

Summary report on research accreditation

I. General information

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|---|--|
| Name of organization | Scientifical and Practical Institute of Biotechnologies in Animal Husbandry and Veterinary Medicine |
| Organization type (to underline) | Ministerial research institute |
| Research mission of organization | The main purpose is to provide scientific-technological support to developing the livestock sector and veterinary medicine of Moldova, by fundamental and applied scientific research in principal industries: cattle, sheep, swine, poultry, rabbits, bees and the problems of nutrition and normal feeding of animals, breeding of animals and regulation of reproductive functions, bioconversion of organic waste. |
| Strategic research direction (s) | <ul style="list-style-type: none"> – Strategic direction 04 – agriculture biotechnologies, soil fertility and food security; – Development of scientific principles to maintain and diversify the gene pool of animals approved in the country and ensure optimal operation of their reproduction; – Rational use of the productive potential of animal breeding through genetic control of quantitative and qualitative characters of productive manner; – Development of new principles to increase the hereditary variability of domestic animal breeds; – Creation of breeds, types, new hybrids with increased productivity and adaptability through applying domestic and imported gene pool; – Development of modern technologies in breeding, running, reproduction and nutrition of animals; – Development of new technologies for fodder production and conservation in order to achieve the genetic potential of animals production; - Optimization and development of procedures, methods and new control and disease prevention schemes in animal breeding. |
| Evaluated period | 2007-2011 |
| Web of organization | http://www.agriculture.md/tevit/index.html |

II. Research capacity (annual average for evaluated period)

| | | | | | | |
|---|------------------|----------------------|------------------------------|----------------------|--------------------|-----------|
| Total number of employees | 71,4 | | | | | |
| Number of scientific researches | 39,6 | | | | | |
| Number of researches who possess honorific titles, scientific degrees, scientific and scientific-didactical titles. | ASM full members | ASM corresp. members | Professor | Associated professor | Dr. hab. | Dr. (PhD) |
| | 0 | 1 | 3 | 14 | 10 | 12 |
| Number of researches involved in international projects | FP7 | | STCU | | Bilateral | |
| | 0 | | 0 | | 0 | |
| Number of young researches (under 35 years old) | Dr.(PhD) | | PhD students | | Others | |
| | 0 | | 4 | | 0 | |
| Financial resources (thousand MDL) | Public budget | | International project/grants | | Research contracts | |
| | 4432,6 | | 0,0 | | 550,2 | |
| Distribution of expenditures (thousand MDL) | Salary | | Infrastructure development | | Other | |
| | 1963,56 | | 1204,2 | | 1821,62 | |

| | | | |
|--|---|-------------------|-----------------------------------|
| Expenditures for infrastructure development (thousand MDL) | Equipments | IT infrastructure | Endowment of experimental resorts |
| | 478,5 | 75,0 | - |
| List of 3 basic research methods, installations, technologies (per accredited field) | <ol style="list-style-type: none"> 1. Technology of growth and exploitation of cattle in loose housing 2. Innovative technology of production of combined and granulated fodder with the full value for rabbits 3. Technology for obtaining and processing the cow milk | | |
| List of provided scientific services | <ul style="list-style-type: none"> – consultations on maintenance, growth, nutrition, reproduction and prevention of diseases of animal and birds; – Support in developing and implementation Technological Transfer projects; – consultations and practical help to prepare to the attestation of farms; – Technology for growth and exploitation of animals (by species), depending on concrete conditions of the farm and request the owner; – Research on chemical composition of feed; – norms and rations for poultry and animal nutrition; – Advanced technology for preparation of feed and efficient use of concentrates; | | |

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| | – services of evaluation of cattle, young sheep, rabbit |
| List of editorial activities | Scientific edition “Agricultura Moldovei” (Agriculture of Moldova) |

III. Distribution of number projects and themes during evaluated period

| Project | 2007 | 2008 | 2009 | 2010 | 2011 |
|--|--|------|------|------|------|
| Institutional projects | 3 | 3 | 3 | 3 | 1 |
| Projects in the frame of State Programmers | 1 | 1 | - | - | - |
| Technological transfer projects | 3 | 4 | 2 | 1 | 1 |
| Projects for equipment procurement | - | - | - | - | - |
| Project for young researches | - | - | - | - | - |
| Project in the frame of bilateral programmers | 1 | 1 | - | - | - |
| International projects/grants | - | - | - | - | - |
| List of 3 representative international projects/grants | - | | | | |
| Research contracts | 1 | 1 | 1 | 1 | 1 |
| List of 3 representative research contracts | 1. Development of recipes of compound feed for poultry and animal waste processing, including sorghum; 2. Improvement of lines created in the framework of new type of tsigai sheep and creation of new lines based on selection of population "in itself" 3. Continuous improvement of the types of moldavian tsigai sheep for wool-meat-milk | | | | |

IV. Scientific publications

| | | | |
|---|--|-----------------------------------|----------------------|
| Total number of publications abroad | Books 1 | Chapters in books 0 | Journal papers 21 |
| Total number of publications in ISI journals and books | Books 0 | Chapters in books 0 | Journal papers 16 |
| Total number of publications in the country | Books 3 | Chapters in books 1 | Journal papers 70 |
| Total number of conference abstracts | International abroad 11 | International in the country 4 | National 7 |
| List of 5 representative publications (per accredited field) | 1. SMIRNOV, E., FOCSHA, V., CONSTANDOGLO, A. Methods of creating the type of Moldavian Black Spotted cattle. Coordinator. E.D.SMIRNOV. Chisinau, type. "Elena VI", Ltd, 2007, 180 p ISBN 978-9975-9750-5-6. (Romanian) | | |

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|----------------------------|---|
| | <p>2. SMIRNOV, E. D; SHUMANSKII, A.V; KONSTANDOGLO, A. G; FOCSHA, V. F The evolution of dairy cattle in Moldova. Chisinau, "Print-Caro" Ltd., 2010, 329 p. ISBN 978-9975-4152-0-0. (Russian)</p> <p>3. LIUTSCANOV, P.I.; NASIBOV, M. G.; MARZANOV, N. S, PETROV, S. N Genetic characteristics of the Moldovian sheepskin-of dairy type karakul breed sheep. in: Bulletin of the Russian Academy of Agricultural Sciences (RAAS), 2007, 4, c. 92-94. ISSN 0869-3730. (Russian)</p> <p>4. CAISIN, L., HAREA, V. Comparative Characteristics of the nutritional values of fodder in Moldova. In: Animal science and biotechnologies. University of Agricultural Sciences and Veterinary Medicine. Series Animal Husbandry and Biotechnology, vol.67 (1-2), ISS, Cluj-Napoca, 2010, p.102-109. (English)</p> <p>5. BULARGA, I.; SHUMANSCHII, A. Nutrition and feeding of livestock. Ch: "Print-Caro" Ltd., 2009. 326 p ISBN 978-9975-9930-8-1. (Romanian)</p> |
| List of 5 citations | <p>1. KONSTANDOGLO A.G., V.F. FOCSHA Genetic polymorphism of blood systems in black and white cattle of the Moldavian type. Journal of animal husbandry, 1998. Number 8, p.3-5 (Kerry L. Using blood-group antigens of in breeding work with black andwhite cattle Transural. Thesis for the degree of PhD of agricultural sciences. Kurgan, 2007).</p> <p>2. MARZANOV NS, LYUTSKANOV P. AND OTHER, Ecological and genetic characteristics of the moldavian type of tsigai sheep. Proceedings of II International Scientific and Practical Conference. Dubrovitsy, 2003, p. 100-103. (Yatskin VI, Improving the efficiency of lamb, Moscow 2008)</p> <p>3. SMIRNOV, E. D. Productive and technological quality of intermediate genotypes Moldovan black and white cattle, Agropromizdat, 1990. - p. 45-51. (Kosolapov, G. V. Improving black and white cattle through improved feed and feeding optimization in the Volga-Vyatka region of Russia: Thesis of Doctor of Agricultural Sciences: 06.02.04, 06.02.02. Lobnya, 2009)</p> <p>4. KONSTANDOGLO A.G., V.F. FOCSHA Genetic polymorphism of blood systems in black and white cattle of the Moldavian type. Journal of animal husbandry, 1998. Number 8, p.3-5 (Bugaev, Sergei Petrovich, Using erythrocyte antigens in the selection of Simmental cattle. Thesis for the degree of PhD in agricultural sciences. Kursk, 2007)</p> <p>5. KONSTANDOGLO A.G., V.F. FOCSHA Genetic polymorphism of blood systems in black and white cattle of the Moldavian type. Journal of animal husbandry, 1998. Number 8, p.3-5 (Politkin, Dmitry Yu. Effect of selection of animals in groups of blood on the reproductive ability of cows and growth. Thesis for the degree of PhD in biology. Country Forest Glade, Moscow Region, 2011)</p> |

V. Innovation outputs

| | | | |
|---|--|-----------------------------------|-----------------------------------|
| Total number of patents | Registered in the country 10 | Registered abroad 1 | Implemented 6 |
| Total number of new developed methods and technologies | Registered 6 | Non-registered 3 | Implemented 6 |
| Total number of new scientific products | Registered 6 | Non-registered 1 | Implemented 6 |
| Total number of scientific outputs for central and local authorities (draft of law, strategies etc.) | <ol style="list-style-type: none"> 1. Program for the eradication of enzootic bovine leucosis for 2008-2015. Approved by Government Decision nr.473 of 26/03/2008 2. Insurance program with mixed fodder of farmers in Moldova. Approved by the Minister of Agriculture and Food Industry no. 205 of 12.10.2010. 3. The strategy "Milk". Approved by the College of the Ministry of Agriculture and Food Industry (2011); 4. Draft of Law "Animal husbandry". 5. Sanitary - veterinary hygiene and content of undesirable substances in feed, 2008 (S. Cosman, M. Bahcivanji, et al) 6. Technical rules. 7. Forms of zootechnical and breeding evidence for goat farms in Moldova. 8. Projects of Regulations of the animals fund (cattle, sheep). | | |
| Total number of scientific outputs for educational institutions | Handbooks for high education 3 | Handbooks for pre-university 0 | Delivered university courses 0 |
| List of 5 representative innovation outputs (per accredited field) | <ol style="list-style-type: none"> 1. Type of Moldavian Black Spotted cattle (Patent no. 3923, 2009); 2. Type of Karakul Moldavian sheep (Patent no. 3825, 2009); 3. Elite type of Tsigai Moldavian sheep (Patent no. 3440, 2007). 4. Premix for calves (Patent no. 284, 2010); 5. Process for celulazo-amylase complex purpose in animal husbandry (Patent no. B1, 2011); | | |

V. Major scientific and innovation achievements

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|--|---|-----------|-----------|-----------|-----------|
| Short description of main scientific results and its confirmation (by awards, citations, development of international projects etc) | <p>- The environment for dilution of boar semen, Gold Medal at International Exhibition of Innovation, Research and New Technologies "Brussels-eurica", Darie G., Marandici E. and other; this innovation refers to problems in artificial sowing of pigs, conservation of boar semen in hypothermal temperatures.</p> <p>- The addition of elaborated feed for young cattle increases breeding intensity of young cattle and increase resistance to illness specific. Additions fodder for young cattle, Silver Medal at Exhibition "Infoinvent" 2010, Diploma, Coshman S., Bahcivanji M. and other;</p> | | | | |
| Number of organization invited speakers at | 2007 1 | 2008 1 | 2009 2 | 2010 2 | 2011 0 |

| | | | | | |
|---|---|------|------|------|------|
| international conferences | | | | | |
| Short description of technological transfer and innovational results and its certification by implementation | 1. Contract 06.407.13T "Implementation of technologies to intensify valorization of the genetic potential in swine culture" (2006-2007); 2. Contract 07.407.41T "Implementation of advanced technologies for recovery the genetic potential of cattle (2007-2008); 3. Contract 07.407.42T "Implementation of the new production lines of sheep Alexanderfeld tsigai" (2007-2008); 4. Contract 08.169.73T The practical implementation in apiculture of a hive "model" to reproduce the race Apis mellifera Carpathian bees to restore the local gene pool "(2008-2009); 5. Contract 08.169.69T Implementation of new biotechnologies to improve the accelerated domestic rabbits to restore genetic fund of animal husbandry (2008-2009); 6. Contract 10.824.04.108T Implementation of innovative technology for producing granulated fodder and feeding of domestic rabbits (2010); 7. Contract 11.824.04.145T "Implementation of Holstein breed in the center of the Republic of Moldova" (2011). | | | | |
| Number of defended dr. hab. And dr. theses per year | 2007 | 2008 | 2009 | 2010 | 2011 |
| | 0 | 1/1 | 0 | 2/0 | 0 |

VII. Present/further involvement in the Seventh Framework Programme (FP 7): specific programmes (Cooperation, Ideas, People, Capacities) of interest and its sub – divisions.

Cooperation: Food, Agriculture and Biotechnology (developing technologies for the potential production of agricultural animals, the production of organic livestock)

Ideas: The international scientific projects in the conservation and development of indigenous animal breeds and types, creation of databases on genetic biodiversity fund of animals

People: Areas of knowledge; Science in the society (the impact assessment of processes for intensifying of reproduction and nutrition on the physiological balance in animal production and safety production.

VIII. Accredited research field and its evaluation by the National Council for Accreditation and Attestation of the Republic of Moldova (very good/good/satisfactory)

Technologies in animal husbandry and veterinary medicine

IX. Category (A/B/C) attributed by the National Council for Accreditation and Attestation of the Republic of Moldova to the organization

Category B

X. Institutional development actions planned for the next 5 years (maximum S page)

- Bi-annual hearing at Methodology Committee of doctoral and leaders of PhD theses on going the planned research and perfecting the thesis;
- Development and submitting for approval by the higher organs of the nomenclature of services provided by institute for payment;
- Elaboration of at least 1-2 research projects in partnership with foreign organization;
- Semestrial update of web pages;
- Elaboration technology for producing competitive animal products (annually one for each species);
- Organization on annual basis of at least 1-2 scientific-practical seminars for users;
- Publication of articles to popularize the science in magazines and newspapers, participation at radio and TV.