



AgriTech Solutions: Innovating VET for Sustainable Agriculture
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List of identified available literature and materials for the use of technology in agriculture

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Location: Kumanovo, Sveti Nikole, Skopje, Strumica, Kavadarci

R.b.	Title	Short description
1	Mechanization in agriculture, significance, problems, advantages and disadvantages and types of modern technology in agriculture https://agrotim.mk/mehanizacija-vo-zemjodelstvoto-znachene-problemi-prednosti-i-nedostatoci/	Mechanization in agriculture, significance, problems, advantages and disadvantages Agricultural mechanization refers to the development and use of machines that can replace human and animal power in agricultural processes. Mechanization in agriculture that occurred during the 20th century led to major changes in the way farmers plant, irrigate and harvest crops. Tractors, combines and other machines have enabled farmers to increase their production while relying less on extended labor. Farm mechanization is the application of engineering principles and technology to the storage and processing of farm agricultural production. Agricultural mechanization is applied to land preparation, planting, fertilizer application, weeding and harvesting of crops, raising, caring for and feeding animals as well as processing and storage of agricultural products using appropriate agricultural mechanization. By applying this method, farmers achieve greater profits and can increase yield productivity. TYPES OF MODERN TECHNOLOGY IN AGRICULTURE Global Positioning Technology (GPS) in Agriculture



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		Most farmers use Global Positioning System technology for better results. By applying GPS devices to your tractors, you can set your machine to auto-drive and this process can plow your field without people. In GPS we need to set the program and instructions for processing, sowing, irrigation, and instructions for applying fertilizer to your field can also be set. By applying this technique, farmers can save money and time. Agricultural mechanization has greatly facilitated the daily hard work of farmers and significantly increased the efficiency and productivity of fields and fields. Animals, including horses, donkeys, oxen, camels, are still used to cultivate fields, harvest and transport these products to markets around the world. Satellites, airplanes, helicopters, trucks, combines and tractors are used in agriculture for tracking, sowing, harvesting, spraying against insects and pest control, transporting perishable goods, but also for fighting forest fires.
2	Modern technology unavailable to farmers https://novamakedonija.com.mk/	Modern technology unavailable to farmers Weather disasters are increasingly destroying a large part of the planted agricultural crops. These days, news about flooded or destroyed crops from hail is topical again. Experts point out that elemental disasters, such as drought, floods, frost, hail in an unexpected period of the year, will become more frequent. As those familiar with the matter point out, there are various mechanisms with which farmers will be able to protect their crops from some disaster. Nets for protection from hail and sun, modern machinery



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		which heats the air and protects the crops from sudden temperature changes, hail protection are just some of the modern mechanisms for protecting agricultural crops, but the problem is that they are expensive to purchase and that different types of disasters require different mechanization.
3	Modern technologies in agriculture https://www.scribd.com/presentation/563904058/Sovremeni-Tehnologii-Vo-Zemjodelstvoto-Martin-Risteski	Modern technologies in agriculture with the application of innovative and new creative technological achievements in agriculture.
4	Technologies that are changing the agricultural industry https://mazz.mk/moderno-zemjodelstvo/tehnologii-koi-ja-menuvat-zemjodelskata-industrija/	Technologies that are changing the agricultural industry Agriculture is one of the oldest professions in the world. Therefore, it is easy to overlook the role of innovative technologies in agriculture if you are not involved in the industry. However, farmers actually use new innovations very consistently. They often adopt new technologies to improve their operations (and serve consumers more efficiently). Small tools like a wheelbarrow or a small tractor may still be suitable for a wide range of jobs. But the agricultural industry as a whole is influenced by much higher-tech development. The following examples illustrate just some of the ways farmers today use the latest tools and technology. Crop sensors The Internet of Things simply refers to devices that are connected through a network, such as smart thermostats and fitness monitors. New IoT devices are especially useful in agriculture. For example, some farmers have started using IoT-based sensors to monitor conditions such as soil moisture. These devices regularly give farmers valuable information about the condition of their soil and agricultural crops. This helps them make important planting choices to



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		increased the yield of agricultural crops. Unmanned aerial vehicles/drones Aerial unmanned vehicles are changing the way they work professionals in agriculture. A farmer who has a large area of land needs an efficient way to visibly check the condition of their various crops. With an aerial drone, they can quickly take overhead photos of their land. Drones also allow farmers to apply agrochemicals quickly and plant new crops. Management systems Many factors influence the success of a farm. A farmer needs to monitor crop conditions, schedule planting and harvesting, prioritize daily and long-term tasks, and much more. Farm management systems facilitate this process. By collecting all the necessary information in one application, a farmer can make and stick to their plans much easier than they could in the past. This is especially useful for large farms with numerous employees. Using an application to ensure everyone understands their short-term and overall goals helps keep every worker on task. Precise monitoring Farmers regularly have to order new supplies to continue to operate efficiently. Everything from equipment, such as oscillating saw blades and fuel to fertilizer, plays a key role in the operation of a farm. With precise monitoring technology, farmers can more accurately determine when key supplies are low. That means they can
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		place new orders before they expire completely on the given resource. Hybrid crops Researchers have developed different forms of hybrid crops that offer benefits that traditional crops cannot. For example, it is shown that hybrid corn varieties use nitrogen more efficiently than non-hybrid corn. This allows them to produce more grain. Farmers who use such hybrids can produce more food without the need for more land. As a result, they conserve large resources. These are just a few examples of new technologies that are revolutionizing the agricultural industry. Again, farmers have been innovating since the beginning of agriculture itself. As new technologies emerge, they will likely find clever uses for them as well.
5	The necessary digitalization of agriculture and basic technology https://www.redeweb.com/	The necessary digitalization of agriculture and basic technology A digital transformation of the agricultural sector must be started to improve the supply chain supply chain and mitigate shortage problems. Innovations, such as the three-in-one soil sensor described above, have the potential to contribute significantly significantly to making agriculture more data-driven, increasing productivity and reducing operating costs. operating costs.
6	Vertical farming equipment: investing in the future of agriculture https://www.opticlimatfarm.com/mk/a-news-vertical-farming-equipment-investing-in-the-future-of-agriculture	Vertical farming equipment: investing in the future of agriculture
7	Achieving sustainable development goals with digital technology https://www.radiomof.mk/den-na-mladi-so-digitalna-tehnologija-do-postignuvanje-na-celite-za-odrzhliv-razvoj/	With digital technology to achieving the goals of sustainable development Young people are the innovators, entrepreneurs and creators of changes that drive sustainable development in North Macedonia, the region and the EU,



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		using digital tools to address challenges such as climate change and food security. For their motivation and encouragement, they need continuous support through fair competition, transparent processes and access to resources, mentoring and investors. By investing in young people and their digital innovations, we encourage economic growth, resilience and sustainable progress, says the German Society for International Cooperation (GIZ) on the occasion of today's International Youth Day, and within the framework of the EU4EG project.
8	Advancing hydroponic agriculture with smart technology https://www.milkiigrow.com/mk/news/advancing-hydroponic-farming-with-smart-technology/	Advancing hydroponic agriculture with smart technology. <u>Hydroponic agriculture</u> eliminates the need for soil, allowing precise control over plant growth and resource use. By adopting hydroponics, you can save up to 90% of water compared to traditional agriculture, making it a sustainable choice. Smart technology, including IoT and artificial intelligence, improves the hydroponic system by providing real-time monitoring and data-driven insights for optimal crop management. Urban environments benefit from hydroponic agriculture, as it allows the cultivation of fresh produce in a limited space, reducing transportation costs and emissions. Integrating smart technology can lead to faster growth cycles and consistent quality of crops, which will ultimately increase your yields and profitability. Although the initial investment in smart hydroponic systems may be high, the long-term savings and



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		increasing efficiency makes it a valuable undertaking. Adopting smart hydroponics contributes to global food security by enabling year-round production in various climates and maximizing the potential for urban agriculture.
9	Green Technology - A Lifesaver for the Environment https://altb.org.br/mk/tecnologia-verde/	Green Technology - A Lifesaver for the Environment Green technology has the potential to significantly reduce the carbon footprint and promote environmental sustainability. Challenges such as high upfront costs and cultural resistance are still obstacles to widespread adoption of green technologies. Innovations such as biofuels and sodium batteries are at the forefront of sustainable solutions. Startups play a crucial role in the green revolution, bringing new ideas and technologies to the market. Global collaboration is essential for green technology to reach its full potential and effectively contribute to saving the planet
10	Drones in Agriculture https://sovetodavna.mk/	Drones in Agriculture The use of drones in agriculture represents a revolution that enables more precise, efficient, and sustainable agricultural practices. Thanks to them, farmers can better cope with the challenges of modern production, protect their yield, and contribute to sustainable management of natural resources. The future of agriculture is undoubtedly in technology – and drones are one of its most powerful tools.
11	"Digital Technologies in Agriculture and Rural Areas – FAO (2019)"	Comprehensive report on the role of digital technologies (GPS, IoT,



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		mobile applications, cloud data) in modernizing agriculture and improving productivity.
12	"Smart Agriculture – An Approach Towards Better Agriculture Management" – IEEE Conference Paper	Scientific paper on the concept of "Smart Agriculture" through IoT sensors, drones, automation and real-time data analysis.
13	"Agricultural Drones: A Peaceful Pursuit" – K.R. Krishna (2016)	Detailed overview of the use of drones for crop monitoring, spraying, mapping and plant health analysis.
14	"Emerging Technologies in Agriculture" – World Bank Blog Series (2020–2022)	Short overviews and practical examples of technology such as blockchain for tracking supply chains, artificial intelligence and agro-applications.
15	"ICTs for Agriculture in Africa" – CTA (Technical Centre for Agricultural and Rural Cooperation)	Guide to the application of ICT (information and communication technologies) in support of farmers – from mobile advice to digital markets
16	"Smart Farming: Technologies for Sustainable Agricultural Development" – IGI Global (2021)	Collection of research on automation, robots, digital crop monitoring, and innovative mapping and forecasting tools
17	"Digital Agriculture: Farmers in a Data-Driven World" – McKinsey & Company Report (2021)	Report explaining how digitalization is transforming farming, with examples from the EU, USA and Indo-Asia.
18	"ICT in Agriculture – e-Sourcebook" – World Bank (Updated 2017)	Practical guide to the use of ICT in all phases of the agricultural chain – production, logistics, sales and financing.
19	"Automation in Agriculture: Securing Food Supplies for Future Generations" – Springer (2018)	Overview of automatic systems – such as harvesting robots, automatic irrigation, and sensor platforms for monitoring growth and yield
20	"Technologies for smart agriculture in Macedonia" – MAFWE and USAID (2021)	Regional report with recommendations for digital transformation of agriculture in North Macedonia, including available ICT solutions and field examples.
21	Handbook of Energy Management in Agriculture Authors: Amitava Rakshit, Asim Biswas, Deepranjan Sarkar, Vijay Singh Meena, Rahul Datta https://www.researchgate.net/publication/378474719_Handbook_of_Energy_Management_in_Agriculture	This handbook provides a holistic overview of the various aspects of energy management in agriculture with an orientation towards sustainable development goals. It covers possible applications not only from a technical point of view, but also from economic, financial, social, regulatory and political points of view.



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		Agriculture is one of the most imperative sectors that contribute to the economy across different agro-ecologies of the universe with energy inputs at every stage of production, from the production and application of chemicals to powering tractors that sow seeds and harvest crops, to electricity for animal housing facilities. Most of the agricultural research has focused on the use of inputs, production and productivity, while rational budgeting and energy use remain a neglected and probably underestimated segment, so far ignored in formulating the agro-ecosystem framework. The study of energy management is a new frontier of agriculture and is challenging due to complex enterprises, spatio-temporal variability, exposure to pollution and the dominant effect of the anthropogenic factor on ecology and the environment. But it is worth accepting the challenge given the important prerequisite role of energy for sustainable development, which is confirmed by increased research recently. Of more recent origin, there are critical, in-depth studies around the world that assess the capture and energy flow in the ecosystem, which will help to develop a conceptual framework for incorporating this vital resource into the agricultural management template. This book is a state-of-the-art resource for a wide group of readers, including a variety of stakeholders and professionals at universities, public energy institutions, farmers and the agricultural industry, public health and other relevant institutions, as well as the wider public.
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22	Precision Agriculture: Technologies And Application In book: Agronomy Vistas: Emerging Trends in Crop Science (pp.44-58) Publisher: Stella International Publication Authors: Saniga, Gangadhar Krishnappa , Sushma https://www.researchgate.net/publication/382995543_Precision_Agriculture_Technologies_And_Application	Precision agriculture combines advanced technologies such as GIS, GPS, and RS to enable farmers to efficiently manage field variability, optimizing cost-benefit ratios compared to traditional methods. Location-specific management enables the reduction of investments while maximizing results, attracting farmers due to its efficiency and sustainability. In addition, by minimizing investments, precision agriculture reduces the runoff of fertilizers and pesticides, thereby improving environmental conditions in agricultural ecosystems. The development of easy-to-use decision support systems that integrate GIS, GPS, and RS technologies is essential to facilitate adoption and use by farmers. Additionally, a robust training and technology transfer program is needed to accelerate the introduction of precision agriculture in the agricultural sector. Therefore, it is essential to understand the technologies and applications of precision agriculture. This ensures that farmers possess the necessary knowledge and skills to effectively implement and integrate precision agriculture practices into their operations, ultimately leading to increased productivity and sustainability.
23	Precision Agriculture Techniques and Tools In book: Agronomy Vistas: Emerging Trends in Crop Management (pp.22-43) Publisher: Stella International Publication Authors: Pavithra Govindaraj Sakthivel Sivakumar Kalaimathi Vellaiyadevan Adhisankaran Kandasamy https://www.researchgate.net/publication/380426089_Precision_Agriculture_Techniques_and_Tools	Precision agriculture is a data-driven management approach that requires the collection, processing, and analysis of agricultural data at an individual, temporal, and spatial level to ensure accuracy and precision. It is integrated to improve resource use efficiency, increase productivity, improve quality, increase profitability, and ensure



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	sustainable operation. Precision agriculture uses technologies such as GPS, GIS, sensors and variable rate applications to efficiently manage resources, ensuring that inputs are carefully measured and applied for increased yields compared to traditional methods. The approach emphasizes doing the right job, in the right place, at the right time and following the correct protocols. Various tools and techniques, such as GPS, GIS, sensor technology, online soil sampling and expert nutrient systems, contribute to the success of precision agriculture. These technologies enable nutrient management location-specific, real-time nitrogen management, yield monitoring and vegetation index analysis. The integration of big data, machine vision, IoT, artificial intelligence and blockchain further enhances precision agriculture. Big data analysis enables forecasting and real-time decision making. On the other hand, machine vision provides non-destructive monitoring capabilities. IoT and artificial intelligence, including machine and deep learning, contribute to guidance systems, high-throughput phenotyping and intelligent robots in agriculture. Blockchain technology addresses the challenges facing the current data sharing infrastructure and improves trust in the supply chain. Precision agriculture is a modern and sustainable management strategy that uses advanced technologies to optimize agricultural practices.
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24	Precision Agriculture: A Modern Technology for Crop Management Authors: <u>Kadagonda Nithinkumar</u> <u>Yalla Yernaideu</u> https://www.researchgate.net/publication/376853087_Precision_Agriculture_A_Modern_Technology_for_Crop_Management	Precision agriculture has emerged as a revolutionary technology for modern crop management, introducing a new era of agricultural practices. This innovative approach uses state-of-the-art technologies such as remote sensing, geographic information systems (GIS), global positioning systems (GPS), and Internet of Things (IoT) devices to optimize agricultural processes and improve crop productivity. By applying precision farming techniques, farmers can analyze and interpret real-time data on soil health, weather conditions, and crop growth patterns. These data-driven insights enable informed decision-making, leading to precise application of fertilizers, pesticides, and water resources, reducing waste and environmental impact. In addition, precision agriculture facilitates monitoring of individual plant health, enabling early detection of diseases and pests. This early intervention mitigates the risk of crop losses and minimizes the need for chemical interventions, promoting sustainable agricultural practices. In addition, precision agriculture facilitates monitoring of individual plant health, enabling early detection of diseases and pests. This early intervention mitigates the risk of crop losses and minimizes the need for chemical interventions, promoting sustainable agricultural practices.
25	Precision Agriculture Technologies In book: Sustainable Crop Management in Modern Agronomy (pp.117-145) Publisher: ND Global Publication House Authors:	This chapter explores the evolution and impact of Precision Agriculture (PA) in modern agriculture. It begins by defining PA and highlighting the importance of



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	Vinodhini S. M Sakthivel Sivakumar https://www.researchgate.net/publication/377811776_Precision_Agriculture_Technologies	technology in agriculture. Following its historical context, key milestones include early adoption of GPS technology and integration of satellite imagery applications. The role of GPS in PA includes automatic control, variable rate technology, yield monitoring and resource optimization. Satellite imagery and drones play a key role in crop monitoring, disease detection and yield prediction. Innovations in precision planting, artificial intelligence integration and sensor networks further enhance agricultural practices. Challenges in PA are discussed, such as concerns about data privacy and initial costs, along with emerging trends such as artificial intelligence, blockchain and 5G technology. The paper concludes by summarizing the impact of PA on food security and sustainability, highlighting its role in resource optimization and improved yield outcomes. Overall, Precision Agriculture is emerging as a transformative force shaping the future of agriculture through the integration of advanced technology and data-driven decision making.
26	Precision Agriculture and Smart Farming Authors: Pradeep Kumar K Srimathi Shani Gulaiya Rahul Ojha https://www.researchgate.net/publication/384392872_Precision_Agriculture_and_Smart_Farming	This chapter provides a comprehensive exploration of precision agriculture and smart farming, which are revolutionizing the traditional agricultural landscape. Precision agriculture uses technology to measure and analyze variations in field conditions, helping farmers make more precise crop management decisions. Smart farming extends this concept by incorporating advanced technologies such as the Internet of



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		things (IoT), Artificial Intelligence (AI) and robotics for intelligent and autonomous agricultural practices. These advances not only increase productivity and profitability, but also promote environmental sustainability and improve decision-making processes. Despite the enormous potential, the adoption of these technologies presents numerous challenges, including technological barriers, high implementation costs, and concerns about data privacy. The e-Choupal initiative serves as an excellent example of integrating precision agriculture and smart agriculture to strengthen rural environments, leading to increased incomes and rural transformation. Future prospects for these technologies promise further progress, with the potential to significantly impact global food security. The development and adoption of these technologies require careful consideration of ethical issues and policy support frameworks. To fully realize the potential of precision agriculture and smart agriculture, it is essential to address these challenges. They include formulating policies that promote the necessary infrastructure, such as reliable internet access in rural environments and education and training programs for farmers. Rigorous ethical standards must be implemented to protect the data privacy of farmers and to ensure cyber security. With appropriate measures, precision agriculture and smart agriculture can play a significant role in the revolution in agriculture, increasing global food security and promoting
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		sustainable agricultural practices in the face of a constantly increasing global population.
27	Precision Agriculture: Using technologies to Boost Crop Farming Authors: Subhash Mandloi Jyoti Bangre https://www.researchgate.net/publication/363839420_Precision_Agriculture_Using_technologies_to_Boost_Crop_Farming	Precision agriculture, also known as precision farming, is a systematic approach to managing crops that generally uses information technology (IT) and satellite technology to identify, assess and manage the spatial and temporal variability of agronomic parameters (e.g. soil, pests or diseases, fertigation, etc.) within the field by applying the appropriate amount of inputs at the appropriate time to achieve optimal productivity and profitability, while reducing the impact on the environment. It is decided that inputs (such as fertilizers, irrigation and pesticides) should be applied in the right amount, at the right time and in the right place. This is generally referred to as "Location Specific Management Strategies" (SSMS).
28	Agricultural Automation: Principles, Systems and Applications — Karl Pegg (2020)	A detailed guide to automation in agriculture, including hardware and software technologies such as sensors, drones, seeding and harvesting robots.
29	Modern Technology for Sustainable Agriculture — edited by Arvind Kumar et al. (2025)	Binding new technologies such as satellites, geospatial modeling, climate measurement, resource management and intelligent agriculture systems.
30	Agribusiness and Technology: Revolutionizing the Future of Farming — Sujit Sahgal (2022)	Focused on innovations in agriculture and the application of technologies as tools for the transformation of farms, especially in the Indian context.
31	"Digital Agriculture: Farmers in the Driver's Seat" Publisher: FAO (Food and Agriculture Organization) Year: 2021 https://documents.worldbank.org/en/publication/documents-reports/documentdetail/617401565782687953/digital-agriculture-farmers-in-the-driver-s-seat	A short publication that provides an overview of the application of digital tools to farmers – including sensors, smart irrigation, agro-applications and examples from developing countries. Excellent introduction for students and teachers.



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32	"ICT in Agriculture – Sourcebook" Publisher: World Bank Year: 2017 (second edition) https://openknowledge.worldbank.org/entities/publication/2a1c6b51-48b7-5cb3-89f0-91b6f3a843a1	Extensive publication with practical modules for the use of ICT in agriculture – mobile applications, remote monitoring, e-training, e-commerce platforms. It can be used to support teaching content and research projects.
33	"Digital Tools for Precision Agriculture" Publisher: ICRISAT (International Crops Research Institute for the Semi-Arid Tropics) https://www.icrisat.org/digital-tools-for-precision-agriculture/	Includes tools for digital mapping, soil sensors, GPS/GIS, IoT and agro-advisory systems. Suitable for practical classes in "Informatics in Agriculture" and "Mechanization".
34	FAO eLearning Course: "Introduction to Digital Agriculture" Publisher: FAO eLearning Academy https://elearning.fao.org/course/view.php?id=651	Online course covering the basics of digital agriculture, including precision agriculture, IoT, drones and mobile technologies. Suitable for teachers and students in higher grades.
35	"Smart Farming: Digital Technologies for Sustainable Agriculture" Publisher: EIT Food / University of Reading (Coursera) https://www.coursera.org/learn/smart-farming	Modern online course covering precision agriculture, agro-sensors, farm management platforms, and data analysis. Ideal for introducing technologies at the school program level or additional training.
36	YouTube – FAO: Agricultural Technologies Playlist Publisher: FAO YouTube channel https://www.youtube.com/playlist?list=PLzp5NgJ2-dkVyrpYFvU2ok1cE6Lz3GSOH	Contains short videos, animations and interviews on new technologies in agriculture: solar systems, smart irrigation, drones and digital platforms.
37	"RAMAS System" – Ag Futura Technologies (Macedonia) Publisher: Ag Futura https://agfutura.com/ramas-system/	System for remote monitoring and consulting in agriculture. Uses drones, sensors, mapping and IoT for monitoring and management. It has videos and descriptive materials in Macedonian – great for inclusion in project teaching.
38	AG Futura YouTube channel – Precision agriculture in Macedonia https://www.youtube.com/@AgFuturaTechnologies	Videos in Macedonian about precision agriculture, NDVI analyses, fertigation systems and educational practices for farmers. Can be used directly in the classroom.
39	Technologies in crop production for III year sector: agriculture, fisheries and veterinary qualification: Technician for agromanagement Authors: Elizabeta Angeleska, Igorche Nikolov Publisher: MON of RSM Place and year of publication: Skopje, 2025	The textbook is intended for students from III year, secondary vocational education, sector agriculture, fisheries and veterinary, qualification agrotechnician. The textbook covers five modular units: Basics of crop production



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		Technologies in crop production Technologies in horticultural and floricultural production Technologies in fruit production Technologies in viticultural production
40	Digitalization in the agri-food industry Authors: Uzanoska, Simona and Najdovski Blagojche (2023) UNIVERSITY "GOCE DELCHEV" – STIP FACULTY OF AGRICULTURE https://eprints.uklo.edu.mk/id/eprint/9875	The paper consists of a theoretical part and research on the implementation and importance of the use of digital tools and technologies in agriculture production. The paper presents the tools and technologies used in the agricultural industry and tools and technologies that are the future of this industry. The benefits and opportunities of using digital tools and technologies in agricultural production are also presented.
43	Advanced Greenhouse Horticulture: New Technologies and Cultivation Practices Author: Athanasios Koukounaras Published: March 19, 2021 Publisher: Mdpi AG ISBN-10 : 3036503501 ISBN-13 : 978-3036503509 Advanced Greenhouse Horticulture: New Technologies and Cultivation Practices: Koukounaras, Athanasios: 9783036503509: Amazon.com: Books	Advanced greenhouse vegetable growing: New technologies and cultivation practices. This book presents current research findings covering a wide range of new technologies and innovative agricultural practices, which are prerequisites for successful production in a very competitive global environment.
44	Horticulture : New Technologies and Applications Author: by Preethi Kartan Published: 2016 Publisher: Arcler Education Inc International concepts ISBN-10 1680957562 ISBN-13 9781680957563 eBay Product ID (ePID) 22046424641	The book presents new technologies in agriculture and the possibilities for their application.
45	Crop Production: Techniques And Technology Author: Wasim Khan Publisher: AG Publishing house ISBN Number 978-81-970182-1-3 https://store.agphbooks.com/product/crop-production-techniques-and-technology/	A guide that offers an in-depth analysis of the various techniques and sophisticated technology that shapes modern crop production. This comprehensive edition guides readers through the basic concepts, proven methodologies and state-of-the-art technology that forms the agricultural production environment. Part of the book explores new irrigation methodologies, offering insights into the latest advances in intelligent irrigation systems.



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46	The latest technologies in agriculture and plant sciences: Improved techniques, methods, and yields Author: Hazem Shawky Fouda Publisher: Delve Publishing Published: 2022 The latest technologies in agriculture and plant sciences: Improved techniques, methods, and yields (PDF/EPUB Version) – Controses Store	The book describes the latest technologies in agriculture, improved techniques, methods and yields.
47	Plant speed breeding and hight-throughput technologies Author: Jen-Tsung Chen Publisher: CRC Production Published:2024	"Plant rapid breeding and high-yield technologies" explores and analyzes a range of innovations, from CRISPR/Cas9-based genome editing to state-of-the-art controlled environment growth facilities. The book integrates the achievements of rapid plant breeding technologies with basic and advanced genome editing systems, functional genomics, controlled environment growth facilities, genomic and phenotypic selection methods, and high-throughput technologies. This book is intended for graduate students, teachers, researchers and experts in the fields of plant science and plant development, as well as agronomy and agriculture.
48	The Evolution of Agricultural Technology by Britannica Educational Publishing Author: Bernadette Davis Published 2019 https://www.kobo.com/us/en/ebook/the-evolution-of-agricultural-technology	This book traces the changes from the Neolithic Stone Age, when agricultural tools evolved from sharpened digging sticks to electronic microscopes. Learning about the problems of the past and the future that agricultural technology aims to solve will help readers understand how the application of critical thinking can change the world.
49	An Integrated Approach To Agricultural Science And Technology Published by: Syrawood Publishing House Author: Farrell Waltz ISBN-13 9781682862681 Published: 2016 ISBN-10 1682862682 https://www.walmart.com/ip/An-Integrated-Approach-to-Agricultural-Science-and-Technology-Hardcover-9781682862681/55030840	The contributions of renowned experts are collected in this book to offer a global perspective on advances in this field. Topics covered in this book are irrigation, genetic variability, seed storage, soil properties, agronomic efficiency, tillage practices, etc. This comprehensive text serves as a reference guide for students,



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		scientists, researchers, botanists, agronomists and professionals involved in the field of agriculture.
50	Agricultural Innovation and Technology Publisher: Syrawood Publishing House Author: Jamie Hanks ISBN-13 9781682862308	Constant technological progress has recently accelerated the growth of agriculture as a scientific discipline. Research is being conducted around the world to develop new methods for improving crop production and increasing their quality. This book attempts to help those aiming to delve into such achievements with topics such as post-harvest technology, organic farming, food safety, genetic engineering, agronomy, and others. It will be useful for students, academics, scientists, and anyone else connected to the field of agriculture.
51	Introduction to Digitalization in Agriculture - Agriskills	Introduction to Digitalization in Agriculture Digital skills to improve agricultural business Managing agricultural business in the digital economy Creating an economic chain of values in agriculture using digital technologies
52	REPORT ON DIGITAL LITERACY AND USE OF E-SERVICES IN RURAL AREAS	Data and report from research on digital literacy among farmers in rural areas
53	Artificial intelligence in agriculture https://aigender.net/index.php/2025/05/12/jfieroh/	Use of drones in precision agriculture Automatic management system Robotic technologies used in agriculture IoT in agriculture Applications in phones for agriculture
54	Smart agriculture – green revolution of today https://agrotim.mk/pametno-zemjodelstvo-zelena-revolucija-na-denesnhicata/	Description of the need for the use of technology in agriculture



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55	Smart Agriculture: Growing Crops That Will Make a Difference Prof. Dr. Fidanka Trajkova Faculty of Agriculture University "Goce Delchev" - Stip https://eprints.ugd.edu.mk/30444/2/Pametno%20zemjodelstvo_Fidanka%20Trajkova.pdf	What Technologies Are Used in Smart Agriculture Examples of Smart Agriculture Digitalization of Agriculture in Our Country
56	Digitalization in Agriculture https://infokompas.com.mk	Measures for Adaptation of Agriculture



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