

Summary report on research accreditation

I. General information

Name of organization	Public Institution Institute of Crop Science “Porumbeni”
Organization type (<i>to underline</i>)	Research institute Institution of higher education <u>Ministerial research institute</u>
Research mission of organization	<i>The mission of the Public Institution Institute of Crop Science “Porumbeni”</i> - The evaluation, multiplication and maintenance of Genetic stock centers of varieties, local populations and lines of corn; the analysis of main germplasm sources; - Creation and complex evaluation of comparative crops of corn hybrids; -The analysis of material for selection according to the main biochemical and physiological parameters, molecular technologies development for corn genome identification;
Strategic research direction (s)	Agricultural biotechnologies, soil fertility and food security.
Evaluated period	2008-2012
Web of organization	www.porumbeni.md

II. Research capacity (annual average for evaluated period)

Total number of employees	139,9					
Number of scientific researchers	32,8					
Number of researchers who possess honorific titles, scientific degrees, scientific and scientific-didactical titles	ASM affiliated members	ASM corresp. members	Professor	Associated Professor	Dr. hab	Dr.(PhD)
	-	1,0	2,0	6	3,2	16,0
Number of researchers involved in international projects	FP7 -	STCU -	Bilateral 1	Others		
Number of young researchers (under 35 years old)	Dr. (PhD) -		PhD students 2,2		Others -	
Financial resources (thousand MDL)	Public budget 5881,1		International projects/grants 20,0		Research contracts 7142,3	
Distribution of expenditures (thousand MDL)	Salary 5976,0		Infrastructure development 6542,3		Other 413,0	
Expenditures for infrastructure development (thousand MDL)	Equipments 260,8		IT infrastructure 159,5		Endowment of experimental resorts. 6122,0	
List of 3 basic research	1. Development of maize lines by traditional pedigree methods.					

methods, installations, technologies (per accredited field)	2. Improvement of corn lines by the backcross methods 3. Assessment of biological purity by protein markers 4. Multiannual experiences on determination the influence of different doses of fertilizers in crop rotation and monoculture to the maize hybrids productivity. 5. Use of physiological methods for determination of maize resistance to stress factors
List of provided scientific services	1. Determination of seed quality, biological and biochemical analysis; 2. Trials of pesticides and fertilizers. 3. Testing of maize hybrids in the central region of Moldova.
List of editorial activities	Co-founder to the journal Agricultura Moldovei . ISSN 0582 5229

III. Distribution and number of research projects and themes during the evaluated period

Institutional projects	2008 3	2009 3	2010 2	2011 2	2012 2
Projects in the frame of State Programmes	2008 3	2009 3	2010 -	2011 -	2012 -
Technological transfer projects	2008 3	2009 -	2010 1	2011 -	2012 -
Projects for equipment procurement	2008 -	2009 -	2010 -	2011 -	2012 -
Projects for young researches	2008 -	2009 -	2010 -	2011 -	2012 -
Projects in the frame of bilateral programmes	2008 1	2009 1	2010 -	2011 -	2012 -
International projects/grants	2008 -	2009 -	2010 -	2011 -	2012 -
List of 3 representative international projects/grants	1. Comparative assessment of molecular and biochemical methods for determining the level of typical lines as parental forms and degree of hybridization of maize seed to increase the efficiency of seed production, 2008-2009 (Bilateral project: Academy of Sciences of Moldova – Belarusian Foundation for Fundamental Research)				
Research contracts	2008 4	2009 3	2010 7	2011 4	2012 2
List of 3 representative research contracts	1. Development of corn hybrids FAO 150-300 for grain and silage, adapted in Russia growing conditions with low temperature. 2. Development of corn hybrids with Crop Science Institute of Polesia, Belarus. 3. Contract with the Alma-Ata Crop and Soil Institute, Kazakhstan				

IV. Scientific publications

Total number of publications abroad	Books -	Chapters in books -	Journal papers 4
Total number of publications in ISI journals and books	Books -	Chapters in books -	Journal papers -
Total number of publications in the country	Books 2	Chapters in books -	Journal papers 130
Total number of conference abstracts	International 7	International in the country 18	National 53
List of 5 representative publications (per accredited field)	<p>Micu, V. Development and implementation of corn hybrids – efficiency factor of sustainable agriculture. <i>Agricultura Moldovei</i>, 2008, nr.7-8, p.22-25</p> <p>Мустеаца С.И., Мистреца С.И., Брума С.Г. Comparative analysis of the criteria for determining distinctness in related corn lines. <i>Кукуруза и сорго</i>, №6, 2009, стр.18-20.</p> <p>Ротарь, А., Ротарь, Е., Комарова, Г. The methodology of using zein polymorphism to determine the degree of hybridity of seeds. <i>Генетични ресурси рослин и селекція: Матеріали Всеукраїнської науково-практичної конференції (Харьковский Национальный Аграрный Университет, Институт Растениеводства им. В. Юрьева) Харьков</i>, 2012, с. 167-171.</p> <p>Мустьяца, С., Брума, С., Борозан, П., Руссу, Г. Classifications of related corn lines on the values of heterosis in crosses. <i>Селекция и генетика сельскохозяйственных растений: традиции и перспективы: 17-19 октября 2012 Международная научная конференция.</i> Одесса, Украина, 2012, с. 177-178. (in rusă)</p> <p>Pojoga, V., Maticiu, V. Factors determinations the obtaining of agriculture crops production. <i>Buletinul AŞ a Moldovei. Ştiinţele vieţii</i>. 2010, 2(311), 135-139. ISSN 1857-064X.</p> <p>Mirza, V. Source “M” CMS in corn and development of modify single crosses on the basis of male sterility. <i>Agricultura Moldovei</i>. 2011, 6-7, 31-33. ISSN 0582 5229.</p>		
List of 5 citations	-		

V. Innovation outputs

Total number of patents	Registered in the country 18	Registered abroad 5	Implemented 18
Total number of new developed methods and technologies	Registered 45	Non- Registered 27	Implemented 18
Total number of new scientific products	Registered 99	Non- Registered 60	Implemented 39
Total number of scientific outputs for central and local			

authorities (draft of law, strategies etc.)	5		
Total numbers of scientific outputs for educational institutions	Handbooks for high education 0	Handbooks for pre-university institutions 0	Delivered university courses 0
List of 5 representative innovation outputs (per accredited field)	Maize hybrid Porumbeni 176 Maize hybrid Porumbeni 270 Maize hybrid Porumbeni 461 Maize hybrid Porumbeni 458 Maize hybrid Pormbeni 397		

VI. Major scientific and innovation achievements

Short description of main scientific results and its confirmation (by awards, citations, development of international projects etc.)	<p>The improvement process combined with applicative researches has been materialized through development and transmission of 45 new corn hybrids to the State Commission for Plant Variety Testing: 23 – in the Republic of Moldova; 5 – in Russia; 18 – in the Republic of Belarus. Twelve competitive corn hybrids were included in Official State Registers.</p> <p>Four – five thousand tons of corn seeds were produced annually from “Porumbeni” hybrids, thus providing the necessities of internal market and for export as well. The Institute researchers maintain the superior biological categories of tobacco varieties included in the State Register and provide farmers with requested seeding material.</p>				
Number of organization’ invited speakers at international conferences	2008 3	2009 1	2010 2	2011 6	2012 2
Short description of technological transfer and innovation results and its certification by implementation	<p>The main technological transfer and innovation results in 2008-2012 consisted in the implementation for production of corn hybrids Porumbeni 458, Porumbeni 459, Porumbeni 461 and Porumbeni 397, cultivated for grain and silage in the Republic of Moldova and of the corn hybrid Porumbeni 270 for export.</p> <p>Nine patents were obtained, 130 scientific publications and 1 monograph were published.</p>				
Number of defended dr.hab./dr. theses per year	0/1	0/0	0/0	0/0	0/0

VII. Present/further involvement in the Seventh Framework Program/Horizon 2020

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

Breeding, seed production and crop science - good

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 ½ page).

1. To expand the spectrum of researched crops and to intensify the investigations in the field of crop science.
2. To organize the attestation of scientific staff and specialists and to organize the contest for recruitment of scientific staff.
3. To update systematically the web page of the Institute, publishing also information in English language.
4. To ensure the purchase & reparation of necessary equipment for field and laboratory works, to repair the premises of laboratories.
5. To found a training center for specialists in the field of breeding, seed production and crop science in addition to the information center.
6. To purchase a refrigerator for preservation of parental forms and maintenance of a reference collection of maize, according to the requirements of UPOV.
7. For young scientists to organize stages abroad for periods over 30 days, especially in the field of crop breeding.