

LEGISLATION OF RENEWABLE ENERGY SOURCES IN SLOVAKIA

LEGISLATÍVNA ÚPRAVA OBNOVITEĽNÝCH ZDROJOV ENERGIE NA SLOVENSKU

Eleonóra MARIŠOVÁ - Zuzana ILKOVÁ - Lucia PALŠOVÁ - Kristína MANDALOVÁ *

I. Introduction

European Union has defined in the area of energy its main priorities, namely sustainability, stability of energy sources, safety and security of energy supply, its efficient use and preference of renewable energy sources. The reason is not only protecting the environment but also reducing dependence on fuel imports and creating new jobs.

However, latest data shows that the EU imported 53% of its energy at a cost of around EUR 400 billion, which makes it the largest energy importer in the world. European renewable energy businesses have a combined annual turnover of € 129 billion and employ over a million people⁽¹⁾. EU com-

⁽¹⁾ Eur'Observateur 2014 Report

Abstract (EN)

Growing renewable energy plants on agricultural land and its further energy usage presents a significant importance for implementing long-term strategy of Slovakia in the area of acquisition and use of renewable energy sources (RES). Renewable energy plants together fulfil the objectives of Europe 2020 strategy and contributes to diversification of energy resources. The paper draws on the EU and national legislation regulating RES. Directive 2009/28/EC of the European parliament and of the Council of 23 April 2009 on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC are analysed. Broadly, the topic of the renewable energy resources is integrated in Rural Development Program 2014 – 2020. More specifically, Biomass Action Plan 2008-2013, Strategy of higher use of the renewable energy resources in Slovakia and Strategy of energy security of Slovakia till 2030 have been adopted. Sustainable use of agricultural land, its management and use, as well as the protection of its quality and functions are regulated by Act No. 220/2004 Coll. on the protection and use of agricultural land and amending the Act no. 245/2003 Coll. on integrated prevention and control of environmental pollution and amending certain acts as amended which came into the force 1. May 2004. Act. No. 57/2013 Coll. with is in effect from 1 April 2013, establishes the principles and procedure for the establishment of plantations of fast-growing trees on agricultural land. Slovak legislation introduced a register for fast-growing trees in Slovak territories at each district office, Land and Forest Department in Slovakia (72). The survey at registers shows that this legislation promoted the farmers to start to use marginal land for fast-growing trees.

Keywords (EN)

renewable energy sources, Europe 2020 strategy, legislation, fast-growing trees, energy diversification

Abstrakt (SK)

Pestovanie energetických rastlín a drevín na poľnohospodárskej pôde a ďalšie využitie ich energie predstavuje zásadný význam pre realizáciu dlhodobej stratégie Slovenska v oblasti získavania a využívania obnoviteľných zdrojov energie (OZE). Energetické rastliny spĺňajú ciele stratégie Európa 2020 a prispievajú k diverzifikácii energetických zdrojov. Príspevok vychádza z právnych predpisov EÚ a národnej legislatívy upravujúcej OZE. Analyzované sú Smernica 2009/28/ES Európskeho parlamentu a Rady z 23. apríla 2009 o podpore využívania energie z obnoviteľných zdrojov a o zmene a následnom zrušení smerníc 2001/77/ES a 2003/30/ES. Téma obnoviteľných zdrojov energie je integrovaná do Programu rozvoja vidieka 2014 - 2020. Konkrétne Akčný plán pre biomasu 2008-2013, Stratégia vyššieho využitia obnoviteľných zdrojov energie na Slovensku a Stratégia energetickej bezpečnosti Slovenska bola prijatá až do roku 2030. Trvalo udržateľné využívanie poľnohospodárskej pôdy, jeho riadenie a využívanie, ako aj ochrana jeho kvality a funkcie sú upravené zákonom č 220/2004 Zb. o ochrane a využívaní poľnohospodárskej pôdy a ktorým sa mení zákon č. 245/2003 Zb., o integrovanej prevencii a kontrole znečisťovania životného prostredia a o zmene niektorých zákonov v znení neskorších predpisov, ktorý nadobudol účinnosť 1. mája 2004. Zákon č. 57/2013 Zb., ktorý je platný od 1. apríla 2013, stanovuje zásady a postup zriaďovania plantáží rýchlorastúcich drevín na poľnohospodárskej pôde. Slovenská právna úprava zaviedla register rýchlo rastúcich drevín na každom okresnom úrade (72), na pozemkovom a lesnom odbore na Slovensku. Prieskum týchto registrov ukazuje, že táto právna úprava podporuje poľnohospodárov, aby začali používať marginálne pôdy pre rýchlo rastúce dreviny.

Kľúčové slová (SK)

obnoviteľné zdroje energie, stratégia Európa 2020, legislatíva, rýchlo rastúce dreviny, diverzifikácia energie

* Slovak University of Agriculture in Nitra

panies have a share of 40% of all patents for renewable technologies (global EU share of all patents is 32%). The challenge is to retain Europe's leading role in global investment in renewable energy⁽²⁾. Today, the European Union has energy rules set at the European level, but in practice it has 28 national regulatory frameworks.

Therefore, EU Commission issued COM/2015/080 "The Framework Strategy for a Resilient Energy Union with a Forward-Looking Climate Change Policy". The goal of a resilient Energy Union with an ambitious climate policy at its core is to give EU consumers - households and businesses - secure, sustainable, competitive and affordable energy. Achieving this goal will require a fundamental transformation of Europe's energy system. The strategy finds that the retail market is not functioning properly. Many household consumers have too little choice of energy suppliers and too little control over their energy costs. An unacceptably high percentage of European households cannot afford to pay their energy bills. Energy infrastructure is ageing and not adjusted to the increased production from renewables. EU's energy policy is to go to right direction: that of an Energy Union.

II. Aim, material and methods

The paper is focused at legislation, support and development of renewable energy resources. The aim of the paper is to highlight the importance of the legislation of renewable energy sources within implementation of the EU visions and requirements. The research covers the EU criteria and requirements in the field of renewable energy resources (RES) and legislation of Slovakia.

Observations are based on the analysis of how the regulations were designed and how the current legislation relating to RES meet the EU requirements. Observations have qualitative character. Material of the survey consists of respective EU and Slovak legislation and strategic documents. The method of analysis of the legislation was used as well as empirical survey in 72 District Office, Land and Forest Department managing registers of land with fast-growing trees.

At the EU level, the main document was Directive 2009/28/EC of the European parliament and of the Council of 23 April 2009 on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC as a common framework for the promotion of energy from renewable sources according to which each member state shall adopt a national renewable energy action plan.

III. Results and Discussion

EU legislation

The use of energy from renewable sources in the EU is regulated by Directive 2009/28/EC of the European parliament and of the Council of 23 April 2009 on the promotion of the use of energy from renewable sources and amending

and subsequently repealing Directives 2001/77/EC and 2003/30/EC.

This Directive establishes a common framework for the promotion of energy from renewable sources. It sets mandatory national targets for the overall share of energy from renewable sources in gross final consumption of energy and for the share of energy from renewable sources in transport. It lays down rules relating to statistical transfers between Member States, joint projects between Member States and with third countries, guarantees of origin, administrative procedures, information and training, and access to the electricity grid for energy from renewable sources. It establishes sustainability criteria for biofuels and bioliquids.

According to Article 3, each Member State shall ensure that the share of energy from renewable sources, calculated in accordance with Articles 5 to 11, in gross final consumption of energy in 2020 is at least its national overall target for the share of energy from renewable sources in that year, as set out in the third column of the table in part A of Annex I. Such mandatory national overall targets are consistent with a target of at least a 20 % share of energy from renewable sources in the Community's gross final consumption of energy in 2020. In order to achieve the targets laid down in this Article more easily, each Member State shall promote and encourage energy efficiency and energy saving.

Each Member State shall adopt a national renewable energy action plan. The national renewable energy action plans shall set out Member States' national targets for the share of energy from renewable sources consumed in transport, electricity and heating and cooling in 2020, taking into account the effects of other policy measures relating to energy efficiency on final consumption of energy, and adequate measures to be taken to achieve those national overall targets, including cooperation between local, regional and national authorities, planned statistical transfers or joint projects, national policies to develop existing biomass resources and mobilise new biomass resources for different uses, and the measures to be taken to fulfil the requirements of Articles 13 to 19.

A working single market is necessary to fully exploit synergies of generating renewable electricity and producing biofuels. Directive 2001/77/EC on the promotion of electricity produced from renewable energy and Directive 2003/30/EC on the promotion of the use of biofuels or other renewable fuels for transport were the main legal acts, laying down the general conditions for developing the legal environment for enterprising on the field of renewable energy resources. The newest legal acts are The Renewable Energy Directive 2009/28/EC (RED) and the Fuel Quality Directive 2009/30/EC (FQD) which lay a sustainability scheme for biofuels used in transport and bioliquids used in electricity, heating and cooling.

The renewable energy policy was formally institutionalized by adopting the documents "Energy efficiency action plan" in 2006 "Road map for renewable energy" in 2007, "Energy 2020 a strategy for competitive, sustainable and secure energy" in 2010, and " a policy framework for climate and energy in the period 2020 to 2030" in 2014. The most complex document incorporating broad topics renewable energy policy included (resource efficient Europe initiative), focus-

⁽²⁾ UNEP-BNEF: Global Trends in Renewable Energy Investments (Globálne trendy investícií do energie z obnoviteľných zdrojov) 2014.

ing on economic growth and development is EUROPE 2020 strategy.

The overall goal of renewable energy policy is to to fulfil at least 20% of its total energy needs with renewables by 2020 – to be achieved through the attainment of individual national targets. All EU countries must also ensure that at least 10% of their transport fuels come from renewable sources by 2020.

Slovak National legislation

Slovak Republic is an integral part of the European Economic Community and an active contributor to Europe 2020 strategy (resource efficient Europe initiative included). Slovakia has taken in part of resource efficient Europe initiative decisive steps. Several documents were adopted. Broadly, the topic of the renewable energy resources was integrated in Rural Development Program 2014 – 2020. More specifically, Biomass Action Plan 2008–2013, Strategy of higher use of the renewable energy resources in Slovakia and Strategy of energy security of Slovakia till 2030 have been adopted. The overall strategic goal is to increase the share of renewable energy resources on total gross energy consumption by 20% in EU countries. For Slovakia, the specific goal was set at 14% of the share (11,3% share in 2011) till 2020.

Sustainable use of agricultural land, its management and use, as well as the protection of its quality and functions are regulated by Act No. 220/2004 Coll. on the protection and use of agricultural land and amending the Act no. 245/2003 Coll. on integrated prevention and control of environmental pollution and amending certain acts as amended which came into the force 1. May 2004.

The purpose of this legislation is to regulate its use in the manner and extent to preserve its biological diversity, soil fertility, regeneration ability and ability to perform all functions. Act besides the definition of environmental functions of agricultural land (biomass production, filtration, neutralization and conversion of substances in nature, maintaining ecological and genetic potential of living organisms in nature) remember to protect agricultural land from unauthorized use for non-agricultural use, and provides penalties for violation of obligations established by this Act. In accordance with § 3 of the quoted Act, every owner of agricultural land or the lessee and manager must perform agro-technical measures to protect and preserve the qualities and functions of agricultural land and to prevent its damage and degradation and ensure the use of agricultural land in the way that ecological stability of the area is not endangered and functional inter-relatedness of natural processes in landscapes will be maintained. Because of the interest of administrative register of real estate in the Slovak Republic, owner of land is obligated to organize and to harmonize the type of agricultural land with its registration in the land cadastre. Agricultural land is primary production factor and also the natural resource which is unique in that land is immobile and therefore all other mobile sources, as well as production processes must adapt to the environment in which the land is situated⁽³⁾. Common Agricultural Policy of the EU raised the issue of soil

⁽³⁾ LAZÍKOVÁ, J. – TAKÁČ, I.: Legal and economic aspects of the agricultural land rent. 1. issue. Nitra: Slovak University of Agriculture, 100 p. ISBN 978-80-552-0447-5.

that are temporarily or permanently unnecessary for agricultural production. One of the possible alternatives of the use of agricultural land which is not profitable for food production is for production of biomass for energy production. The main types of biomass resources are fast growing trees (e.g. willow, poplar, alder, and black locust). Fast-growing trees compared to energy woods have advantage that the period between planting and logging is significantly shorter. Period is between 2 to 5 years and planting is renewed after 20 to 30 years.

Based on the significance of the fast growing trees as renewable sources of the energy the amendment of the Act No. 220/2004 Coll. was adopted under the Act No. 57/2013 Coll. Which came into the force 1. April 2013. The amendment supplement into the Act §18a Fast growing trees on agricultural land.

For the purposes of this Act, the fast-growing tree species on agricultural land means the crop fast growing trees to produce wood biomass an area of more than 1 000 m² for a maximum of 20 years. The crop of fast growing tree species can be cultivated on agricultural land, which is included by Soil and Ecologic unit (BPEJ) to fifth to ninth qualitative groups or on agricultural land contaminated by hazardous substances for as decided by the authority of agricultural land protection or on agricultural land is classified under the code of Soil and Ecologic unit (BPEJ) in the third or fourth qualitative group, where the agricultural land located in floodplains is waterlogged, or exposed to wind erosion. The crop of fast growing tree species cannot be cultivated on the land that is in the third to fifth degree of territorial protection of nature and landscape based on the Act No. 543/2002 Coll. on nature and landscape protection. In accordance with the § 2 of the Act a person who proposes to establish a crop of fast growing tree species on agricultural land is required to apply for registration in the register of land fast-growing trees managed by the District Office, Land and Forest Department. The application for registration accompanied:

- a) extract from the ownership certificate; if the ownership right to the land is not registered in the ownership certificate, other document proving ownership of land,
- b) a document declaring land tenancy land or document proving tenancy and property with the consent of the owner of land used for planting fast-growing trees, if the cultivator is not the owner of the land,
- c) basic identification details on the area of the proposed planting fast-growing trees, which were identical with the annexes under § 9 Section 4 of the Act.

The registration to the Register of fast growing trees areas will be announced by the authorities protect agricultural land to municipality and affected state administration bodies that protect public interests pursuant to special legislation (§3 of the Act). The cultivator of fast growing trees crop or its legal successor is obliged remediation of agricultural land in the period to end fast growing tree species according to the certificate issued by the District Office, Land and Forest Department (§4 of the Act). District Office, Land and Forest Department based on the application for registration of fast growing trees issues the to the cultivator of the crop fast

growing trees registration certificate- certificate of registration area of a crop of fast growing tree species. The issued certificate shall be sent to the central register of Soil service⁽⁴⁾ (§5 of the Act). Central register of land crops fast-growing trees administers and updates soil service.

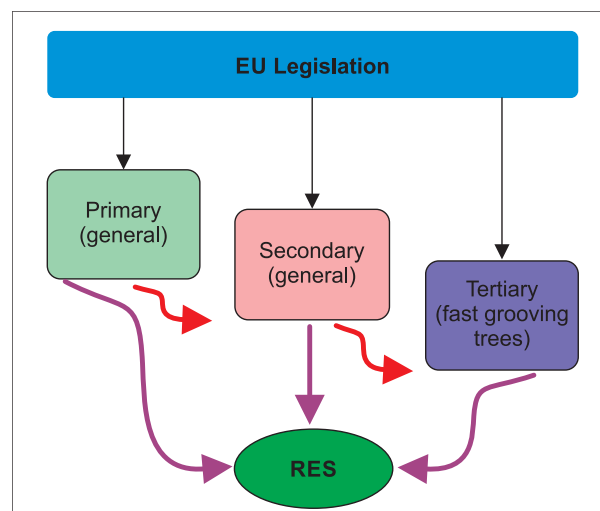
For growing energy crops on agricultural land is necessary (according to the § 17 quot. Act) to temporary withdraw agricultural land because the agricultural land can be used for non-agricultural purposes only in necessary cases and in reasoned range. Decision on withdrawal issues organ responsible for protection of agricultural land in responsible territory - where is agricultural land situated (relevant District Office, Land and Forest Department). Relevant District Office, Land and Forest Department considers the draft of non-agricultural use of agricultural land for planting fast-growing tree species on the basis of the agronomic and pedologic results means according to the quality of the soil: Soil and ecologic unit (Slovak abbreviation: BPEJ). The law designates Soil and Ecologic unit (BPEJ) as a classification and identification figure for the quality and value of production-ecological potential of agricultural land in the given area. Agricultural land is classified into the 9 groups of quality according to the 7-digit code of Soil and Ecologic unit (BPEJ). Specifically protected land for agricultural use is land classified into the group 1 - 4 according to the Soil and Ecologic unit (BPEJ). Potentially suitable land for planting fast-growing trees are the agricultural land classified under Soil and Ecologic unit (BPEJ) into the group 6-9 and according to the Annex No.3 of the Act.

Based on Directive 2004/8/EC of the European Parliament and of the Council of 11 February 2004 on the promotion of cogeneration based on a useful heat demand in the internal energy market and amending Directive 92/42/EEC and based on Directive 2001/77/EC of the European Parliament and of the Council of 27 September 2001 on the promotion of electricity produced from renewable energy sources in the internal electricity market, Slovak Republic adopted the Act No. 309/2009 Coll. on promotion of renewable sources of energy and highly effective combined production and amending other acts as amended. The Act came into force on 1.1.2011 and has been amended twelve times. Last amendment is Act No. 321/2014 Coll. on energy efficiency and amending certain acts, which came to the force on 1.12.2014.

According to the explanatory memorandum of the quoted act, its role is to optimize the electricity market in renewable energy sources and to promote decentralized production of electricity. The law creates conditions for environmental protection and development of highly effective combined production of electricity and production of electricity from renewable energy sources. The aim of the Act is better utilization of primary energy sources in energy supply through high efficient combined production of electricity or mechanical energy and heat with a consequent reduction in greenhouse gases, particularly carbon dioxide.

⁽⁴⁾ The Soil Service is in accordance with § 4 Section 1 the Act No. 220/2004 Coll. on the protection and use of agricultural land and amending the Act no. 245/2003 Coll. on integrated prevention and control of environmental pollution and amending certain acts as amended National Agricultural and Food Centre, Soil Science and Conservation Research Institute

Fig 1: Scheme of RES legislation in Slovakia



Source: own processing

- In accordance with the § 1 Act (Subject matter) lays down
- The manner and conditions for promote production
 - Electricity from renewable energy sources,
 - Electricity from highly effective combined production,
 - Biomethane.
 - The rights and obligations of producers
 - Electricity from renewable energy sources,
 - Electricity from combined production,
 - Electricity from highly effective combined production,
 - Biomethane.
 - The rights and obligations of the other participants in the electricity and gas markets.
 - The rights and the duties of the legal entity or natural person which markets motor fuels and other energy products used for transport purposes.

Legislative field of renewable energy sources is represented by several laws and regulations. These can be divided into several categories:

- The primary (general) legislation
- Secondary (general) legislation
- Tertiary legislation (relating to the fast growing trees)
- EU legislation

The figure 1 shows a structured scheme of RES legislation in Slovakia. Common rules are defined in EU directives are implemented at all levels of legislation, whether directly or through primary legislation. Secondary legislation is Slovak legislation and follows the primary legislation. Tertiary legislation is largely made up of documents and rules of the participating entities in the field of fast-growing trees.

The measure has a positive impact on the environment, especially by saving of primary energy resources (particularly fossil fuels), which will lead to smaller outflow of the emissions into the air. The law has undoubtedly a positive impact on the business environment by promoting the construction and reconstruction of the facilities for combined production and support of innovation in this field by using innovative technologies in energy supply. This Act establishes the means

and conditions to support the production of electricity from renewable energy sources, biomethane and electricity by highly effective combined production and combined production. In the individual regulations establishes the rights and obligations of electricity producers, rights and obligations of other participants in the electricity and gas market, as well as rights and obligations of the legal person or natural person who launches motor fuels and other energy products used for transport purposes in the market. By adopted act there is an increase in minimum limitation of the share of renewable sources of energy in the fuel up to 30%. Increasing the share of renewable energy in the fuel in combined heat and power production from 20% to 30% causes the production of electricity from renewable energy sources by individual producers will be increased in the same proportion, as well.

The regulation moves the construction of solar power plants on buildings and, therefore, they will not occupy large areas of arable land for the construction of solar power plants. In addition, the place for production of electricity moves closer to its consumption and that reduces losses in electricity distribution. Promoting the production of electricity is related mainly to the smaller power sources. The producer of electricity from renewable energy sources and combined production, has according to the § 3 Section 1 of Act right for preferential connection to the facilities for the production of electricity into the regional distribution system, priority access to the system, preferential transmission, distribution and supply of electricity regardless of device performance. The basis of the support of the renewable energy sources is in guaranteed purchase of electricity, in guaranteed purchasing prices, and in guaranteed movement of the purchasing prices depending on inflation and other macroeconomic indicators. Price of electricity produced from renewable energy sources and combined heat and power production will be set by the Regulatory Office for Network Industries (Slovak abbreviation: URSO) on the basis of profit.

Price for electricity set by this Authority is in a way that take into account the types of renewable energies, the technology used, the date on which the facility to generate electricity go into the operation process and size of the installed equipment.

Legislation of the renewable energy sources in the Slovak Republic has also a number of shortcomings that are criticized by energy producers, and also by professionals. One the contentious point is that the State will be obliged to purchase electricity from renewable sources only 15 years. Most of the countries in the European Union have this deadline longer (e.g. Germany, Spain, Italy). Slovakia is still lagging, in comparison and nuclear power plants produce four times more energy than renewable energy sources. Fossil fuels are still on the first place and in total energy consumption of the world they present 87.8 percent. Fossil fuels dominate also in Slovakia and on production of the energy they represent 71 percent.

According to the directions of the European Union, Slovakia should produce 14% of all energy from renewable sources by 2020. Many energy producers argue that despite on the adopted legislation this commitment will not be completed.

Our survey was done on the basis of the data from the

register for fast growing trees in Slovak territories at each district office, Land and Forest Department in Slovakia (72). The survey at registers shows that this legislation promoted the farmers to start to use marginal land for fast-growing trees. From all regions in Slovakia (8) there is no record about area of plantations of fast growing trees in register in the Trenčín region. Based on data from district offices (72) Land and Forest Department, we found that the largest area of fast growing trees on agricultural land is in the region of Bratislava and Banská Bystrica. In the Bratislava region the total registered area is 1 468 111 m² and in the Banská Bystrica region it is 899 692 m². The lowest area is recorded in the register in the Košice region - 331 254 m². The fast growing trees are recorded in the register since 2013, and recultivation of these areas is planned in the years 2032 - 2035. The expected increase of fast growing trees plantations will be subject of continuous research.

IV. Conclusions

The EU legislation in the area of renewable energy sources reflects the long-term dependency on energy imports and the need of stability of energy sources.

The Energy Union strategy is designed to help deliver our 2030 climate and energy targets and make sure that the European Union becomes the world leader in renewable energy.

The current national legislations give to any business (entrepreneur) the possibility to extend the scope of its business in the cultivation of energy crops on the basis of diversification of activities. In Slovakia, entrepreneurs have the opportunity to very effectively use less quality agricultural land by the cultivation of energy crops and the implementation of production on the assumptions of fulfilling the strict conditions stipulated by law no. 220/2004 Coll. on the conservation and use of agricultural land. We see the biggest problems in proving ownership of land on which the entrepreneur wants to establish a plantation or prove the tenancy with the agreement of owners of the land. Proving fulfilment of this condition is for entrepreneurs in Slovakia very difficult because of the persistent fragmentation of land ownership and predominant business on leased land. Another problem is seen in the lack of targeted support for the establishment and management of crop land for energy crops.

Acknowledgements

The paper was prepared in the frame of APVV project SK-SRB-2013-0031: Revitalization of small agricultural farm through energy crops cultivation and biomass production.

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Contact address/ Kontaktná adresa

Prof. JUDr. Eleonóra Marišová, PhD.

Department of Law, Slovak University of Agriculture in Nitra,
Tr. A. Hlinku 2, 949 76 Nitra, Slovakia,
e-mail: eleonora.marisova@gmail.com

Doc. JUDr. Zuzana Ilková, PhD.

Department of Law, Slovak University of Agriculture in Nitra,
Tr. A. Hlinku 2, 949 76 Nitra, Slovakia,
e-mail: zuzana.ilkova@uniag.sk

JUDr. Lucia Palšová, PhD.

Department of Law, Slovak University of Agriculture in Nitra,
Tr. A. Hlinku 2, 949 76 Nitra, Slovakia,
e-mail: lucia.palsova@gmail.com

Ing. Kristína Mandalová, PhD.

Department of Law, Slovak University of Agriculture in Nitra,
Tr. A. Hlinku 2, 949 76 Nitra, Slovakia,
e-mail: k.mandalova@gmail.com

