



Hungarian Agriculture: The potential of tradition & innovation

**WORLD CLASS PRODUCTS & KNOW-HOW
FROM CENTRAL EUROPE**







*agricultural
economy
in Hungary*



I. *Characteristics of the agricultural economy of HUNGARY*

HUNGARY'S AGRICULTURE

EXCELLENT
GEOGRAPHICAL
CONDITIONS

PROPER CLIMATE

STATE OF THE ART
TECHNOLOGIES

*Hungary's
agriculture is
among the
world's best*

The Hungarian agriculture – due to its geographical and climate conditions, more than one thousand years of history and the high-quality of technologies applied – consolidates its position among the world's best.

AGRICULTURE IN HUNGARY

**5 300 000 hectares
agricultural area**

**52 355 km
water courses**



The economic and social conditions of the country are substantially determined by these characteristics, which are outstanding even on the global scale. The agricultural area covers 5,300,000 hectares, nearly two thirds of the country's total territory. Whilst this represents one of the highest ratios in a worldwide comparison, we are the leaders in terms of soil fertility as well:

THE COUNTRY'S FERTILE SOIL IS ONE OF THE BEST IN THE WORLD, WHICH IS REFLECTED BOTH IN YIELDS AND IN QUALITY OF THE PRODUCED GOODS.



One of the key prerequisites of this is the rich water supply of Hungary:

WE POSSESS ONE OF THE LARGEST UNDERGROUND FRESH WATER RESERVES OF EUROPE

while the density and yield of the rivers and streams ensures our first place among other countries of the continent—the combined length of all water courses reaches 52,355 kilometres. The country's excellent agro-ecological characteristics allow the establishment of diverse production structures. The cultivation of crops, horticulture, meadow and pasture management, and animal husbandry provide great potential, which was strengthened even further with the accession of the country to the European Union in 2004.

STRICTLY CONTROLLED CERTIFICATION SYSTEM IS APPLIED IN ALL AREAS OF AGRICULTURE INDUSTRY IN HUNGARY.

It is prohibited to grow and use genetically modified crops, which ensure the totally GMO-free status of the agricultural and processed products, and this direction is stipulated in the Constitution of Hungary as well.

CROP PRODUCTION AND ANIMAL FARMING

Crop production in Hungary is very diverse: cereal grains (wheat, rye, barley, oats, maize) are in the leading positions with average production yields higher than the European mid-range—even without irrigation. The amount of excellent quality wheat traditionally produced in Hungary exceeded 4.5 million tons in the past years.

Higher average production yields than European mid-range

4.5 million tons excellent quality wheat

the highest technical standards and plant breeding technologies

Crop production safety is supported by the highest technical standards and plant breeding technologies, while quality is ensured by controlled seeds and plant protection authorities.

Animal farming accounts for approximately 40% of all agricultural activities of Hungary. Marketleading breeds are being used in livestock breeding for slaughter and milk production, while slaughterhouses apply the livestock classification system introduced by the European Union.

MOST OF THE PROCESSING PLANTS ARE SUITABLE FOR EXPORT TRADING, AND HOLD SPECIAL PERMITS AS WELL.

Dairy products and dairy production technologies are of world class standard, which is reflected by the fact that a number of Western European companies have their products produced in Hungary. Animal health status of the country is also outstanding, which is proven by the fact that the Hungarian stock could remain healthy during a number of European and world-wide epidemics. High standard food production and processing, a more and more advanced agricultural machinery production industry, followed by internationally renowned plant breeding and veterinary science and—more recently—the activity of biotechnological research and development sector have been built progressively on the traditionally advanced agricultural industry of the country.

HIGH QUALITY

- *food production*
- *agricultural*
- *machinery production*
- *plant breeding*
- *veterinary science*
- *biotechnology*
- *development sector*



EXCELLENT QUALITIES IN TERMS OF LOGISTICS

In addition to the excellent food production potential, the Hungarian national economy —based on the balanced agricultural production sector—can also boast the knowledge accumulated by generations of farmers. Hungary has excellent capabilities in terms of logistics as well: it is the Eastern gate of the European Union, the entrance to the Balkan, a corridor to Russia, the Middle East and the Far East, all at the same time. As a result of the geographical situation of the country, movement of commodities related to exports is possible on road, railway, and by air or waterway.





***the Eastern gate of the
European Union***

***the entrance
to the Balkan***

***a corridor to Russia
the Middle East and
the Far East***

UNTAPPED POTENTIAL

Despite all of these conditions, the Hungarian agricultural sector has a huge unexploited potential. This potential is currently not reflected in the figures. The steeply increasing export volume can further be enhanced by conquering new quality buyer markets, thus ensuring high standard and permanent demand for products with high added value. There is a huge hidden potential in the development of the Hungarian food processing industry as well: for instance, only one sugar mill is operating nowadays in Hungary—a former sugar empire— due to the lack of development projects (26 years ago their number was 18). Nevertheless all market and professional conditions are present to restore the former capacities.

In general, the Hungarian agriculture might have the world's best constellation of natural, economical, institutional and legal conditions necessary for high quality food production. Its performance can be doubled in the coming years, provided the necessary market organization and development actions are duly taken.

**ANYBODY INVESTING
IN THE HUNGARIAN
AGRICULTURAL
STRUCTURE—WHETHER
IT'S THE PURCHASE OF
EXISTING PRODUCTS
OR SERVICES, OR A
BUSINESS INVESTMENT
IN THE SYSTEM—WILL
DEFINITELY NOT FAIL
IN A WORLD WHERE
DAY-TO-DAY EVIDENCE
SUGGESTS THAT THE
KEY COMMODITY IN THE
UPCOMING ERA WILL BE
FOOD WITH LAND AND
WATER AS BASIS.**

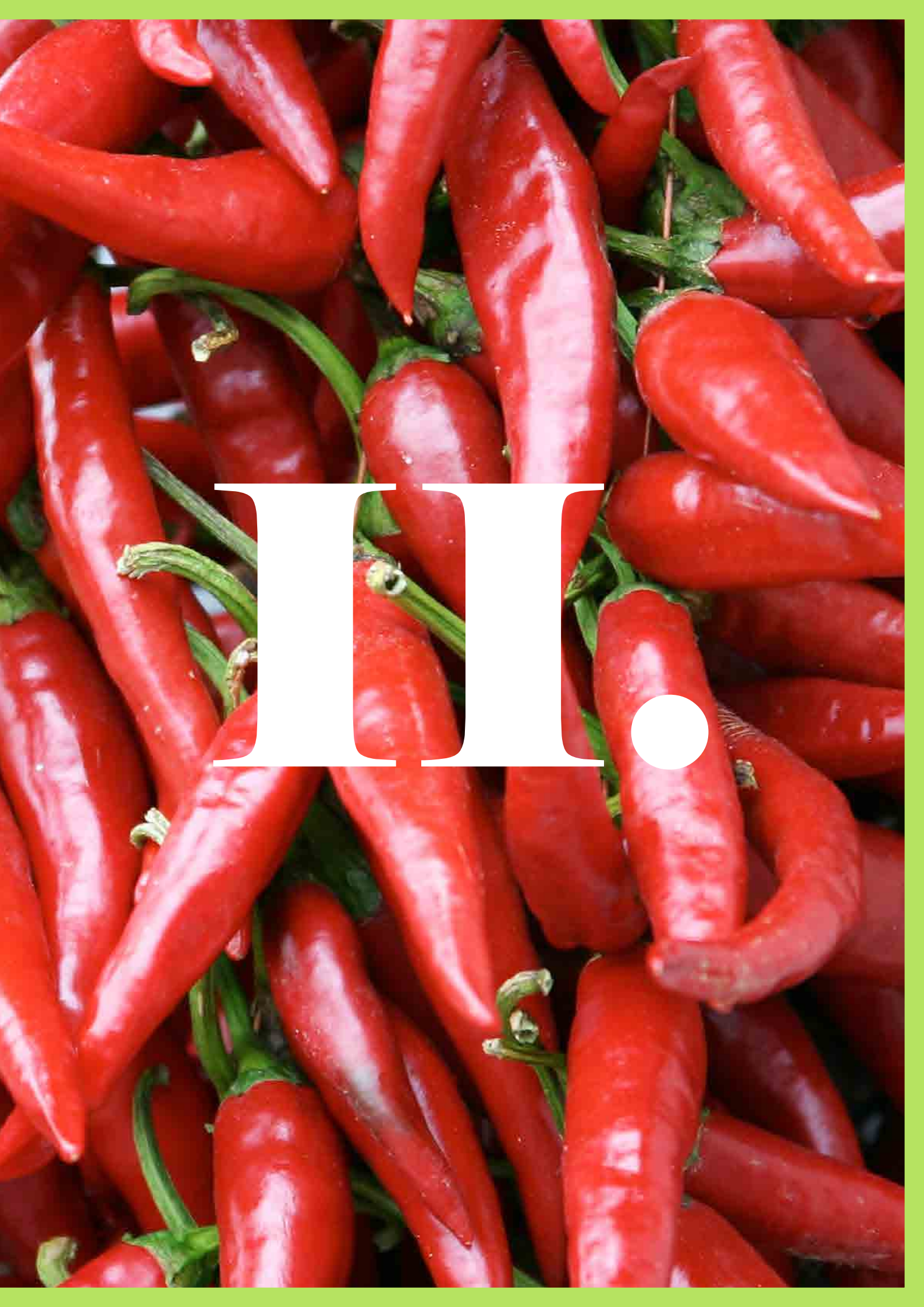




The population of Hungary ranges up to 9.8 million, but the country's agriculture is capable of providing continuous, highest standard food supply to approximately 30 million people.



***THE ROLE
OF THE
HUNGARIAN
NATIONAL
TRADING
HOUSE***



III

A glass jar filled with golden honey, tied with a piece of twine around the neck, sits on a wooden board. A wooden honey dipper is placed next to it. The background is a blurred blue fabric.

PREMIUM QUALITY HUNGARIAN PRODUCTS AND SERVICES ON ALL OF THE FOREIGN MARKETS

The main goal of the Hungarian National Trading House is to make premium quality Hungarian products and services available to partners in all the foreign markets of the world. There is a huge potential in the sale of excellent quality Hungarian agricultural products in these markets. The geographical, climatic and environmental characteristics of this country, its age-old agricultural traditions and the more and more intensive research, development and innovation activities, and also the technological development provide an excellent basis for increasing the weight and volume of trade oriented to the international agricultural markets. The Hungarian State places a great emphasis on creating and developing those infrastructural and institutional frameworks, by which the export potential of the Hungarian agricultural sector can be enhanced. Through its actions the Hungarian National Trading House intends to actively participate in the expansion of Hungarian export activities as an integrator.

***From the producer
to the importer:
a comprehensive
supply chain***

**AN IMPORTANT
OBJECTIVE IS TO
ORGANIZE FORWARDING
OF HIGH QUALITY
AGRICULTURAL
COMMODITIES PRODUCED
BY HUNGARIAN SMALL
FARMERS TO EXTERNAL
MARKETS.**

In order to achieve this goal, the Hungarian National Trading House will set up a comprehensive export supporting supply chain, which will collect Hungarian agricultural commodities produced by small farmers for sale, deliver them to the—yet to be established—regional distribution centres for classification and quality assurance, and forward them directly to importers with the involvement of international freight companies.

Easy and simple sales

Thus producers may easily and simply sell their products through a single-contact-system, which relieves them of a number of potential costs, significant amount of work and risk associated with export activities. The single-contact-system is beneficial for the buyer as well, since the selling procedure will be simplified by the involvement of a dedicated contact person.

Safe trade

Governmental background and warranty reduce market risks for both exporters and importers.

***High quality
guarantee***

Food safety is controlled by a number of governmental and professional (trade) organizations and bodies based on international standards of requirement (HACCP). Continuous and rigorous control of the products bought-in, and classification of the commodities ensure that buyers on the external market will continuously get the same quality, high standard, safe and healthy products and food items. In order to do so all products sold through the supply chain will get their own trademark, which is also a guarantee for quality.

**CONTINUOUS AND
RIGOROUS CONTROL OF
THE PRODUCTS
»SAME QUALITY, HIGH
STANDARD, SAFE AND
HEALTHY PRODUCTS**

Local representation

The extensive trading-house-network of the Hungarian National Trading House on the external markets allows quicker flow of information, thus export operations best suited to the special economic and social needs of the target country can be established. The network is continuously being expanded with agencies in the West Balkan, Asia, Middle East, Africa, Latin and North America, and also within the territory of the Commonwealth of the Independent States.





III.

PRODUCT CATALOGUE



Honey

ACACIA

FLOWER

LINDEN

MIXED

SUNFLOWER TECHNOLOGY



Dairy products

UHT MILK

0,1%; 1,5%; 2,8%; 3,5%

BIO MILK

Goat's milk;
bio cow's milk

CHEESE

Trappist cheese;
Gouda; Emmenthal;
Camembert; rasped cheese;
cheese in bulk natural;

JOGHURT

fruit; bio

TOFU



Meat products

GREY BEEF CATTLE

live animal, halved; carved

FRESH AND FROZEN
RAW TURKEY MEATS

whole turkey; turkey breast;
turkey leg; fresh and frosted turkey

WHOLE CHICKEN AND
CHICKEN PARTS

chicken breast; chicken leg; whole;
carved chicken; live animal;
fresh and frosted

LAMB, SHEEP,
VEAL AND GOAT MEAT

whole; halved,
carved, live animal

DIFFERENT KINDS
OF SAUSAGES

veal, poultry, deer, grey beef



Fresh and dried fruits and vegetables

FRESH FRUITS AND VEGETABLES

apple; apricot; plum; sour cherry; cherry

GERM

onion germ, radish germ, wheatgerm, broccoli

DEHYDRATED VEGETABLES, DRIED FRUITS

plum; sour cherry; apricot; black cherry; grape-raisin

MUSHROOM

oyster mushroom, champignon, marasmius, dried

FRESH VEGETABLES

onion; pepper; tomato; cucumber; green salad; cabbage; cauliflower



Confectionery products and snacks

BIO BALLS - ORGANIC SNACKS SPECIAL EXTRUDED CORN, RICE

millet, corn

DIFFERENT KINDS OF BISCUIT, BONBON SPECIALITY

different kinds of biscuits; salty, sweet, oat biscuit

ORGANIC BREAD, ORGANIC MILLING INDUSTRIAL PRODUCTS

organic bread, organic milling industrial products

INSTANT DRINKS, HOT CHOCOLATE, INSTANT COFFEE, ICE-CREAM POWDER

MARZIPAN, PRALINES, TEA-BISCUITS



Flours and pastas

DIFFERENT TYPES OF WHEAT, RYE, CORN FLOUR, DURUM FLOUR

GLUTEN-FREE PRODUCTS

DRY PASTAS, DURUM PASTAS

(2-4-8 eggs or without eggs); organic milling whole spelt pasta

EXTRUDED PRODUCTS

crackerbreads, sandwich, snack

ORGANIC MILLING WHOLE SPELT PASTA



Spices and oils

VACUUM DRIED SWEET OR HOT PAPRIKA POWDER FROM KALOCSA

VACUUM DRIED SPICE POWDERS

thyme grass, horseradish, garlic, onions, basil

OILS

sunflower, olive, lin, pumpkin, lavender

SUGAR

birch sugar, isosugar, beet sugar, natural and traditional sweeteners

EROS PISTA

red-hot paprika cream of Hungary



Canned food

CANNED FRUITS AND VEGETABLES

baby carrots, baby corn, crumbled corn, bean, tomato

READY MADE MEALS

szekely cabbage, bean stew, pottage, chili bean, vegetables

JAMS, JELLIES, SPREADS

strawberry, cherry, apricot, plum

DUCK AND GOOSE LIVER CANNED FOODS

pate, liver cream

DRESSING AND COOKING SAUCES

ketchup, mustard, mayonnaise



Herbs, tea, food supplements

HERBAL TEA AND FRUIT TEA

chamomile, forest fruits, lemon grass, mint, nettle

HERBAL EXTRACTS

vegetable oils, vegetable extracts

MEDICAL PLANT

lavender, lemon grass, mint, sage, lanceolar rip grass

HERBAL MEDICINES AND NATURAL REMEDIES

VITAMINES AND DIETARY SUPPLEMENTS



Soft drinks

NATURAL MINERAL WATER	still, sparkling, light, enriched with oxygene, baby-water
VEGETABLE AND FRUIT JUICES	tomato juice, apple juice, mixed vegetable - fruit juice, orange juice, multivitamin
ENERGY DRINK	with sugar, without sugar, with slevia
CARBONATED SOFT DRINKS	sparkling apple, sparkling cherry, sparkling orange
FRUIT SYRUPS	apple, sour cherry, orange, elderflower, redcurrant

Frozen foods

IQF VEGETABLES AND FRUITS	sour cherry, raspberry, peas, corn, carrots, string-bean, pumpkin, mixed vegetable mix
FROZEN RAW AND HALF-READY MADE MEAT	duck, goose, turkey, rabbit
FROZEN WILD GAME MEAT	roe, deer, rabbit, pheasant
FROZEN DUMPLINGS AND NOODLES	stuffed with plum, stuffed with apricot, stuffed with jam, stuffed with cocoa, stuffed with vegetables
FROZEN DESSERTS	ice cream cake, frosted cake, popsicle, marron purée

Seeds

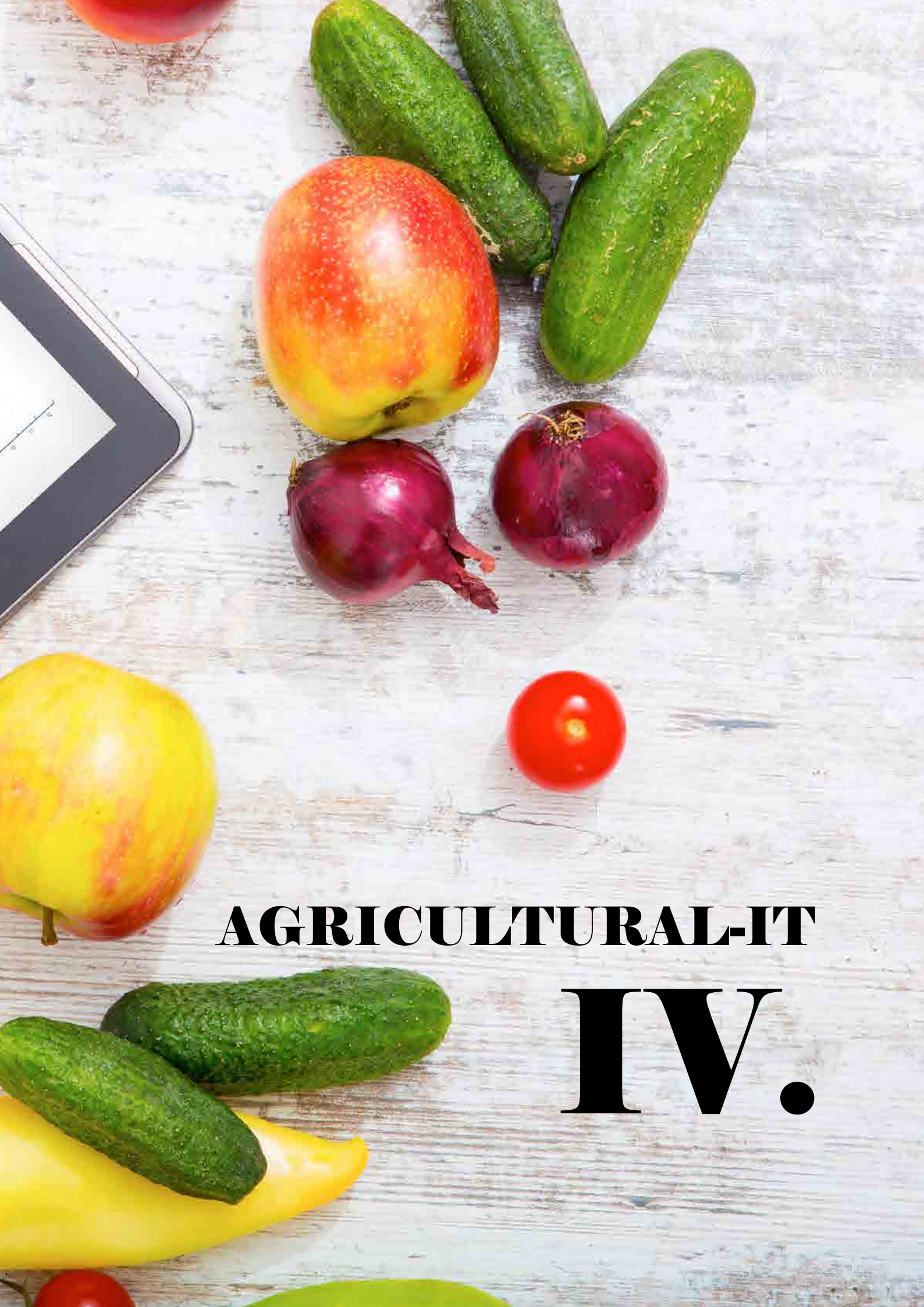
SUNFLOWER SEED	hulled unsalted, hulled salted, unhulled - crusty
LINSEED	
POPPY SEED	
PUMPKIN SEED	shaved, unshaved
WALNUT-BASED PRODUCTS	walnut kernel, minced walnut

Preserved fruits and vegetables

SOUR CHERRY	with stone, stoned
PEACH	halved, carved
CUCUMBER	leaven cucumber, pickles, sliced cucumber
MIXED PICKLES	cabbage-onion-carrot, cabbage-pepper
LETCHO	

AVERAGE PRODUCTION YIELDS





AGRICULTURAL-IT

IV.

40 / 0.6
160 / 0.17

AGRICULTURAL CORPORATE MANAGEMENT SYSTEMS

ROBOTIC SYSTEMS

PROCESS MANAGEMENT SYSTEMS

THE USE OF IMAGING AND IMAGE RECOGNITION DEVICES

DRONES AND SENSORS

Agricultural information technology in Hungary

KEY AREAS:

crop production

animal husbandry

wildlife management

food safety

food processing

monitoring

environmental

impacts

The use of information technology and communication technology in the last few years has become particularly important in Hungarian agriculture. Development of modern procedures complying with the most recent trends plays an important role in enhancing productivity and increasing efficiency.

THE COUNTRY'S OUTSTANDING RESEARCH AND DEVELOPMENT ACTIVITIES AND INNOVATIONS PROVIDE THE MOST COMPETITIVE TECHNOLOGIES ON AN ONGOING BASIS.

KEY AREAS OF USE INCLUDE

crop production, animal husbandry, wildlife management, food safety, food processing and monitoring environmental impacts. Effective support can be given to farmers on assessing game damage, checking greenhouse ecosystems, monitoring the usage of basic food commodities, pest control, or developing GPS based systems used for precision farming.

INTEGRATED SYSTEMS

Integrated systems containing real-time weather forecasts, and geological and crop data can be used both in animal husbandry and cultivation of plants, for example to set and control greenhouse ecosystem parameters.

AGRICULTURAL CORPORATE MANAGEMENT SYSTEMS

*more transparent
business processes*

improved service level

better cost efficiency

Agricultural corporate management systems satisfy the special needs of agricultural companies by collecting farming related information in a transparent manner, and are connected to professional systems, like the mixing plant, the fuel station or the milk-house systems, by interfaces. M2M solutions allow conventional corporate management applications to get instant access to data detected by machinery and instruments, which makes it possible to introduce new business models. These ensure more transparent business processes, improved service level, better cost efficiency, and shorter return on investment periods.

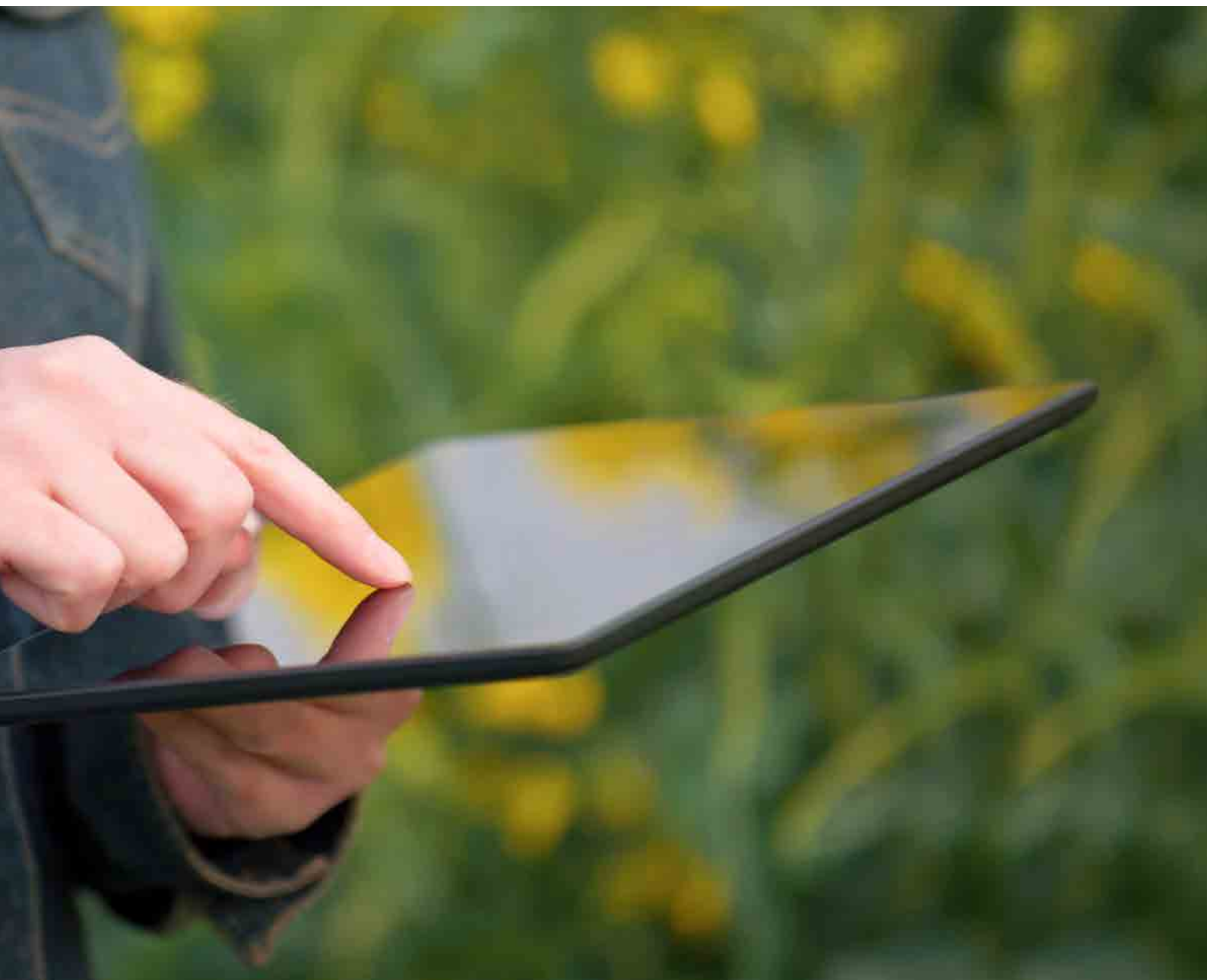
ROBOTIC SYSTEMS

more efficient record keeping

time and fuel saving

Robotic systems—running usually on web-based interfaces—are connected to a quick reporting mobile application. By using it, work organisation and record keeping become more efficient, while time and fuel saving may also be achieved. Covered areas can be monitored through the central system, which is also able to create a complex structure of partial areas. Most control activities are programmable and are operated





by a remote access unit or programmable logical control unit. The developed mobile applications are suitable to aggregate and process data collected from various analogue and digital devices, including rainfall, temperature, moisture, and soil chemical composition data.

PROCESS MANAGEMENT SYSTEMS

The aim of the research of process management systems is to develop such mobile robotic devices and technologies, which provide the foundations for creating new products and services.

THE USE OF IMAGING AND IMAGE RECOGNITION DEVICES

Imaging and image recognition systems can be used to identify pests, thus specialists and farmers may gather relevant and accurate information to assist them in effective and economical pest control.

DRONES AND SENSORS

Drones can be deployed quickly, are able to provide high resolution images and can act as a cost efficient solution in remote sensing instead of or supplementing the satellite and small aeroplane based surveys used so far.





V.

*Hungarian
agricultural
technologies
and services
portfolio*



The ratio of machinery and technologies developed and manufactured in Hungary is very high within the industry, while Hungarian engineering know-how is also present in the technologies related to agriculture. Our strength is that we are able to provide solutions representing high level of added value in local customized projects.

Our service portfolio includes the following elements:

- Training opportunities intended to enhance productivity and improve quality of the commodities produced
- Integration of slaughterhouses into the network of market leading processors
- Improving food safety management practices within the supply chain
- Supporting the development of agricultural logistics, infrastructure and regulation; ceasing trade barriers; promoting regional trade; allowing integrators
- Providing policy and regulatory advices with a focus on the expansion of the agrarian economy
- Functional food items and pharmaceuticals produced from agricultural basic materials





*Hungary is a country
in the Central and
Eastern European
region with thousand
years of agricultural
traditions, which
now belongs to the
forefront of Europe.*

Technology competencies

Animal husbandry

HUNGARY SETS HIGH STANDARDS REGARDING THE SCIENTIFIC AND TECHNOLOGICAL BACKGROUND IN THE FIELD OF ANIMAL HUSBANDRY—EVEN ON AN INTERNATIONAL SCALE.

The applied research and development activities in Hungary combine genetics, breeding and reproduction, dietetics, feed utilisation, and nutrition physiology together with management and feed technology with focus on the so-called large farm animals (cattle, pig, sheep, horse, turkey), waterfowl (duck, goose) and traditional broiler poultry. Thus we offer the implementation of complete, turnkey ready projects in the field of animal husbandry to our international partners.

- **GENETICS**
- **BREEDING**
- **REPRODUCTION**
- **DIETETICS**
- **FEED UTILISATION**
- **NUTRITION PHYSIOLOGY**
- **FEED TECHNOLOGY**

Animal husbandry should not be considered a simple construction activity. Well-functioning farms need reliable internal logistical planning

to achieve competitive efficiency. Market participants have 20-30 years of professional experience in Hungary, which expertise is of paramount importance and ensures guarantee notably in the planning phase, because farms are planned for long-term (e.g. at least 20 years for cattle) in such way that they cannot stop production for more than 4 hours even in case of maintenance.

Self-sustaining farms often carry out joint tasks, such as crop cultivation for feeding purposes, as well as storing and mixing of feed. Closed water purification systems and manure treatment are also an integral part of any modern animal farms. Most of the farms are implemented with integrated biogas and waste treating technologies as well.

Freshwater fish farming is another technological area where Hungary has been able to keep its position as global market leader in case of certain fish species even nowadays.

These technologies – developed and applied by the partners of the Hungarian National Trade House – and the know-how in the field of animal husbandry are representing valuable export products on the global market.

Slaughterhouse and meat processing technology

We offer complex processing technology in the form of mobile or stationary slaughtering facilities for all livestock species, depending on the demand. Additional competences include re-engineering and capacity building of existing slaughterhouses.

CATTLE, SHEEP

- Processed finished products: 1000-2000 kg/day
- The processing unit is fit for the production of different types of pâté, cold meat, cured and smoked products

CONTAINER TYPE SLAUGHTERHOUSE

Processing pork and beef

- Slaughtering capacity: 10-15 pigs and 2-3 cattle per shift
- Output: 500-1000 kg of end-product per shift

POULTRY SLAUGHTERHOUSE

- Manufacturing poultry processing machinery and associated hygienic equipment

Pisciculture technology

We offer fish farming technology, fish processing know-how and related complex engineering services with a focus on intensive farming of freshwater fish species:

- Flow through fish management system
- Recycle fish management (aquaculture) system (RAS)
- Processing technology (smoking, canning, ready-to-cook products)

Turnkey dairy processing plant / dairy processing technology

We offer a complex development program in the form of vertical integration, from stable technology to processing of dairy products. In addition to classical procedures in terms of technology (milk, sour cream, yogurt, kephir, cheese, cottage cheese), we also provide production know-how of products needing special technologies (including mechanization).



Agricultural machinery

The production of agricultural machinery has a long history in Hungary. Today there are approximately 40-50 mostly small and medium-sized enterprises on the market with exportable products and actual export strategies. As a result of the continuous product development, most of these manufacturers have a wide range of modern products.

- **PICK-UP HEADERS**
- **HOEING MACHINES**
- **SEEDERS**
- **FORESTRY MACHINERY**
- **PLANT PROTECTION MACHINERY**
- **BIOENERGETICS EQUIPMENT**
- **SMALL HORTICULTURAL EQUIPMENT**
- **TRANSPORT VEHICLES**

Despite the fact that the domestic industry does not produce main farming equipment (like combined harvesters and tractors), the agricultural machinery industry has been a net exporter within the machinery industry every year, which means that our manufacturers export more machines, than the net amount of imported main farming equipment and machines.

The range of these domestically manufactured products includes pick-up headers, hoeing machines, seeders, forestry machinery, plant protection machinery, bioenergetics equipment, small horticultural equipment, transport vehicles.

Hungarian manufacturers place strong emphasis on product development. Our latest innovations include the rotary seedbed maker, the mechanical seed drill, the mulch seed drill, the 6row cultivator equipped with an automatic row-guard regulatory system, the sunflower harvesting header equipped with a stalk crusher, grain cleaners, the crop crusher and a machine for loading grain into (foil) storage bags.





Technology competencies

Sunflower and maize cultivation

These are traditional Hungarian plant cultures, and the complex Hungarian technology related to their production and processing is recognised and sought for internationally.

Associated product offer:

- **GMO-FREE SEEDS SELECTION**
- **ORGANIC FERTILISERS**
- **ROOTER**
- **ALTERNATING PLOUGH**
- **MULCHING MACHINE**
- **COMBINATOR**
- **SEEDING MACHINE**
- **CULTIVATORS**
- **SPRAYING MACHINES**
- **MAIZE AND SUNFLOWER
HARVESTING ADAPTERS**
- **HEAVY DISC HARROWS**

Grain technology

We provide our partners all mobile and stationary technologies necessary for the cleaning, competent and profitable drying, transportation and storing of grains already produced.



Cadastral and land register

In 2013, a project was started with the objective of reforming land administration, as well as developing a reliable national record of assets. The program, which aims to reform the complete IT infrastructure of the Hungarian Land Administration Office, is going to renew the registry system of the land funds and the National Land Fund Management Organisation.

It represents a qualitative leap, which provides—with the help of the new IT system—instantly accessible information, such as who is the user of a certain area (individual parcel of land), what kind of agreements are connected with it, and whether the user has been fulfilled their contractual obligations. This makes it easier and simpler to access information recorded in various land registers, and it ensures a higher level of availability. The administration process in these land registers will also be more efficient and faster.

TAKARNET24:

THE TAKARNET24 IS AN INFORMATION SYSTEM OPERATED ON A 24/7 BASIS BY THE LAND REGISTRY BRANCHES. THIS ENSURES WIDE-RANGE ACCESSIBILITY OF THE MOST REQUIRED DATA IN RELATION TO THE LAND REGISTRY.

The online system of the Land Registry can be accessed through the internet even by private individuals due to this new system, via the Central Portal provided by the government. After the identification process, the system gives an option to choose the type of the information, as well as to search for the actual real estate property. The customer can pay for the service through an online system for ATM card transactions before downloading the data. The identification of the real estate property is the fastest by searching for the registration number in the land registry, but the system provides search options based on a map and on the address, as well. The search process uses interactive maps of different scales in the last two cases.

The TAKARNET24 system provides the following products for the customers:

- The first part of the property deed (20 query/month free)
- E-certified copy of the property deed (complete copy, review)
- Non-certified copy of the property deed (complete copy, review)
- Copy of the map (non-certified)

The e-certified copy of the property deed is provided with a digital signature and time stamp. The e-certified copy of the property deed guarantees that the information on the property deed is identical to the original data of the land registry as of the date and time indicated by the time stamp.

Among the partners of the Hungarian National Trade House, there are enterprises with extensive experience in the preparation of cadastral and land register, and cadastral maps, in the collection of geo-information data, and in the development of the above mentioned IT systems.

Irrigation

Hungary—due to its geographical location—is an agricultural land with irrigated farms. In the agriculture of Hungary, field crops dominate the market, but the production of vegetables and fruits is also considerable. In case of irrigated crops it is important to construct drainage systems and water retention basins in agricultural areas.

HUNGARY IS CONSIDERED A WORLD-CLASS DEVELOPER AND MANUFACTURER OF IRRIGATION PUMPS, WHEREAS THE MOST STRIKING EXAMPLE OF IT IS THAT EVEN EGYPT EMPLOYS PUMPS MADE IN HUNGARY FOR IRRIGATION, WHICH IS A TASK OF STRATEGIC IMPORTANCE.

These irrigation pumps, which can also be utilised in flood protection, are equipped with a Hungarian invention – the so-called spring-type starter –, and because of this, they do not need any batteries for start-up, compared to the products of the competitors, and so they do not require any electric starters either. Further advantages of the Hungarian pumps are that these specialised machines produced for this exact purpose ensure the maximum amount of water flow, in addition to optimal performance, while using the smallest pump required for the task with reduced power consumption.





Land improvement

In Hungary, the farms tend to combine the different soil fertilisation methods depending on the level of their development and the type of their production. The use of organic fertilisers is common, supplemented with chemical fertilisers. Due to the large amount of livestock, a large supply of organic fertilisers is available to use, but the utilisation of livestock manure to produce biogas, and the use of the residue during fermentation process for fertilisation purposes are also widespread amongst the farmers. Additionally, they use green manures, as well as stems and other agricultural crop residues ploughed back into the soil as an important source of organic material.

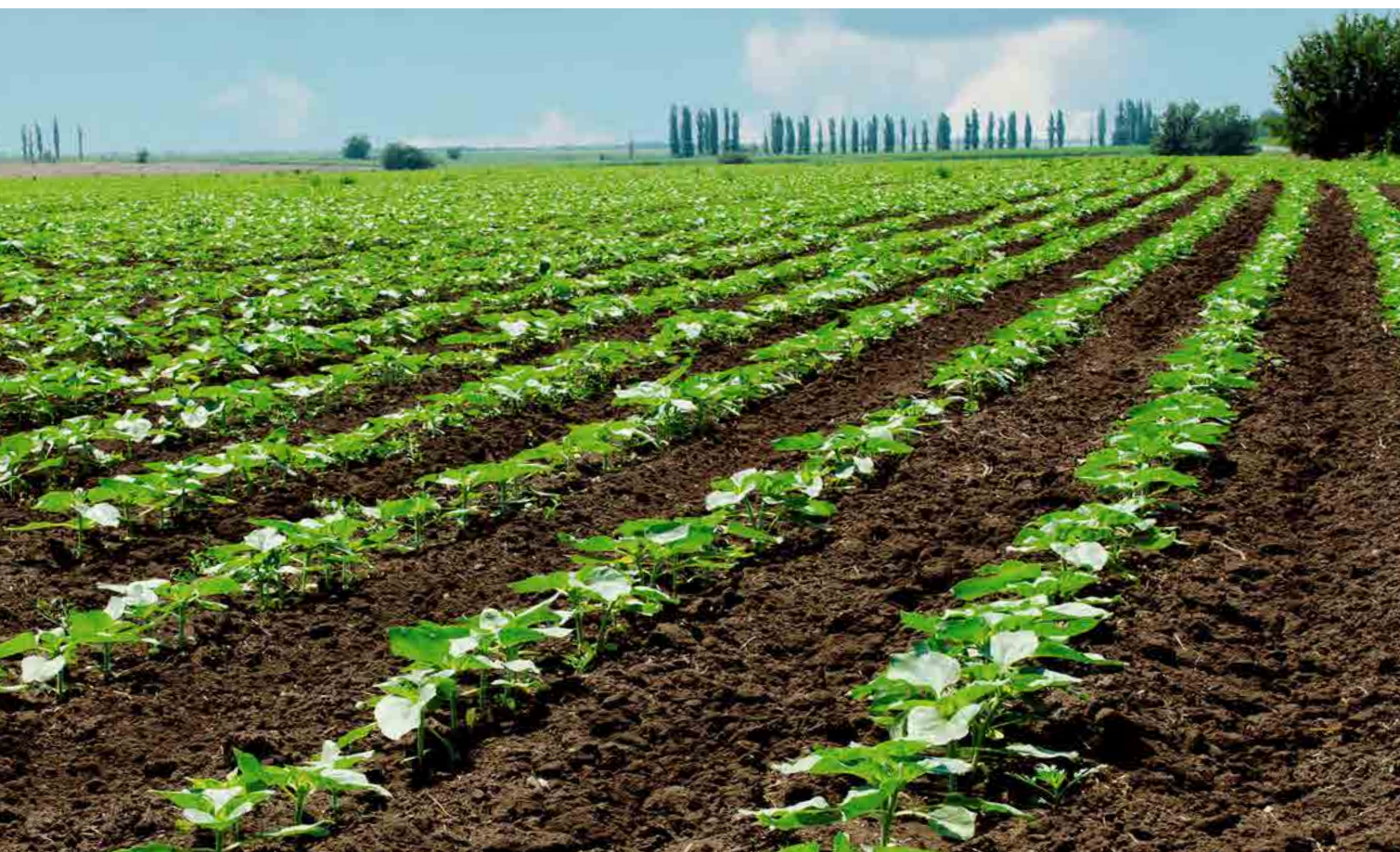
The use of organic agricultural residues as fertilisers is combined with chemical fertilisers, because they can be administered to the crop during the deep-tilling in the autumn, when the seedbed is prepared, or during seeding, and even as a top dressing if needed. Ammonium-nitrate is being produced in Hungary, but a wide range of NPK fertilisers is also available, which—combined with soil analysis—guarantees a suitable level of soil fertilisation, and ensures proper nutrition for the given stock.

The continuous monitoring of the level of nutrients in the soil through measurements is essential, because it is changing constantly. Because of the crop rotation, the soil must be always prepared for new agricultural products, thus it has to have different proportions of nutrients, which can be guaranteed only with the exact amount of dosage of fertilisers.



**THE METHODS OF
SOIL FERTILISATION
AND THE MATERIALS
PRODUCED BY HUNGARY
REPRESENT WORLD
CLASS QUALITY.**

Risk management systems



The efficient operation of the liability-system is provided by the so-called “complex agricultural risk management system (WCS)” which is active since 2014. This database holds all important information provided by the system operators regarding risk management in one place. Data such as information about the weather conditions led to the harmful events can be requested, as well as production statistics from previous years, published reference prices, average yield on county and national level, and also data regarding official inspections for administrative purposes, contribution-payments for compensation and disbursement of benefits for harm reduction.

The development of the new IT system simplifies the duty of all the operators of the

risk management system: it makes possible for farmers to submit a declaration of damages by electronic means, to claim benefits for harm reduction, it helps to collect all the necessary spatial data for agricultural insurances, the operations of authorities, and it ensures efficient management of the system. Collected data can be used to analyse and develop the risk management system, as well as to prepare established decisions of the ministerial leadership. This is being supported by the statistical and reporting system developed for the database.


The agricultural risk analysis IT systems are also part of the export portfolio of the Hungarian National Trade House.



VI. *investment offers*

As part of our investment offers we propose unique complex opportunities and transactions to clients and partners which include the provision of starting materials, management of processing industry units and the exploration of foreign markets alike. Coverage for the investments is provided by the factory, plant or processing industry area concerned. Management is professionally competent consisting of experts skilled in the most state-of-the-art technology.

WE ARE LOOKING FOR EVER NEWER INVESTMENT OPPORTUNITIES ON AN ONGOING BASIS, COLLECT THEM AND SET UP CATEGORIES.



WE PROPOSE UNIQUE COMPLEX OPPORTUNITIES AND TRANSACTIONS

Our current offer is merely a part of the full system managed and developed by us, our portfolio covers the entire Hungarian agriculture sector and includes a number of other major or minor volume of business opportunities.

The current regulations in place in Hungary do not allow the acquisition of arable land for business organisations. However, we are in contacts with a number of business entities holding their own cropland, farmland, meadows or grasslands which intend to sell their business shares and by the acquisition of which the investor may become a land owner in this country. As an example, let us present a land parcel of 3500 hectares with excellent properties. Its price is EUR 21 million.

Additional brownfield and greenfield investment opportunities include the following:

1. HALAL SHEEP SLAUGHTERHOUSE (USD 2 MILLION)

At the time being, there are no slaughterhouses specialised in processing sheep or lambs. Annual livestock in sheep represents 1,200,000 live animals in Hungary, while the livestock accessible in the neighbouring countries represents a similar order of magnitude. Hungary has extensive grasslands and hay meadows. The Hungarian farmers are open to breeding, therefore warranted volumes can be made available for an integrator both on the mid-term and long-term scenarios.

2. HALAL POULTRY SLAUGHTERHOUSE (CHICKEN AND TURKEY)

2.1 Poultry export is dominant in Hungary; several slaughterhouses with substantial capacities are in operation, with a daily discharge capacity of 80-100,000 poultry/day each. Several operational slaughterhouses have spare capacities to be recommended to investors.

2.2 Setting up of a slaughterhouse fit for the slaughter of 18,000 poultries on a daily basis as a greenfield investment project. The daily capacity can be exploited within six weeks with the help of an integrator operation, and it can be utilised on the spot market as well. A number of Hungarian poultry producers expressed their intention to cooperate.

Investment value:
USD 4.5 million

3. FRUIT CONCENTRATE FACTORY

Fruit juice concentrate production plant for a capacity of 200,000 tons/year (for processing carrots, tomatoes, melons, raspberries, apricots and peaches, strawberries, sour cherries, apples, pears, plums)

Hungary's climatic conditions are excellent for the production of fruit juices and fruit juice concentrates. Currently the full production volume is manufactured by a small number of plants domestically. Basic material needed for production volume able to serve the developing needs of external markets is domestically available and can be produced, respectively.

Investment value:
USD 18 million

4. MORPHINE CONCESSION

In 2012, Hungary produced poppy for industrial use on an area of 12,000 hectares. The poppy head is used to produce improved quality morphine. Hungary's processing plants operate with outdated technology. Production of industry grade poppy is bound by stringent requirements, yet Hungarian farmers are fond of its production since it has an excellent crop rotation quality. Morphine production is bound by the government's concession.

***Investment value
(factory and production):
USD 22 million***

5. GREENHOUSES

In greenhouse cultures the average annual yield is 50-60kg/m², resulting in an annual production value of USD 400,000 per hectare. Hungary is particularly rich in geothermal energy. Geothermal energy can be used for greenhouse heating—thus greenhouses can be operated economically for most part of the year.

***Investment value:
USD 1 million/hectares
(tomatoes, peppers,
cucumbers)***





6. GRAIN DRYERS, WAREHOUSES

A number of sites, grain dryers, flat storages and silos are put up for sale in Hungary, with a market value of USD 400,000 to 25 million—depending on geographical location and capacities.

The project with the value of 25 million US dollars is a port on the Danube with a capacity of 500,000 tons, fit for loading grain or other commodities to barges and rendering them navigable at the Constanta seaport. This project does not contain any farmland.

7. PROCESSING AND PACKAGING OF WALNUTS AND HAZELNUTS

In Eastern Europe, there seems to be a substantial demand for setting up walnut and hazelnut plantations. Hungary's climate and soil conditions are extremely suitable for the production of both walnuts and hazelnuts. From profitability perspective, the optimum size of the plantations to be set up varies between 100 and 200 hectares; setting up walnut or hazelnut processing capacity also represent an excellent investment as far as this project is concerned.

8. FUNCTIONAL FOOD FACTORY

The turnover of functional food items shows dynamic growth worldwide. A number of functional food factories operate in Hungary with lesser production capacities, presenting excellent quality products, which are unable to enter the world market due to their small size. However, by setting up a medium-sized factory and the associated integrator network, sufficient amount of commodities could be produced to enter the world market.

Investment value depending on capacity and associated optional R&D:

EUR 7-15 million

9. PLASTIC REPROCESSING (GRANULATE) FACTORY

This is a waste recovery production facility currently producing for export markets, with a capacity of 15,000 tons annually, covering 20% of the entire Hungarian market. In line with the ever more stringent European Union regulations, Hungary needs to increase the volume of reused plastic materials, thus this sector faces a significant growth path.

***Investment value:
USD 14.5 million***

10. ZSANA GEOTHERMAL PROJECT FOR PROVIDING HEAT TO INSTITUTIONS AND GREENHOUSES

Hungary is abundant in geothermal wells with outstanding capacities, with water bursting out at an average temperature of 127 °C.

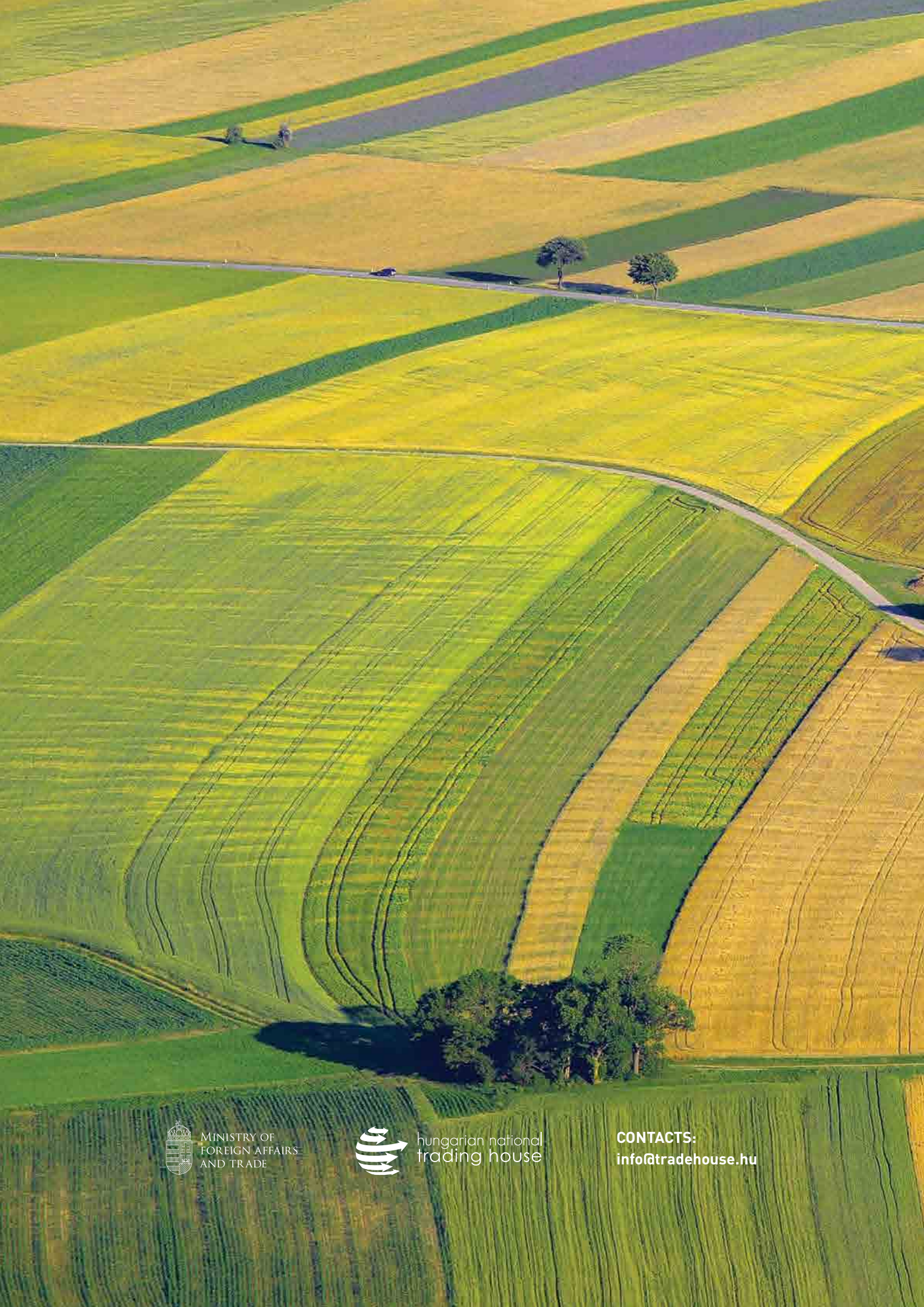
The Zsana Project is a mixed utilisation geothermal project providing heat supply to municipal institutions, hospitals and schools in the one hand, and being capable of heating greenhouses within a 10-15 km zone of the wells on the other hand.

***Investment value:
USD 35 million***









MINISTRY OF
FOREIGN AFFAIRS
AND TRADE



hungarian national
trading house

CONTACTS:
info@tradehouse.hu