

BURIS/EBS – Electronic exchange trade with agrarian commodities in the Czech Republic

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ABSTRACT

The Czech University of Agriculture in Prague in cooperation with the Business Exchange in Hradec Králové operates an electronic business system EBS, which enables on-line exchange trade negotiations through the Internet. The system fully takes the advantage of possibilities and technologies of e-business, bringing thus forward new opportunities for making use of the exchange trade with agricultural and food commodities on the EU liberal market. The whole procedure is a part of the Agrarian www portal AGRIS.

Keywords: e-business; commodity exchange; portal; ICT; Internet

The business exchange is an invention of the market developed in the period when the exchange of goods and money and vice versa by means of common methods was no longer possible. Quite well-known is the example of Chicago during the boom of livestock keeping, when herds of cattle had filled up the town in such a manner that the town itself ceased to function and gave way to the stock exchange. At present, a similar boom of trade is brought forward by the information and communication technologies (ICT) and by abolishing trade barriers. The solution comes with e-business, which is a sum of technologies and processes. E-business can take place on a so-called free market or on an organized market, which follows stock exchange rules and the laws on stock exchange. In this case, such a trade is referred to as an electronic exchange.

Approximately 20 to 40 per cent of the worldwide production is traded at the effective exchange market. The rest of production is sold through direct connections between purchasers and sellers at the free market. The electronic business system EBS aims at penetrating this market gap in the Czech Republic and at providing services within the whole region of Central and Eastern Europe.

At the commercial exchange in Hradec Králové there is a trade with meat, cereals, legumen and oil-bearing crops. Producers and tradesmen still do not appreciate the role of commodity exchanges as a market organizer; therefore the volume of trade proposals and concluded deals in the Czech Republic continues to be insignificant compared to the European Union. Exchanges play a key role especially in pricing and protection against price fluctuation.

MATERIAL AND METHODS

EBS is an electronic business system using the Internet network, which enables participants to register their proposals at the exchange via an electronic application form anytime between the end of the last exchange assembly and the closing of the current exchange assembly, and from wherever the participants can access the Internet, provided that they dispose of hardware or software allowing the EBS maintenance. It cooperates with the exchange information system BURIS and thus actually creates an upgrade that enables remote secure communication with BURIS through the

Internet. Until introducing the project BURIS-EBS at the Business Exchange in Hradec Králové the exchange assembly was organized explicitly as a floor (classic) assembly. By carrying out the project BURIS-EBS the exchange was given an opportunity to organize the electronic business.

Project BURIS-EBS has focused on 3 key targets:

- enable its participants to **issue and register proposals** at the exchange through the Internet,
- enable stockbrokers to **participate, trade and conclude exchange deals in the exchange assembly** from their computers (via the Internet),
- **not to reduce the number of parameters** for concluding an exchange business and to provide control over the proceedings of exchange assembly in the same way as it is in the case of classic exchange assembly.

The electronic business system stands on two basic modules, operationally called BURIS and EBS.

BURIS is an exchange information system that files following information:

- information on persons competent to conclude exchange deals and enter the exchange assembly
- information on trade
- information on exchange assembly proceedings
- information after closing the exchange assembly
- information on concluded exchange deals
- information on the settlement of exchange deals

Electronic business system **EBS** is an update system providing remote and secure communication, signing documents and maintenance of BURIS between a user and BURIS, and among users themselves through the Internet. System users are:

- **Exchange business participants or exchange members** who trade through the EBS. It enables them to issue, sign, send or withdraw a proposal for concluding an exchange deal whenever, i.e. from closing the last exchange assembly until closing the current exchange assembly. On their computer they can observe the trade and react to the trade development by sending or withdrawing the proposal.
- **Stockbrokers** who trade through the EBS are able to reregister the proposal to another stockbroker before the start of the exchange assembly; they also trade and conclude an exchange busi-

ness from wherever they register for trading.

- **Exchange and exchange commissioners** who manage and follow the proceedings of the exchange assembly from their computers.

RESULTS AND DISCUSSION

Compared to the classical way of trading, business aspects of e-business are interconnected with the economic advantage, which is brought to exchange business participants by the way of trading. Trading between participants **occurs through issuing and registration of proposals at the exchange**. Proposals are registered by both parties of the exchange business. If stockbrokers at the exchange assembly list a proposal, i.e. approve that the purchasing and selling party agree with its conditions, the deal is concluded. The following table highlights an overview of advantages and possibilities when registering a proposal (Table 1).

One of the most important business aspects of e-business is the **participant's possibility to immediately respond to the exchange rate development or the development of registered offer or demand** by withdrawing the registered proposal and issuing a new one with the price that corresponds with the trade development at the exchange assembly.

Taking into account that the exchange chamber may announce more exchange assemblies in one week, sending and registration of a proposal in the classical way will become almost impossible. Advantages of e-business at the organized exchange market are:

- Even the smallest economic subjects can enter a cashable market, where they can settle a business deal at the **set price**; if the price were to fluctuate in the zone below or above the desired price, the stockbroker will not conclude the business.
- **Anonymous system of trading** at the exchange enables even an SME participant to trade with a very influential partner without the large participant taking advantage of his/her economic power and projecting it into the price. Proposals to buy or sell are registered under registration numbers and a stockbroker negotiates with another stockbroker.
- The participants **need not make an effort to look up the current prices**. By connecting to the exchange WebPages or Agris portal they easily find out the current prices, which are used at the indi-

Table 1. Proposal registration

Proposal registration through the EBS	Classic registration through a paper application form
A proposal is issued by filling in values into the blank cells of an electronic application form by using the keyboard on the computer screen.	A proposal is issued by filling in values into the blank spaces of a paper application form in handwriting or typing.
When filling in the form, the participant is provided with roll-on lists, from which he or she can choose needed values. These lists are gradually updated and thus it is not necessary to look up any current values in other exchange documents. Therefore, errors made out of inattention when rewriting the values are avoided.	To fill in the values it is necessary to use other documents of the exchange. The participant himself must make sure about their update. When rewriting values there is a chance of making a mistake caused by an inattention or ignorance.
When issuing a proposal, it is necessary to follow the logic of relation between the values in cells, e.g. issue of proposal for concluding effective business or call option, prompt or time business, guarantee of deals, lay-out arrays etc. BURIS monitors these logic connections and does not allow registration of a proposal unless the participant removes the logic errors.	When registering this way, the participant must control logic errors by himself. It is possible to make a mistake caused by an inattention or ignorance; in such a case the exchange or stockbroker can refuse to trade with the proposal.
If a participant connects through the EBS to BURIS he or she can register his/her proposal whenever from closing the last exchange assembly until closing the current exchange assembly. Thus, he or she can register the proposal even during the proceedings of the current exchange assembly. The participant is given a confirmation from BURIS that his or her proposal has been registered.	The exchange registers the proposal after receiving it by post and only until opening of the current exchange assembly. If the participant does not consult his/her stockbroker or the exchange, he/she has no confirmation whether the post delivered his/her proposal before opening of the exchange assembly.
Thanks to the fact that there is practically no time delay between issuing the proposal and its registration at the exchange, one can immediately react to the price or exchange rate development.	There is a significant time delay between issuing the proposal and its registration at the exchange due to the time the post needs to deliver the proposal. Since submitting a proposal, exchange rate of price development can change and the participant cannot respond to that.
If the access rights have been allocated to a participant, he/she will be able to follow the proceedings of the exchange assembly and send or withdraw the proposal from trading.	The participant does not have a possibility to follow the exchange assembly proceedings.
In the case of an unfavorable development of exchange rate it is possible to withdraw the proposal at anytime.	The proposal can be withdrawn only on a special application form that must be delivered by post before opening of the next exchange assembly.
The proposal is signed by a combination of attributes from an HW key that is delivered to a participant with the EBS.	The proposal has to be signed according to the specimen signature of the participant's authorized representative.

- vidual contractual months, as well as an analysis of impacts and factors influencing the price.
- Connecting to the Internet **anytime and anywhere** enables the participants to issue their proposals for purchase or sale of a specific commodity at the next exchange assembly. This is the most significant advantage that an organized market brings.
 - **Active influence of the market price.** As soon as one trades at the exchange, the exchange

- registers every single proposal of a purchase agreement and by doing that it also registers the bid price of the proposal into the stock list. Consequently, by every proposal of a purchase agreement sent to the exchange, one influences the exchange rate and therefore actively contributes to a certain commodity pricing.
- **Possibility to cover risks related to the price fluctuation detrimental for the participant** concerns the so-called direct and indirect hedg-

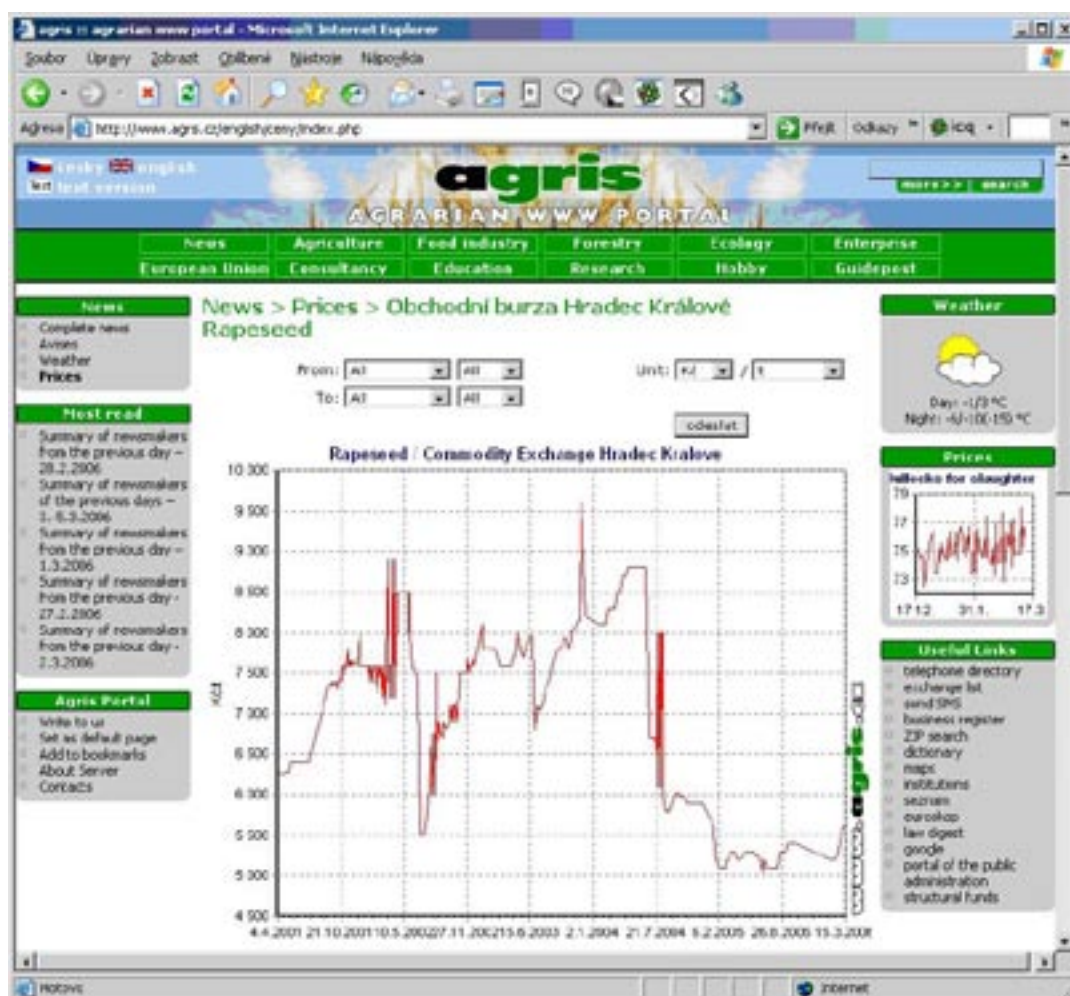


Figure 1. Price development of rape at the Business Exchange in Hradec Králové – AGRIS presentation (<http://www.agris.cz/english/ceny>)

ing and **covering risks from business relations**; the exchange prevents unregistered subjects from entering this market and also protects its participants against insolvency of other exchange deals participants.

To summarize this paper, it is necessary to highlight the fact that the development of the electronic business system is far from being finished. In 2006 the development will focus mainly on the possibility of multi-language communication and on providing a comprehensive information service for all who are interested in such information. The presentation will be a part of the Agrarian portal AGRIS (<http://www.agris.cz>) – Figure 1.

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Received on April 4, 2006

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