# RESEARCH DOCUMENTS IN HOP RESEARCH INSTITUTE CO.LTD. ZATEC, ACCESS TO FULL TEXTS AND RESEARCH DATA.

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#### **Abstract**

Hop Research Institute Co.Ltd. in Zatec, as a scientific organization, produces different types of research results and documents due to its research and commercial activities. In this article we summarized all types of these documents and a possibility of access to full texts and research data from the perspective of copyright laws and company policy.

## **Keywords**

research results, grey literature, document accessibility, company policy

Hop Research Institute Co.Ltd. (HRI) in Zatec is a private scientific organization. It was established in 1992 as a successor of State Hop Research and Breeding Institute. This organization was established in 1950 as a continuator of previous Hop Research Station in Destnice, operated from 1925 to Second World War. Nowadays the company seats in a building complex, which was built in 1974. The main owner is Hop growers union of the Czech Republic. Government support for research results is under control of Ministry of Agriculture of CR. HRI consists of five departments: Genetics and Breeding, Chemistry, Biotechnology, Plant Protection and Hop Cultivation. Hop farm in Steknik includes experimental and commercial hopgardens and nurseries on total acreage of 138 hectares. HRI also handles 50 litres pilot microbrewery for experimental beer brewing tests. Main activities of HRI are Research and development on hop growing, harvest and processing of hops; Hop breeding of new cultivars and maintenance of breeding materials; Multipropagation of hop rootstocks; Ecological production and environmental safe management of hop plant protection and hop quality; Consulting and training activities for hop growers and special public and Hop production. Research activities are mainly supported in research projects by Grant Agencies of CR and Academy of Science of CR, Technological Agency of CR, Ministry of Agriculture, Ministry of Industry and Trade, Ministry of Education, Youth and Sports of CR, and also by European Commission and breweries.

As research scientific organization, HRI produces research results in both areas of research, basic and applied. An article is a main type of basic research and science publication of results. Different types of scientific articles are defined in Methodology of evaluation of research results for scientific organization (1) in the Czech Republic. Published scientific articles are divided into scientific articles in journals with Impact factor (IF), non-IF journals, Czech reviewed journals and conference proceedings. But not all journals and conference proceedings are included in evaluated databases by this Methodology. All these articles are protected by author's rights and copyright laws (2). Article abstracts are mostly available for

free on the websites of the journals. However, the possibility to access full texts is only for pre-paid users and as a paid service. The use of scientific and public libraries is other possibility to obtain the copy of the article. Researchers often use e-mail and mail communications with article authors for obtaining a PDF file or a hard copy of article. HRI authors published 16 articles in IF journals (Czech, European and American), 2 in non-IF journals (Germany), 13 in Czech reviewed journals and 7 in conference proceedings during 2009-2012. Nevertheless, more than 120 articles were published in other journals, conference proceedings, brochures and yearbooks. Research results are also published in specialized books and chapters. A preparation of this type of publication is more time consumpting than publication of research results in a article and therefore books are more general, extensive and out of date.

Another very important research outcome is patent, which is also mentioned in Methodology (1). Patent is under very strict rules (3) and no results can be published before patenting. Every patent can be registered in any country but it depends on the money for patenting fees. National patent laws are administrated by Industry Own Office in Prague (4). HRI registered three patents: Method for evaluating hop resistance to hop downy mildew, Process for preparing of hop pure beta acids and Device to trim hop-vine planted in low structure during 2009-2012. Patent documentations are available on Industry Own Office website (4).

Applied research results are the next category which is mentioned in Methodology (1). This category includes different types of specific results which are the especially useful for agricultural and industrial practice. Even though there are primarily practical devices, organisms and technologies, descriptive documentation is necessary. A new cultivar is one of these results. During company history HRI has bred 10 hop cultivars which have been released for hop production in CR. Saaz Late and Bohemie are the most recent cultivars. Certification of new cultivars is under control of Central Institute for Supervising and Testing in Agriculture and registered varieties are put to List of permitted varieties, accessible on website (5). Information about hop cultivars is published on our website (6) and in our brochures (7). Technical devices and solutions are other applied results. These results are under law protection as a utility model and an industrial design by Industry Own Office in Prague. Technical documentation is available on Industry Own Office website (4). HRI registered six utility models and three industrial designs during 2009-2012. Slightly aside, prototype and functional sample are research results, which are similar to utility models or industrial designs. However, they are not protected by law. These results are registered by government offices like Ministries and Research agencies for evaluation of research results by Government Council for Research and Development and Innovations of CR. HRI registered one prototype and 15 functional samples during 2009-2012. Documentation is under company ownership and security measure as know-how and it is used for business purposes. Certified methodologies are very important applied research results for agricultural practice, organisations and offices. These methodologies contain useful descriptions of experimental and technical processes, methods and procedures. They are certified by government offices as Ministries, State offices and laboratories. HRI published 17 certified methodologies during 2009-2012. They are available in HRI and several reprints in Czech National Library in

Prague. We distributed many of them to hop growers and research organizations at seminars and other events. We plan to put them on our website (6) and grey literature server (8).

From the other research results, which are mentioned in Methodology (1), HRI organizes specialized conferences, seminars and workshops for researchers, hop growers, merchants, breweries and public. There were five conferences and four workshops during 2009-2012. Beer tasting competition during the "Hop Harvest Festival in Žatec" is held annually. The third International ISHS Humulus Symposium in 2012 was the top world action in international hop research. The proceedings and abstract books have been published from these actions and provided mainly for participants. Some of them are available on our website (6) and we also plan to put them on grey literature server (8). Other our activities include consultancy and training services for entrepreneurs in hop growing (a course for handling plant protection agents, for operators of hop picking machines and hop kilns). Learning texts are provided for participants.

At the end, HRI produces raw research data and company documents which are under company policy, accessibility and circulation. Raw research data (data from measurement, analyses, photo documentation, statistical analyses, protocols, methods, etc.) are under supervision of their authors and users. A lot of the above mentioned data is utilized for research publications, conference presentations, posters, periodical and final project reports. These reports are provided to research and ministry agencies, which evaluate project filling and results. The access to these reports is limited. Reprints are provided by the author, one is available in the company library and we plan to put final reports on grey literature server (8). Apart from these company documents, there are also meeting, financial and travel reports which are accessible to the company management, financial authorities and supervisor board. Company directives and orders are designated for all company employees. These documents are under company and trade secret. Travel reports include confidential costs but they are available in our company library. Specific part of research and tests is done under contracts, therefore these results (registration and measurement protocols, reports) are in contractor property.

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