvas, D., 2001. Nutritional Management of Vegetables and Ornamental Plants in Hydroponics. In: Dris, R. Niskanen, R., Jain, S.M. (Eds). Crop Management and Postharvest Handling of Horticultural Products. Volume I: Quality Management. Science Publishers, Enfield, N.H., U.S.A., pp. 37-87.
- Savvas, D., G. Gizas, 2002. Response of hydroponically grown gerbera to nutrient solution recycling and different nutrient cation ratios. Sci. Hort. 96, 267-280.
- Savvas, D., Φztekin, G.B., Tepecik, M., Ropokis A., Tózel, Y., Ntatsi, G., Schwarz, D., 2017. Impact of grafting and rootstock on nutrient to water uptake ratios during the first month after planting of hydroponically grown tomato. J. Hort. Sci. Biotechn. 92, 294–302.
- Savvas, D., Gruda, N., 2018. Application of soilless culture technologies in the modern greenhouse industry - A review. Europ. J. Hort. Sci. 83, 280-293.
- Savvas, D., Neocleous, D., 2019. Developments in soilless/hydroponic cultivation of vegetables. In: Hochmuth, G. (Ed.). Achieving sustainable cultivation of vegetables. Burleigh Dodds Science Publishing, Cambridge, UK. Pp. 211-243.
- Savvas, D., Drakatos, S., Panagiotakis, I., Ntatsi, G., 2021. NUTRISENSE: A novel software to automatically control nutrient supply in closed hydroponic crops based either on off-line chemical analyses or on ion-specific electrodes. Acta Hort 1317, 215-222.
- Sambo P, Nicoletto C, Giro A, Pii Y, Valentinuzzi F, Mimmo T, Lugli P, Orzes G, Mazzetto F, Astolfi S, Terzano R and Cesco S, 2019. Hydroponic Solutions for Soilless Production Systems: Issues and Opportunities in a Smart Agriculture Perspective. Front. Plant Sci. 10:923.
- Selma, M.V., Luna, M.C., Martvnez-Sanchez, A., Tudela, J.A., Beltran, D., Baixauli, C., Gil, M.I., 2012. Sensory quality, bioactive constituents and microbiological quality of green and red fresh-cut lettuces (Lactuca sativa L.) are influenced by soil and soilless agricultural production systems. Postharvest Biol. Technol. 63, 16–24.
- Sonneveld, C. and Straver, N. 1994. Nutrient solutions for vegetables and flowers grown in water or substrates. 10th Edition, Serie: Voedingsoplossingen Glastuinbouw, No. 8. P.B.G. Naaldwijk – P.B.G. Aalsmeer, The Netherlands, 45 pp.
- Sonneveld, C. and Voogt, W. 2009. Plant Nutrition of Greenhouse Crops. Dordrecht, The Netherlands:

Springer.

– Steidle Neto, A.J., Zolnier, S., de Carvalho Lopes, D., 2014. Development and evaluation of an automated system for fertigation control in soilless tomato production. Comput. Electron. Agric. 103, 17–25.

– Van Os, E.A., Gieling, T.H., Ruijs, M.N.A., 2002. Equipment for hydroponic installations. In: Savvas, D., Passam, H.C. (eds). Hydroponic Production of Vegetables and Ornamentals. Embryo Publications, Athens, Greece, pp. 103-141.

– Χρηματοδότηση: Η ανάπτυξη του λογισμικού NUTRISENSE υποστηρίχθηκε από το Ελληνικό Ίδρυμα Έρευνας και Καινοτομίας (ΕΛ.ΙΔ.Ε.Κ.) το οποίο χρηματοδότησε το ερευνητικό έργο «NUTRISENSE: Ανάπτυξη προηγμένης τεχνολογίας με χρήση εκλεκτικών ιοντικών ηλεκτροδίων και κατάλληλο λογισμικό για υδροπονικές καλλιέργειες κηπευτικών με έμφαση στην ανακύκλωση των απορροών σε κλειστά συστήματα».

## ΚΗΠΕΥΤΙΚΑ

### Επίδραση εμβολιασμού στην ωρίμαση και την ποιότητα

### Επισημάνσεις για μεγαλύτερη διατηρησιμότητα και γεύση

**Βιβλιογραφία**

– King, S.R., Davis, A.R., Zhang, X., and Crosby, K. 2010. Genetics, breeding and selection of rootstocks for Solanaceae and Cucurbitaceae. Scientia Horticulturae 127, 106-111.

– Kyriacou, M.C., Soteriou, G.A., Rouphael, Y., Siomos, A.S. and Gerasopoulos, D., 2016. Configuration of watermelon fruit quality in response to rootstock mediated harvest maturity and postharvest storage. Journal of the Science of Food and Agriculture, 96(7), pp.2400-2409.

– Soteriou, G.A., and Kyriacou, M.C. 2014. Rootstock Mediated Effects on Watermelon Field Performance and Fruit Quality Characteristics. International Journal of Vegetable Science DOI: 10.1080/ 19315260.

## ΔΕΝΔΡΟΚΟΜΙΑ

### Επίδραση της οργανικής λίπανσης στην καλλιέργεια της κερασιάς

### Με διαφορετικά είδη οργανικών λιπασμάτων

**Βιβλιογραφία**

– Chatzistathis, T., V. Kavvadias, T. Sotiropoulos, I. Papadakis. 2021. Organic Fertilization and Tree Orchards. Agriculture 11(8), 692.

– Chatzistathis, T., V. Tzanakakis, A. Giannakoula, P. Psoma. 2020. Inorganic and Organic Amendments Affect Soil Fertility, Nutrition, Photosystem II Activity, and Fruit Weight and May Enhance the Sustainability of Solanum lycopersicon L. (cv. 'Mountain Fresh') Crop. Sustainability, 12, 9028.

– Chatzistathis, T, E. Papaioannou, A. Giannakoula and I. Papadakis. 2021. Zeolite and Vermiculite as Inorganic Soil Amendments Modify Shoot-Root Allocation, Mineral Nutrition, Photosystem II Activity and Gas Exchange Parameters of Chestnut (Castanea sativa Mill) Plants. Agronomy. 11, 109.

– Liu, Z., Guo, Q., Feng, Z., Liu, Z., Li, H., Sun, Y., Liu, C., Lai, H. 2020. Long-term organic fertilization improves the productivity of kiwifruit (Actinidia chinensis Planch.) through increasing rhizosphere microbial diversity and network complexity. Appl. Soil Ecol. 147, 103426.

– Marschner, P., Kandeler, E., Marschner, B., 2003. Structure and function of the soil microbial community in a long-term fertilizer experiment. Soil Biol. Biochem. 35, 453–461.

– Marschner H. Mineral Nutrition of Higher Plants. 2012. London ; Waltham, MA: Academic Press.

– Montanaro, G., Xiloyannis, C., Nuzzo, V., Dichio, B. 2017. Orchard management, soil organic carbon and ecosystem services in Mediterranean fruit tree crops. Sci. Hortic. 217, 92–101.

– Montanaro, G., Dichio, B., Briccoli Bati, C., Xiloyannis, C. 2012. Soil management affects carbon dynamics and yield in a Mediterranean peach orchard. Agric. Ecosyst. Environ.161, 46–54.

### Κίνδυνος αφυδάτωσης των κερασιών

### Στάδια που πρέπει να προσεχθούν από την συγκομιδή μέχρι τη μεταφορά στα σημεία λιανικής

**Βιβλιογραφία**

– Βασιλακάκης Μ. (2006). Μετασυλλεκτική φυσιολογία, μεταχείριση οπωροκηπευτικών και τεχνολογία. Εκδόσεις Γαρταγάνης, σελ. 588.

– Golding J.B., Spohr L. (2015). Postharvest technology experimentation – Solutions to common problems. pp 1-17. In: 'Advances in Postharvest Fruit and Vegetable Technology'. Eds. R.B.H. Wills and J.B. Golding. CRC Press, USA.

– Johnson S., Vesely V. (2021). Deshidratacion en postcosecha de cerezas. Redagricola 121, 62-65.

– Lichou L., Edin N., Tronel C., Saunier R. (1990). Le cerisier. CTIFL, Paris.

– Micke W.C., Mitchell F.G. (1972). Handling sweet cherries for the fresh market. Circular 560, University of California, Davis, 18 pp.

– Sekse L. (1988). Storage and storage potential of sweet cherries as related to respiration rate. Acta Agriculturae Scandinavica 38, 59-66.

– Χατζηχαρίσης Ι., Καζαντζής Κ. (2014). Η κερασιά και η καλλιέργειά της. Εκδόσεις ΑγροΤύπος, σελ. 440.

## ΚΤΗΝΟΤΡΟΦΙΑ

### Η φυλή προβάτων Κύμης στην Εύβοια

### Μια αυτόχθονη παραγωγική φυλή που χάνεται

**Βιβλιογραφία**

– Καράβας Γ. 2016. Μελέτη του συστήματος εκτροφής του προβάτου φυλής Κύμης στο Νομό Εύβοιας, Πτυχιακή εργασία, Τμήμα ΕΖΠ&Υ, ΓΠΑ. 2. Κατσαούνης Ν. (1994). Προβατοτροφία, εκδοτικός οίκος Αδελφών Κυριακίδη Α.Ε., Θεσσαλονίκη. 3. Ρογδάκης Εμμ., 2002. Εγχώριες φυλές προβάτων, ΑγροΤύπος, Αθήνα.

## Διατροφή σε παχυόμενα μοσχάρια κρεατοπαραγωγής

### Καθοριστικοί παράγοντες για την κατάρτιση των σιτηρεσίων

**Βιβλιογραφία**


- INRAE-CIRAD-AFZ Feed Tables, Composition and nutritive values of feeds for cattle, sheep, goats, pigs, poultry, rabbits, horses and salmonids https://feedtables.com
- Dufreneix, F. (2019). Variations et estimation de la valeur protiique des sources azotıes dans l'alimentation des vaches laitiθres (Doctoral dissertation, Agrocampus Ouest).