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REPCETERMELÉS ÉS A BIODÍZEL FELHASZNÁLÁS

FALUSI BÁLINT – NÉMETH ANETT dr. – VINCZE JUDIT

Kulcsszavak: világ energiaigénye, repce, növényi olaj, biodízel.

ÖSSZEFoglaló megállapítások, következtetések, javaslatok

Megállapítható, hogy ha a hidegen préselt növényolaj megfelelne a szabványoknak, annak használatát semmi nem akadályozhatná, a mezőgazdaságot megillető jövedékiadó-visszatérítés sem volna megtagadható. A Magyarországon előállított hidegen préselt növényi olaj megfelel a DIN 51 605 szabvány előírásainak, így például Németországban törvényileg elismert és alkalmazható. Könnyű felismerni, hogy a repceolaj említett szabványának honosításával jelentős gázolajmennyiség lenne kiváltható. Ez nemcsak a környezettudatos gazdálkodás feltételeinek felelne meg, de Magyarország energiafüggőségén is sokat javítana.

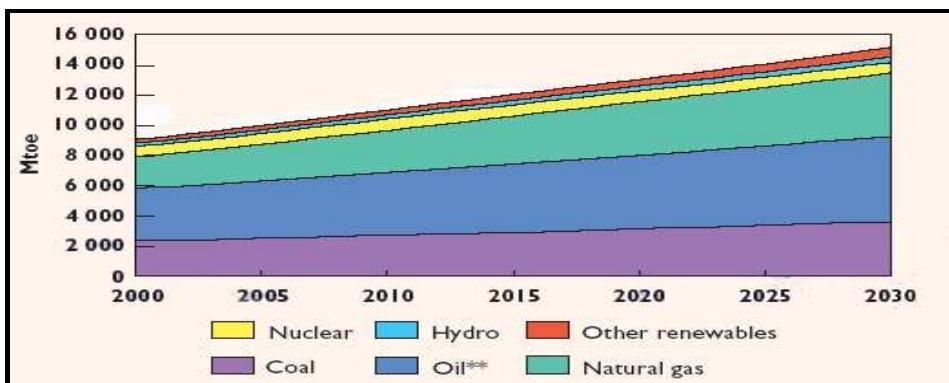
BEVEZETÉS

A repce a huszadik század „sikernövénye”, ami fokozódik a huszonegyedik században is. Felhasználását tekintve fontos olajnövény. Olaját használja az élelmiszeripar, a kozmetikai ipar is, de utóbbi időben egyre nagyobb mennyiségen használják a belőle készült biodízel belső égésű motorok hajtóanyagaként. A repceolaj a harmadik legfontosabb növényolaj a világon,

amit a szójaolaj és a pálmaolaj előz meg. A világ energiaigénye – olajegyenértékben kifejezve – 2030-ra szóló előrejelzések szerint háromszorosa lesz a mai igénynek. A rohamosan csökkenő szénhidrogének mennyisége és azok lelőhelyein tapasztalható elhúzódó politikai és gazdasági bizonytalanság előtérbe helyezi a növényi olajokat, mint energiahordozókat.

1. ábra

A világ energiaigényének várható alakulása



Forrás: Energy Balances of OECD Countries; Energy Statistics and Balances of Non-OECD Countries in „30 KEY ENERGY TRENDS in the IEA & Worldwide”

OLAJNÖVÉNYEK TERMELÉSE A VILÁGBAN

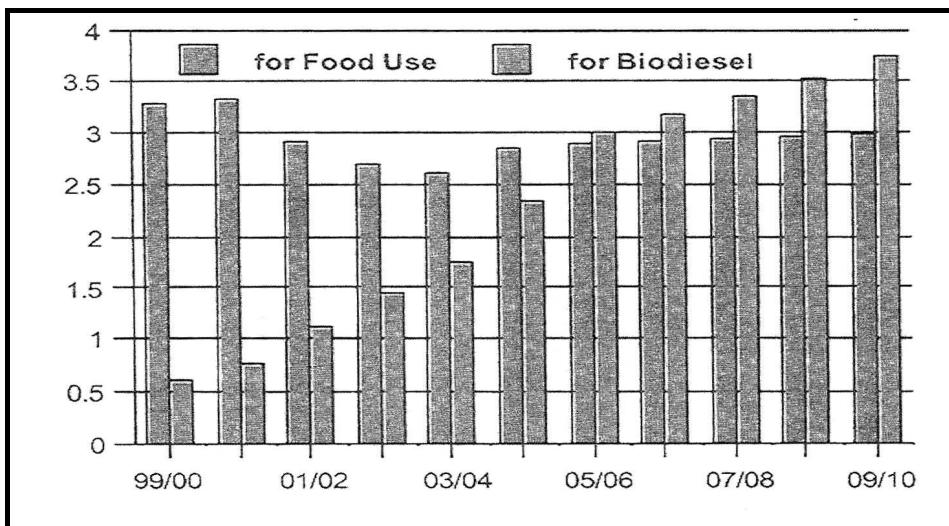
Az olajnövények világtermelése évente átlagosan 8%-kal emelkedik. A szójabab termelésében az USA a piacvezető, évi több mint 80 millió tonnás termésmennyiséggel.

Az őszi káposztarepce mag termelésében vezető helyen az Európai Unió áll, 2007-ben várhatóan 18 millió tonna terméssel. A legnagyobb repcetermelő országok, India és Kína termelése azért nem jelentkezik a világpiacon, mert a nagy népesség miatt a termelt repcét belső piacon

használják fel. Az Európai Unióban a repcemag feldolgozás erőteljes növekedést mutat a biodízel iránti megnövekedett kereslet miatt, ugyanis 2010-re a kőolajszármazékok üzemanyagként való felhasználásának 5,75%-át bioüzemanyagokkal kívánják helyettesíteni. A repceolajigény a biodízel célú felhasználás miatt monoton növekedést mutat, míg az élelmiszeripari felhasználás várhatóan 1999 óta tartó monoton csökkenést követően stabilizálódik a 2002-es színvonalon (*D. Papula – Nagy, 2007*).

2. ábra

Az EU-25-on belüli repceolaj igények alakulása



A repceolaj felhasználásának termésszetes korlátot szab a rendelkezésre álló és repcetermesztésre gazdaságosan alkalmas földterület, a kormányzati szabályozások, a szénhidrogének árának alakulása és változások a jövedéki adórendszerében. Az Európai Unióban feldolgozó kapacitása kezdetben elégetlenek bizonyult a beszerezhető nyersanyag mennyiségéhez képest ezért a szójabab és napraforgómag kapacitásokat folyamatosan állítják át repcemag feldolgo-

zásra. Az utóbbi időben jelentős beruházások történtek a kapacitások növelésére, illetve a biodízelgyártás bővítése érdekében.

MAGYARORSZÁGI TRENDÉK

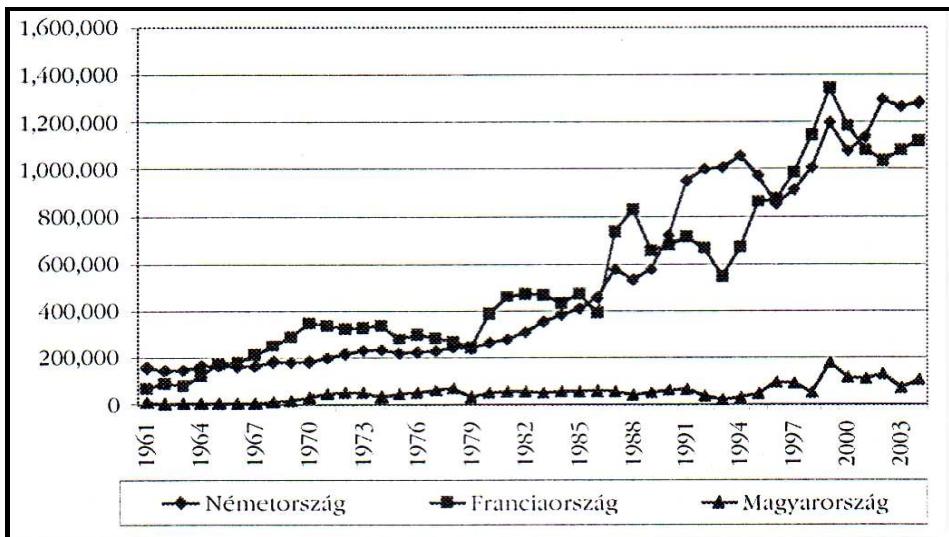
Magyarországon a vázolt trend figyelhető meg csak kisebb méretben és lassabb ütemben. Az Európai Unióban Franciaország és Németország a legnagyobb repcetermelő. Mindkét országban

a vetésterület egymillió hektár fölött van. E két ország repcetermelésére érdemes több szempontból is odafigyelni. A földrajzi közelség, a jelentős termésmennyisége és a magas termésátlagok miatt e két ország repcetermelése alapvetően meg-

határozza a hazai repce értékesíthetőségét és az árát. Az értékesítési ár alapvető a jövedelmezőségben. A hazai repcemag értékesítési ára nem a hazai ráfordítás mértékétől és termésátlagától függően alakul.

3. ábra

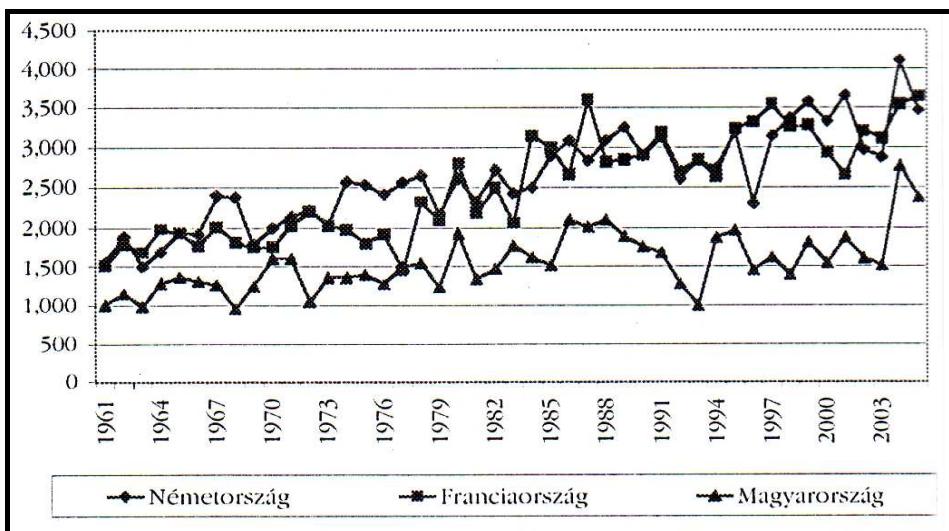
Repcetermesztés 1961-2005 között, terület (ha)



Forrás: Falusi J. – Falusi B., 2007

4. ábra

Repcetermesztés 1961-2005 között, termésátlag (kg/ha)



Forrás: Falusi J. – Falusi B., 2007

Jelentősebb repcetermelők még Európában az Egyesült Királyság, Csehország és Lengyelország. Csehországi repcetermelők elsősorban színvonalas repcetermelésük miatt érdemelnek figyelmet, amely hasonló a francia és német termelési színvonalhoz. Várható, hogy Lengyelország félmilliós hektárt meghaladó vetésterülete az elkövetkező években megkétszereződik, és a termésátlaga is emelkedhet. A lengyel repcetermelés eddig is méreténél nagyobb hatást gyakorolt a hazai repce értékesítési árára. Ha Lengyelországban sok repce kifagyott, növekedtek a hazai felvásárlási árak.

A gabonafélék értékesítési gondjai, a biodízelgyártás beindulása Magyarországon is a repcére irányítja 2004-től a gazdák figyelmét, minden lehetőséget megragadva a repce termésátlagának növelése érdekében. A korszerű csavázott vetőmag használata és a vegyszeres gyomirtás általánossá vált, megkezdődött és gyorsan terjed a hibridfajták használata, nőtt a műtrágya felhasználás, a gazdák alkalmazzák a legkorszerűbb növényvédelmi technológiákat és a regulátorokat. A gépesítés színvonalára az utóbbi években sokat javult. A 2006 őszén elvett repce vetésterülete a korábbinak kétszerese: 240 000 ha, és a megköött szervsződések alapján az értékesítési ár nagyon bíztatóan alakul. Várhatóan a jobb értékesítési ár miatt a gazdák többet költenek a termésnövelő agrotechnikai elemekre, mivel a megtérülés biztosabbnak látszik. Ha természeti katasztrófa nem történik, akkor nagyobb termésátlag növekedés és minden idők legnagyobb repcetermése várható 2007-ben.

ÚJ MINŐSÉGI KÖVETELMÉNYEK A REPCÉBEN ÉS A HAZAI TAPASZTALATOK

A repcének a korábban elfogadott minőségi paraméterek helyett új kihívá-

sokkal kell szembenéznie. Az üzemanyagcélú felhasználás a nemesítés irányvonalát új irányba fordítja. A biodízelgyártás új minőségi igényei és konyhatechnikai szempontok indokolják az olajsavtartalom növelését a linol és linolénsav rovására. A nagyobb olajsavtartalom nemcsak biodízelgyártás szempontjából hasznos. Az olaj nagyobb hőtűrő képessége fontos tulajdonság a konyhatechnológiában is. A linol és linolénsav nem stabil, hamar avasodik, hőstabilitása nem megfelelő. Sütéskor gumiszerű kiválást tapasztalhatunk az edényeken, erősen pörkölvé pedig karcionogén agyagok keletkezhetnek belőle. Tárolásnál, különösen ha az hosszabb ideig tart, hamar avasodhat. Ezért a sütéstre szánt étolajokat, a finomított étolajokat és a biodízelgyártás céljára felhasznált olajokat részlegesen hidrogénezik. A hidrogénezés hatására ún. transzsírsavak keletkeznek, amelyek élelmezési megítélete erősen vitatott. A nagyobb olajsavtartalom szükségtelenne teheti, vagy csökkentheti a hidrogénezést, amely egészségesebb étolajat és olcsóbb technológiájú energetikai felhasználást segíti.

A magyarországi tapasztalatok a biodízel mezőgazdasági erőgépekben és aggregátorokban való hasznosításáról vegyes képet mutatnak. A technológiai feltételek adottak. A gyakorlati tapasztalatok azt mutatják, hogy +10 °C felett motortípustól függően 10-20% növényi olaj bármikor hozzáadható a gázolajhoz. Kizárolag a növényi és az ásványi olaj jó elkeverése kritérium a motor megfelelő, kopogásmentes működéséhez.

A régebbi típusú motorok és erőgépek minden átállítást vagy átalakítást nélküllözve képesek tisztán növényi olajjal üzemelni. Néhány szakember olyan problémákat mutatott, miszerint a növényi olajokból kis mennyiségben savak és víz válik ki, amely a motor károsodását okozza.

A savak és a víz csökkenik a motorolaj hatékonyságát és korroziót okoznak. Ennek kiküszöbölése érdekében használat után, leállítás előtt a gépeket tiszta gázolajjal szükséges üzemeltetni. Fentiekből érzékelhető, hogy a mezőgazdasági erőgépeknél, megfelelő szakértelemmel, a növényi olajok hajtóanyagként alkalmazása gazdaságosan kivitelezhető, mivel a hidegen sajtolt növényi olajok ára 50-60%-a a gázolajénak.

Ezek után felmerül a kérdés: miért nem használ már mindenki növényi olajat gázolaj helyett, mezőgazdasági

gépek hajtására? A Vám- és Pénzügyőrség Országos Parancsnokságának illetékes szerint: „A hidegen préselt növényolaj nem felel meg a vonatkozó magyar üzemanyagszabványoknak, ezért a dízel üzemanyagnál általánosan használt 85 Ft/liter jövedéki adóval szemben a jövedéki adó mértéke 125 Ft/liter. Mindemellett aki növényi olajjal üzemelteti mezőgazdasági erőgépét nem számíthat az általa művelt területeken a hektáronként maximum 95 liter gázolaj felhasználása után, a mindenkit megillető literenkénti 65 Ft áfa visszaigénylésre.”

FORRÁSMUNKÁK JEGYZÉKE

- (1) Energy Balances of OECD Countries; Energy Statistics and Balances of Non-OECD Countries in „30 KEY ENERGY TRENDS in the IEA & Worldwide – (2) D. Papula L. – Nagy L. (2007): Új piaci trendek a nemzetközi és hazai növényolajpiacra” – (3) Falusi J. – Falusi B. (2007): Repce – múlt, jelen, jövő. Agrofórum, február – (4) Ismeretlen szerző: „Biodízel” tisztán, hajtóanyagként a valóságban. AgrárUnió VII. évf. 1. sz. 2006. dec.-2007. jan. – (6) Szőcs J. (2007): Biodízel: bíztató jövő, vagy repce-kelepce? AgrárUnió VII. évf. 2. sz. február

PÁLYÁZAT

A GAZDÁLKODÁS SZERKESZTŐBIZOTTSÁGA PÁLYÁZATOT ÍRT KI AZ ALÁBBI TÉMAKÖRBEN:

A MAGYARORSZÁGI 2007-2013. ÉVI AGRÁR- ÉS VIDÉKPOLITIKA MEGVALÓSÍTÁSÁNAK AGRÁRÖKONÓMIAI MEGKÖZELÍTÉSE

A pályázatra küldött kézirat címe fejezze ki a tartalmat, kérjük, hogy a cím alatt közöljön 5 kulcsszót, a kézirat elején pedig „ÖSSZEFOGLALÓ MEGÁLLAPÍTÁSOK, KÖVETKEZTETÉSEK, JAVASLATOK” alcímben a lényeg tömör ismertetését 15-20 sorban. (Tehát nem tartalmi ismertetésről, absztraktról van szó!) A pályázatra érkezett kézirat terjedelme lehetőleg ne haladja meg a 15 szabvány oldalt, az illusztrációval együtt. A szerzők, illetve társszerzők több pályázattal is szerepelhetnek.

A pályázat **2007. június 30-ig** nyújtható be.

A pályázat díjai:

- | |
|--------------------------------------|
| I. díj = 200 000 Ft |
| II. díj = 100 000 Ft (három II. díj) |
| Egyéb elismerések. |

A beérkezett pályázatokat a Szerkesztőbizottság két tagja lektorálja, a szokásos formai követelményeknek és a tartalmi igényességnek megfelelően.

A megjelent pályamunkákat a Szerkesztőbizottság értékeli, s dönt a pályázat díjainak odaítéléséről. A pályadíjak és egyéb elismerések, jutalmak ünnepélyes keretek között kerülnek átadásra. Az eredményhirdetés a Gazdálkodásban is megjelenik.

Dr. Szerdahelyi Péter
a Szerkesztőbizottság
elnöke

Dr. Magda Sándor
a Kiadó vezetője

Dr. Csete László
főszerkesztő

THE IDEALS AND REALITIES OF EUROPEAN AGRICULTURAL POLICY

By:
UDOVECZ, GÁBOR

Keywords: Common Agricultural Policy, SPS, regional development, conflict of hearts and minds.

Increasingly fierce, globalised competition awaits agriculture and food production in general. This explains the fact that the ideals and realities of European agricultural policy are increasingly in conflict with each other and is the cause of the continuous CAP reforms, as well as being related to distortions in competition and inconsistencies in the CAP. Beyond all this, the Hungarian situation and its development potential are influenced by the new challenges of inherited competitive disadvantages and the uneven preparations for Accession. 2007 is an important year in terms of preventing a competitive collapse, as it is when the national subsidy system, including the system of national top-up subsidies, is to be transformed, and when preparations must be made for transforming the EU's direct subsidy system, the so-called SAPS system. The foundation for possibly bridging the gap and retaining markets and jobs can be laid via the sensible expenditure of the roughly 1,400 billion forints of regional development resources.

TRANSFORMING MARKETS IN GLOBALISATION

By:
MARKOVSZKY, GYÖRGY

Keywords: market concentration, globalisation, concentration of capital, derivatives market, e-trade.

The increasingly fast growth of the world economy, changes in the leading regions' and states' share of world production, new regions closing the gap, the increased concentration and growing ratio of companies operating above and beyond nations, all adds up to a strengthening geographical and corporate concentration of capital. Alongside traditional industrial sectors, sectoral concentration is also strengthening in the various branches of the service sector. In spite of their fluctuations, money- and capital-markets, the commercial development of the world's greatest stock exchanges, are dynamic. The volume and sensitivity of derivative products (total derivative transactions being many times greater than share transactions), have elevated them to being the barometer of business life.

The adjustment of the domestic economy to the world economy is contradictory. The circle of large companies that primarily operate on foreign capital are performing outstandingly, exports are growing and SMEs have remained weak, their ability to close the gap doubtful. The analysed data also proves that the process of domestic concentration is speeding up.

The Hungarian capital market, the increasing rise of the derivatives market behind the growth in public share transactions, is a factor increasing market security. The futures and derivatives market represents almost 50% of total transactions. In the previous period, the Hungarian cereal and oil-seed market represented 10% of the foreign

exchange futures trade on the commodities exchange, a fact which illustrates the decline and loss of ground of local markets.

The growth in electronic trade – the new market force in the post-millennium period – is dynamic, and its share in certain areas (procurement) is significant.

GREEN ENERGY AND REGIONAL DEVELOPMENT

By:
GERGELY, SÁNDOR

Keywords: energy efficiency, renewable energy, employment, regional development, green energy scripts.

Hungary's GDP indicators in terms of energy efficiency reflected on consumer spending parity, falls behind the EU's older member states. We are in the top half of the field of 12 states that have joined since 2004. The situation is also similar with regard to CO₂ burden indicators.

There has been a breakthrough in recent years in end-user energy consumption from renewable energy sources. This was made possible by the mass utilisation of power stations supporting green energy – fuel wood – realised as a result of the interests created by legal and economic regulation. Last year Hungary achieved the ratio of renewable energy utilisation it had undertaken to reach by 2010. At the same time, this represents only a fraction of the domestic possibilities. In the transformation of arable land utilisation, a determining factor has been the drastic deterioration of the exchange rate, expressed in oil, of agriculturally produced basic foodstuffs; six-fold in the case of wheat, eight-fold for corn and eleven-fold for beef, over a period of 30 years.

The positive effects of green energy production on regional development come into their own if the producers band together into producer groups, which in turn form clusters with the service providers and utilisation companies. This system is supported by the scientific and local government background institutions. In the long term, the fundamental elements of a balanced, integrated partner relationship are self-restraint by stronger partners, the proportional sharing of work, capital and risk, and obligatory contractual discipline for all.

The production and utilisation of green energy carriers most affects regional development through increasing regional competitiveness, which manifests itself in the improvement of the conditions and effectiveness of: social structure, decision-making centres, quality of the environment, social cohesion of the region, economic structure, culture of innovation, regional accessibility, institutional and social capital, operation of SMEs, foreign investment, infrastructure and human capital, R&D, level of employment, labour productivity, income of regional areas and towns, and finally, improvement in the quality and standards of life for those living in the countryside.

Local or centralised utilisation of green energy has differing effects on regional development. Local utilisation is more advantageous for population retention and employment than centralised utilisation.

We present the scripts for three green energy programmes, of which the first ties up 440,000 hectares of arable land, the second 880,000 ha., and the third, 1,370,000 ha. The number of jobs newly created or retained changes from 22,841 to 68,226, in so far as we calculate wood's green energy carrying proportional energy price in relation to the tax-free

price of diesel fuel. However, if we calculate using the price of fuel wood valid in April 2006, then the number of newly created or retained jobs changes from 10,469 to 30,270.

THE EXPECTED EFFECTS OF EU SUBSIDY POLICY ON LABOUR MARKET DEVELOPMENT IN THE 2007-2013 PERIOD

By:
HUZDIK, KATALIN

Keywords: positive economics, segmented labour market, normative economics, European Employment Strategy, New Hungarian Development Plan.

The Hungarian labour market faces significant challenges in the upcoming period. The rate of employment needs to be raised from the current 59% to 70%, without any significant increase in the rate of unemployment, through the utilisation of EU resources. This will have a considerable impact on agrobusiness in such a way that – in keeping with international trends – the ability of agriculture to provide employment will fall. In light of this, and taking into account the economic laws of the labour market, sectoral development must serve both employment growth and effective production in the 2007-2013 period.

The necessity and importance of labour market flexibility came to the forefront of employment policy in the second half of the 1990s in particular, following the democratic transformation, as a result of globalisation and growing unemployment in Western Europe. Greater labour market flexibility has become important, because international competition is growing increasingly hard (Hungary's accession also creates growing competitiveness), and the companies that can expect better results and improved competitiveness on global markets are those that can adapt flexibly to changing market expectations. Important elements in adapting to the market are the labour market's terms and conditions and the active and passive skills of the employed; in other words, the extent to which employed labour can be adapted fast and flexibly to changing market requirements. This, however, requires knowledge of the forces that move the labour market and how these work, as well as how labour market theories developed, which can have a significant role in the implementation of necessary measures and the highlighting of the correct goals.

GLOBAL AND EUROPEAN NUTRITION TRENDS

By:
BALOGH, SÁNDOR – BALÓ, TÜNDE

Keywords: convenience products, functional foods, global and local effects in food consumption, obesity.

An overview is given of the differences which can be observed between European and American consumer habits – which start and reflect global trends – as well as between European and American characteristics of food supply. The different positions of the supply of convenience products on these two large markets are presented. The close relationship between the supply of convenience products, uncontrolled personal

consumption and obesity is pointed out. The third generation of convenience products has already appeared in the USA, where manufacturers aim at combining convenience and health aspects. Contrary to this, the European consumption “philosophy” – while also acknowledging the convenience aspect – gives greater preference to natural origin, freshness and traditional recipes.

DEFORMATIONS OF STRUCTURE AND ENTERPRISE CONNECTIONS IN AGRICULTURE

By:
NEMESSÁLYI, ZSOLT

Keywords: enterprises, structure of production, system of farm management, extensive-intensive farming, net margin of enterprises.

The study deals with the structural deformations of Hungarian agriculture. It focuses primarily on the structural change of private and joint ventures from a farm business management aspect. Due to the declining profitability of animal breeding enterprises and the EU subsidy policy, the number of farms specialised in crop production is definitely increasing in contrast to animal breeding and mixed farming. The author cites and calls for the help of professors and researchers in the field of classical farm business management, to strengthen his viewpoint that Hungarian agriculture cannot omit mixed structure farming and the utilisation of the advantages of enterprise connections. He highlights the danger of important intensive crop production enterprises dropping out of the structure. Forcing back sugar beet and tobacco production and the forced closure of their related processing industries may start a process in Hungarian agriculture, which cannot be reversed. A loss of profits and jobs may just further aggravate the condition of rural populations already in a difficult situation.

ECONOMIC CHARACTERISTICS OF ORGANIC FARMS WITH SPECIAL REGARD TO WEED MANAGEMENT

By:
KOLTAI, JUDIT PETRA – MAZÁN, MÁRIÓ

Key words: organic farming, income, cost, weed management.

The demand for relevant and practical information about organic farming practices is likely to become greater as more growers enter the industry, presumably with little or no experience in commercial organic production. However, numerous reports state that institutional organic research and expansion is poorly developed, with relevant information being difficult to obtain.

On the one hand, organic agricultural yields are likely to fall behind conventional ones. On the other, higher prices can be achieved as consumers' needs tend to shift towards products of higher or special quality, and they are willing to pay up to 100-200% extra in order to purchase a product resulting from “non chemical” production.

Its cost structure differs from conventional production as some cost forms are lower (e.g. pesticides), while others tend to be higher (e.g. salaries and employer's contributions). Altogether, an 80-100% cost level can be seen as valid.

Weed management is widely acknowledged as a major constraint in organic agriculture. The lack of relevant, accessible information, and concerns about the impact of weeds on production have highlighted the need for further research and an extension of OWM practices.

THE CHARACTERISTICS OF THE RETAIL MARKETS FOR ORGANIC PRODUCTS

By:
GYARMATI, GÁBOR

Keywords: organic farming, markets for organic products, characteristics of consumers, organic markets of the world.

Despite the slight boom in the 90's in Western Europe the market for organic products forms a narrow segment in the foods market. The growth ratio decreased recently and even stalled on some markets, where these reached the limits of their possibilities. The consumers of organic products consist of committed consumers, health conscious luxury consumers, and those subject to an enforced diet due to health problems (Gerson diet or Breuss cure). The average ratio of the consumption of organic food is 0.1 % globally due to significant extra charges and narrow sales possibilities. This ratio was even smaller (0.05 %) in Hungary in recent years, as the extra charges were more than 100 % higher than in Western Europe. The largest consumer markets are North America and Western Europe where the consumption ratio of organic products can reach 2 %, while Europe, South America and Australia are the largest producers.

THE CONNECTION BETWEEN CHEMICAL REDUCTION AND SUSTAINABILITY – OPTIONAL FARMING STRATEGIES

By:
TAKÁCSNÉ GYÖRGY, KATALIN – KIS, SÁNDOR

Keywords: chemical usage, sustainable farming, strategies.

In this study we surveyed the development of Hungary's chemical usage (chemical fertiliser, plant protection remedies) in plant production and evaluated the possibilities of sustainable agriculture from the viewpoint of environmental burden. We determined that the sector's chemical use has by now significantly decreased from the levels measured in the 1980s; partly due to financing issues, the technological development of plant protection remedies, and to a lesser degree due to environmental protection viewpoints. Among the trends to reduce the environmental burden and realise sustainability, one of the solutions may be precision farming, which means rational chemical use. However, not every farmer is capable of shouldering the additional burdens of this technology (investment requirements, higher production costs). The other extreme is artificial-chemical-free farming. Organic farming has spread to ever greater areas over the past decade, in parallel with the processes above, although based on the data of recent years its growth appears to have stalled, which is suggestive of the effects of supply and demand and profitability.

COST EFFECTS OF THE NITRATE DIRECTIVE

By:
HOFFMANN, ANDRÁS – SOMOGYI, TAMÁS

The Nitrate Directive set different deadlines for building liquid manure storage units on nitrate-sensitive versus non-sensitive areas. Our study investigates the effect of this at two agricultural firms. The one operating over a non-sensitive area can generate a significant environmental burden without any financial consequences. The other firm, operating over a nitrate-sensitive area, was forced to establish a system for storing and treating liquid manure at a cost of several hundred million forints, in order to comply with the decree. In the year operations began, the value of this system reached 10% of the corporation's tangible assets. There are also further costs of operation. Against these expenses one might set the yield from the nitrogen content of the liquid manure. However, our investigations revealed with statistical tests that there was no excess crop production in the 2002-2004 period on the fields irrigated with liquid manure. This implies that, under the conditions of the treatment, almost all nitrogen content must have escaped into the atmosphere as ammonia. Therefore the goal targeted by the decree was reached at great investment cost and produces atmospheric pollution rather than nutrients useful for crop production.

ANALYSIS OF THE TAXATION ENVIRONMENT AND TAX BURDEN OF COMPANIES IN THE HUNGARIAN AGRICULTURAL SECTOR

By:
MOLNÁR, BARNA – GODA, MÁTYÁS

Keywords: basic principles of taxation, taxation competition, corporate tax, tax burden, tax allowance.

There are two major factors, which can be identified behind the recent remarkable changes in Hungarian taxation policy. These are the switchover to a market economy at the end of the 80's and accession to the European Union. The resulting processes are the reduction of tax rates, the widening of the tax base, the reduction of tax allowances and international conformance. But the changes have not yet finished. The tax policy systems face new challenges such as globalisation, competitiveness and sustainability.

Within the investigations we tried to find opportunities for the Hungarian taxation system to meet all the new requirements. First we checked international aspects - the situation of European tax policy issues. We reviewed the appearance of three main dimensions of sustainability within taxation. We tried to define the corporate taxation level in Hungary with respect to agricultural enterprises and compare it with the tax burden in European member states. The implicit tax burdens were calculated by size, by type of activity and by regional aspects for these enterprises.

The conclusions show that the economic situation at the companies investigated worsened up until 2005 and that the tax burden in Hungary is considered to be competitive compared to the other member states. The nominal trend is decreasing, but if we consider the impacts of tax allowances the trend is the opposite. The highest taxes were paid by the bigger companies located in the Central Hungary and Central Transdanubia regions, which deal with animal breeding or mixed activity in general.

THE TECHNICAL AND ANIMAL PROTECTION CONDITIONS OF DOMESTIC LAYING FARMS

By:

NÉMETH, ANETT – VINCZE, JUDIT – FALUSI, BÁLINT

Keywords: laying farms, animal protection, technical conditions.

Taking animal protection viewpoints into consideration, in the 2001 survey 46% of the laying-cages examined met regulatory requirements. The second survey (2004) with similar conditions painted a more favourable picture, as 57% of the laying-cages met the requirements valid in 2001. However, amendments to the regulations in the intervening period alters this picture in an unfavourable direction, as the increased cage-space required for each laying hen was only achieved in 31% of laying-cages. The EU's animal protection regulations relating to laying hens has resulted in a lively debate among experts. Many among them hold that those advocating animal-friendly technologies have not taken fundamental professional viewpoints into consideration and that expectations in relation to producers are unrealistic and do not create a balance between effective production and the needs of the animals. Conforming to the EU's demands also raises numerous questions in Hungary. Domestic egg production requires the creation of new laying-cages, due to the increased space requirement per laying hen. Taking the results of the 2004 survey as a base, around 1,742,000 more laying spaces are needed by 2012. Switzerland has already banned all forms of caged laying and Germany will do so from 2007, although imports of cage-produced eggs can continue. The processing industry is only interested in the animal maintenance technology if the additional costs can be passed on in the sales price. If the Hungarian egg sector recognises this market niche and further processes the eggs produced in the improved domestic cages, then it can sell its higher value-added product on the EU markets in the 2007-2013 period.

THE PROFITABILITY OF SETTLEMENTS SPECIALISING IN SHEEP FARMING

By:

VINCZE, JUDIT – TENK, ANTAL – NÉMETH, ANETT – FALUSI, BÁLINT

Keywords: factors influencing profitability, production value, production cost, sector achievement, the effects of subsidies on income.

The settlements examined were loss-making in three of the years between 2001 and 2005 (2001, 2004, 2005). Following accession in 2004, grass-based animal husbandry sectors enjoyed significant subsidies from the EU. This is particularly relevant in such disadvantaged areas as the North Hungary region. In domestic sheep-farming there are two options available for reducing expenditure and thereby reducing costs: utilisation of grazing lands and the reduction of veterinary costs. At the same time, the quality of the environment and the standard of feeding could be improved. One of the possibilities for increasing turnover is to increase prices, but this is independent of the

farmer's decision-making remit and his influence on it is negligible. However, another possibility for increasing turnover is to increase yield, while a third is to maximise utilisation of subsidies. It can be determined based on the calculation method that, taking into account income calculated with the various forms of subsidy available, the sector could be profitable. On the settlements examined, the subsidy per ewe would increase profit by 4,103 forints, while the subsidy per hectare would increase it by 5,802 forints.

THE PHYSICAL LABOUR SUPPLY OF LARGE-SCALE CATTLE COLONIES

By:
KOVÁCS, ANIKÓ

Keywords: animal husbandry, vocational training, workforce, competitiveness.

The workforces of large-scale stock-breeding colonies face significant professional and generational changes, which play a part in the development forecasts for the period 2007-2013. Animal husbandry working processes require increasingly complex activities, therefore, with changes in the regulations relating to the end-product and to production, technological development, and the progress of mechanisation, more comprehensive technical knowledge will be required in the future. The foundations for the supply and constant development of valuable human resources that meet employers' requirements are the various forms of vocational training. The establishment of short, practical, targeted courses is the best for changing the generally fixed, harmful working practices characteristic of animal husbandry, therefore their expansion is important.

THE COMPETITIVE POTENTIAL OF FAMILY FARMS

By:
BARANYAI, ZSOLT – TAKÁCS, ISTVÁN

Keywords: family farm, sustainability, effectiveness, competitiveness.

Our investigations highlighted the effectiveness problems of agricultural production. Obviously, a farm's effectiveness improves in tandem with the growth of the concern. We found two realistically workable solutions. One is based on farmers' collaboration and co-operation, ensuring agricultural competitiveness through "virtual" large-scale formations. The other possibility is a structure based on feasible and competitive family farms, which is far from an innovative idea. In our opinion under current domestic conditions – depending on production structure – in arable plant production a concern of 2-300 hectares is the size that can be hoped to produce competitively. At the same time we must admit that co-operation between farmers still cannot be omitted in the case of farm concentration at this level, which, even if not manifest in production processes understood in their narrowest sense, will certainly be present at various points in the vertical chain (e.g. processing).

THE SITUATION OF SMALL-SCALE PRODUCER DAIRY FARMING IN HUNGARY

By:
VÁGÁNY, JUDIT

Keywords: survey of small-scale producers, production of raw milk, quality.

One of the significant subjects of our day and age is quality. The recent, serious food scandals - food label substitution, the BSE scandal, the fatal food poisonings caused by E. coli, SARS, the dioxin scandal, bird flu, and the paprika scandal – have increasingly placed the subject in the spotlight. Hungary ordered the legally obligatory adoption of the HACCP system in food production from January 1st 2002, which is still not mandatory in the production of agricultural raw materials. However, food processors are placing increasing pressure on raw material processors, primarily in the interests of being able, as suppliers, to credibly certify that their products (the raw materials specifically produced for food supply) do not contain foreign matter in quantities that may be harmful to health. Quality also has a key role to play in the 2007-2013 period. Those small-scale producers who are unable to meet the quality requirements will be left out of the markets, a fact that is supported by the results of the survey.

WHEAT PRODUCTION SUCCESS OF A CO-OPERATIVE

By:
KARÁCSONY, PÉTER

Keywords: income, winter wheat, costs, competitiveness,
West Transdanubia region.

The co-operative achieved good production results, the mediocre nature of its site notwithstanding and, despite average sales prices, with the help of EU support it was able to declare sector successes in 2004 and 2005. A drop in results is a warning that highlights the exploration of reserves, the proportional transformation of the production structure, and a change in sales direction.

THE PROFITABILITY OF APPLE PRODUCTION UNDER THE INTEGRATED PLANTATION TARGET PROGRAMME

By:
FODOR, ATTILA

Keywords: income, expenses, apple, agro-environmental farming, sustainable farming.

Thanks to agro-environmental farming programmes, apple producers can access surplus subsidies (388.24€ / ha.), provided they undertake to meet the requirements

prescribed in the relevant laws (150/2004. Ministry of Agriculture and Rural Development (FVM) statute and amendments). Conforming to these rules, however, imposes additional expenses on the farmer, for example land survey and forecast costs, as well as increasing labour requirements. It is worth examining, therefore, exactly what proportion of expenses this denotes altogether and how it compares proportionally to the subsidy amount, as in the near future (2007-2014) the sector will only utilise subsidies targeting sustainable and environmentally-friendly farming if the producers deem it to be economically remunerative.

According to my investigations, the additional costs are 26,283 forints per hectare, while the potential subsidy is 97,740 forints. The difference could be spent, for example, on the development of forecasting tools, on supplementing the costs of employing specialists, generally on naturalising the development of sustainability, or on achieving numerous other advantages.

Loss of yield is not expected as a result of participation in the programme, neither is any significant decline in quality. At the same time, consumer confidence in the product will increase and, if the integrated production method is declared, its marketability will also improve.

SECURITY, TERRORISM, TOURISM

By:

DÁVID, LÓRÁNT – MOLNÁR, FERENC – BUJDOSÓ, ZOLTÁN
– DERESKEY, ANNA

Keywords: terrorism, future of tourism, threat level, attacks.

Security has become one of the fundamental problems in tourism. In the period since 2001 the increasing occurrence of previously rare acts of terror, and the unpredictability of their location, have created a new situation in the tourist sector.

The vigorous development of tourism is the aim in Hungary during 2007-2013. It is to be hoped that Hungary's preparedness and utilisation of international experience – both in mitigating potential threats and in strengthening the security of locations – will be able to counteract the risks caused by terrorism.

TOURISM AND THE HISTORICAL GARDENS OF THE NORTH HUNGARY REGION

By:
JÁTÉKOS, EDIT

**Keywords: tourist trade endowments, entertaining attractions, attraction factors
of a thematic nature.**

In the increasingly global tourism market the destinations that can expect to be popular are those which build on local endowments and offer touristic products that meet touristic demand. According to international forecasts, with rising levels of education and culture, tourists in the coming decade will primarily prioritise

culturally-based attractions. In the interests of realising the 2007-2013 development period targets, I constructed a touristic product – a thematic trip – in my study, the central theme of which is the garden.

SUBSIDIES IN BÉKÉS COUNTY

By:

KELLE, VERONIKA – TAKÁCS, ISTVÁN

Keywords: agricultural financing, national and EU subsidies, gross domestic product.

Békés county's agricultural nature determines its state of economic development. The gross value added per head produced by the county's agricultural sector significantly exceeds the national average. However, growth in the county's economic results falls behind the rest of the country and the gap is widening in terms of GDP per head. The region's lag could be halted through appropriate activism and professional subsidy applications. The county's share of subsidy resources and the amount granted per application have increased. Its application activity is high, falling into the top third of all counties. In assessing subsidy grants, the judges favour the more complex applications. At the same time it is a disadvantage that the subsidy amount available for one project, in the case of developments financed through AVOP (Agricultural and Regional Development Operative Programme), is lower than nationally, indicating a smaller volume of individual developments.

The applications show that the county is ready for successful participation in EU grant-making processes, which could be useful in the 2007-2013 period. It will help the county close the economic gap, including in agricultural production and the processing industry that is built on it, as well as assisting in the development of the service sector.

A GLOBAL COMPANY ON THE DOMESTIC FEEDING TOOLS MARKET

By:

BENKE, HEDVIG

Keywords: feeding tools, marketing strategy, product positioning, market attraction.

Companies utilise unique strategies and marketing policies in the interests of achieving maximum profits.

The domestic and international success of the technological equipment distribution company examined, is the product of numerous factors among which marketing policy is important. Product development and production, distribution, planning, and organisation, are based on intensive investigation of consumer demands and product-related expectations. The key to success may be thorough knowledge of the market and the information acquired on producers' methods of pork and poultry breeding, the maintenance technologies used, and the animals being kept.

CONSUMER ASSOCIATION IN THE DUNASZERDAHELY DISTRICT FOOD TRADE

By:
VÉGH, KATALIN

Keywords: food retail, chain store, marketing strategy, own brand.

The three types of Jednota Slovensko COOP chain store consists of 2,388 units. Of these, 67, which compete successfully with "Western" chain stores, can be found in the Dunaszerdahely district examined. The advantage of the association network units is their closeness to and knowledge about their consumers. Among their weaknesses, the primary ones are shortcomings in logistics and marketing. With its 38% share, the association holds the strongest position among small retail chain stores. It can further increase its market share by freeing its units from the burdens of storage, processing and packing.

ESTABLISHMENT OF INFORMATION SERVICES AND INFORMATION USE THROUGH THE INSTRUCTION OF ACCOUNTANCY IN AGRICULTURAL HIGHER EDUCATION

By:
KISS, ÁRPÁD

Key words: higher education, linear training system, accountancy, information services, information use.

Owing to the reform in higher education and using the possibilities it provides, accountancy training in agricultural higher education has to be updated as well. The objective of this education has to be established by considering, on the one hand, the feature of the subject as an auxiliary science and, on the other, its importance and position within the economic sciences. Since it is an auxiliary science the purpose of the training cannot be training accountants, and the simpler syllabus of the certified accountant training cannot be adopted either. Being an auxiliary science it also follows that the accountancy syllabuses do not, by any means, have to be successive at the specific training levels, but they have to meet the purposes of the given training programme. The importance of the subject within the economic sciences is due to its feature as a summarising subject (every economic event or decision appears in the accountancy registers). Therefore in my thesis I describe a possible accountancy and finance management syllabus, which is in accordance with the main line of the training system in agricultural higher education. In this the main purpose of the training is to have agricultural students acquire the necessary skills in information flow and communication relating to accountancy.

THE ROLE OF PRODUCTS WITH GEOGRAPHICAL INDICATION IN RURAL DEVELOPMENT

By:
PANYOR, ÁGOTA

Key words: products with geographical indication, multifunctionality, distinguished quality, added value.

In accordance with Council Regulation (EEC) No 510/2006, geographical indications of products have two types, namely designation of origin and geographical indication.

Geographical indications are important in retaining the population of less developed areas through promoting rural development and preserving traditional, local methods. They help consumers to choose products by providing clear and concise information about the origin of the product. Moreover, these products become known all over Europe and their producers' income will increase in return for real quality-improving efforts.

The application for Community-level protection with geographical indication is in progress for 11 Hungarian agricultural products and foodstuffs. We consider it important to extend their range; for example, the products in the "Traditions, Tastes, Regions" programme have a good chance of receiving Community protection. However, in order to achieve this, it is essential to encourage and to support production groups.

RAPE PRODUCTION AND THE UTILISATION OF BIODIESEL

By:
FALUSI, BÁLINT – NÉMETH, ANETT – VINCZE, JUDIT

Keywords: global energy demand, rape, plant oil, biodiesel.

It can be stated that if cold-pressed plant oil met the requirements of the regulations, nothing could hinder its utilisation, and the income tax rebate owed to agriculture could not be denied either. The cold-pressed plant oil produced in Hungary meets the requirements of the DIN 51 605 standard and is, for example, legally recognised and usable in Germany. It is easy to see that with the naturalization of rape oil's above mentioned standard, significant quantities of fuel would be redeemable. This would not only meet the requirements of environmentally responsible farming, but would also greatly improve Hungary's energy dependency.

CONTENTS

Preamble.....	1
STUDIES	
<i>Udovecz, Gábor:</i> The ideals and realities of European agricultural policy	2
<i>Markovszky, György:</i> Transforming markets in globalisation.....	11
<i>Gergely, Sándor:</i> Green energy and regional development	24
<i>Huzdik, Katalin:</i> The expected effects of EU subsidy policy on labour market development in the 2007-2013 period	42
<i>Balogh, Sándor – Baló, Tünde:</i> Global and European nutrition trends	50
<i>Nemessályi, Zsolt:</i> Deformations of structure and enterprise connections in agriculture.....	58
<i>Koltai, Judit Petra – Mazán, Mária:</i> Economic characteristics of organic farms with special regard to weed management	64
<i>Gyarmati, Gábor:</i> The characteristics of the retail markets for organic products	75
<i>Takácsné György, Katalin – Kis, Sándor:</i> The connection between chemi- cal reduction and sustainability – optional farming strategies	83
<i>Hoffmann, András – Somogyi, Tamás:</i> Cost effects of the Nitrate Directive	91
<i>Molnár, Barna – Goda, Mátyás:</i> Analysis of the taxation environment and tax burden of companies in the Hungarian agricultural sector.....	98
<i>Németh, Anett – Vincze, Judit – Falusi, Bálint:</i> The technical and animal protection conditions of domestic laying farms.....	116
<i>Vincze, Judit – Tenk, Antal – Németh, Anett – Falusi, Bálint:</i> The profit- ability of settlements specialising in sheep-farming	126
<i>Kovács, Anikó:</i> The physical labour supply of large-scale cattle colonies.	133
<i>Baranyai, Zsolt – Takács, István:</i> The competitive potential of family farms	139
<i>Vágány, Judit:</i> The situation of small-scale producer dairy farming in Hungary	146
<i>Karácsony, Péter:</i> Wheat production success of a co-operative	151
<i>Fodor, Attila:</i> The profitability of apple production under the integrated plantation target programme	154
<i>Bakos, István:</i> The competitiveness of apple production	158
<i>Dávid, Lóránt – Molnár, Ferenc – Bujdosó, Zoltán – Dereskey, Anna:</i> Security, terrorism, tourism	160
<i>Játékos, Edit:</i> Tourism and the historical gardens of the North Hungary region.....	167
<i>Kelle, Veronika – Takács, István:</i> Subsidies in Békés county	176
<i>Benke, Hedvig:</i> A global company on the domestic feeding tools market	182
<i>Végh, Katalin:</i> Consumer association in the Dunaszerdahely District food trade	189
<i>Kiss, Árpád:</i> Establishment of information services and information use through the instruction of accountancy in agricultural higher education	198
<i>Panyor, Ágota:</i> The role of products with geographical indication in rural development	206
<i>Falusi, Bálint – Németh, Anett – Vincze, Judit:</i> Rape production and the utilisation of biodiesel	209
Summary	215
Contents	228

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