NATIONAL INSTITUTE OF RESEARCH - DEVELOPMENT FOR MACHINES AND INSTALLATIONS DESIGNED TO AGRICULTURE AND FOOD INDUSTRY
- INMA Bucharest -

- EXCELLENCE CENTER –

ACTIVITY REPORT
- 2014 -

BUCHAREST

CONTENTS

1. IDENTIFICATION DATA

1.1. Denomination

NATIONAL INSTITUTE OF RESEARCH - DEVELOPMENT FOR MACHINES AND INSTALLATIONS FOR AGRICULTURE AND FOOD INDUSTRY
- INMA Bucharest -

1.2. The establishing document with the subsequent amendments

- HG 1308/1996;
- HG 823/2004;

Accreditation to carry out research and development activities financed from public funds according the NASR Decision no. 9634/14.04.2008

1.3. Registration number in the Register of potential contractors

2421, according the Annex 1 of Info package of the Excellence Research Program – CEEX 2006:436

1.4. Address

Bucharest, Sector 1, 6, Ion Ionescu de la Brad Blvd , Postal Code 013813, ROMANIA

1.5. Phone: 021 269.32.69
Fax: 021 269.32.73
webpage: http://www.inma.ro
E-Mail: icsit@inma.ro

2. SHORT PRESENTATION OF NIRD

2.1. HISTORIC

ORGANIZATIONAL EVOLUTION

1927 – Setting up „**TESTING CENTRE FOR AGRICULTURAL MACHINES AND TOOLS**"- BĂNEASA within the INSTITUTE FOR FORESTRY RESEARCHES IN ROMANIA by the Establishing Law **ICAR** (M.O no. 97/05.05.1927).

1930 - Decision no. 2000/1930 of ICAR Manager - GHEORGHE IONESCU ŞIŞEŞTI related to **operating** standards and **the role of TESTING CENTRE FOR AGRICULTURAL MACHINES AND TOOLS** "

1952 - Setting up the institute of SCIENTIFIC RESEARCHES FOR AGRICULTURE MECHANIZING AND ELECTRIFYING - ICMEA by transforming the TESTING CENTRE FOR AGRICULTURAL MACHINES AND TOOLS within ICAR (HCM no.543/16.04.1952).

1982 - Joining ICMEA Băneasa to INSTITUTE FOR DESIGNING AGRICULTURAL MACHINES OTOPENI and establishing the NATIONAL INSTITUTE OF RESEARCH-DEVELOPMENT FOR MACHINES AND INSTALLATIONS DESIGNED TO AGRICULTURE AND FOOD INDUSTRY ICPITMUA Băneasa (Decree of State Council no.386/27.10.1982).

1996 - Establishment of National Institute of Research - Development for Machines and Installations Designed to Agriculture and Food industry-INMA (HG 1308/25.11.1996, Official Journal no. 329/1996) coordinated by the Ministry of Education and Research;

2008 - **INMA** was accredited to carry out R & D activities financed from public funds in accordance with the GD 551/2007, Decision of NASR no. 9634/2008

2010 – **INMA** was authorized to carry out activities of training / qualification and specialization / professional improvement, in accordance with the Authorization Series B no. 2795310 from 17.02.2010;

2011 – INMA was authorized to develop activities of:
- skills training for AGRICULTURAL MACHINERY MECHANIC I, code COR new 723309, Acord to. Aut. Series B no. 0004500 from 24.03.2011
- skills improving for SPECIALIST ÎN AIDED-COMPUTER DESIGN position, code COR new 251401, Accord to. Aut. Series B No. 0004501 from 28.04.2011;

2012 – **INMA** was authorized through the Center for Evaluation and Certification of Professional Competencies to carry out activities for the qualification of "**miller**", COR code 816020, according Aut. Series C no. 00260 from 31.08.2012

TARGETS

- Performing scientific and experimental researches on"the machines and equipment the most suitable for Romania soil and climate";
- Testing the machines recently brought in the country.

- Creating and endowing the first laboratory for testing agricultural machines;
- Establishing rules of experimental research and chosing the types of machines suitable to Romania agriculture;
- Establishing the testing methodologies and programmes;
- Publishing the results of agricultural machines testing;
- Regional demonstrations with state-of-the art agricultural machines.

- Elaborating the agro-technical requirements for machines and equipment appropriate to agricultural processes;
- Elaborating the systems and types of machines necessary to mechanizing the agricultural processes;
- Experimental researching and improving the technical and manufacturing solutions.

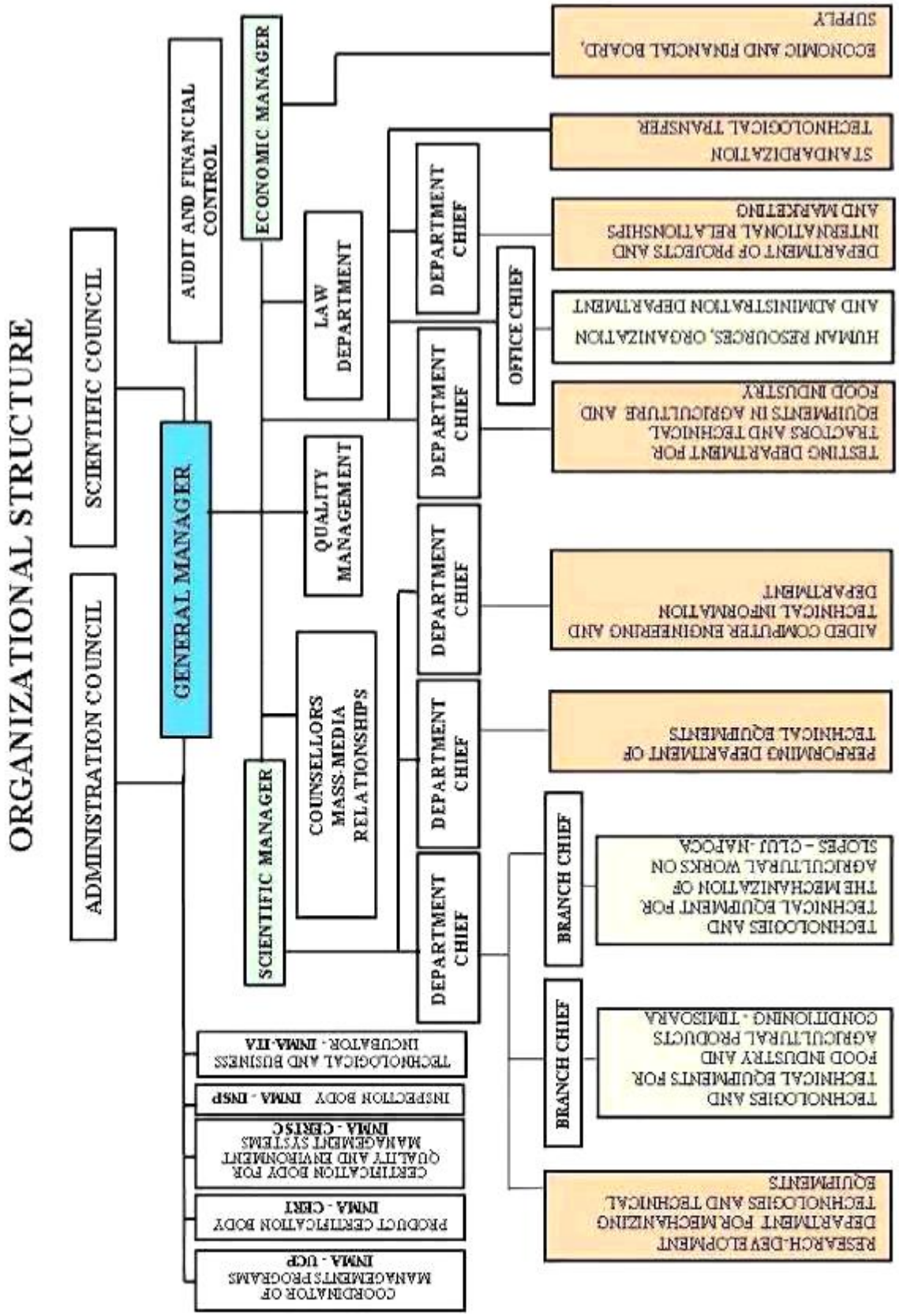
- Performing scientific research, designing and manufacturing experimental models and prototypes of agricultural machines and equipment;
- Elaborating the mechanizing technologies;
- Elaborating the machines and equipment classes designed to agricultural processes.

- Fundamental research on the structure and the strength of materials used in the construction of technical equipment; the relation TE, plant, environment (air, water, soil);
- Applied research in order to develop and achieve mechanization technologies and performance technical equipment for agriculture and food industry;
- Technological development through experimental models and prototypes of technical equipment;
- Standardization, typification and organological unification of technical equipment for agriculture TC 77;
- Testing and certification of technical equipment;
- Practical demonstrations, dissemination and technical assistance at implementation;
- Incubation and Technology Transfer;
- Training and professional training; scientific careers;
- Substantiation of partnerships and consortia, thematics for EU-funded projects (FP7, EUREKA, COST, TRANS-BORDER etc.)

- Activities for qualifying and skills improving within the training center.

- Professional training activities for adults

2.2. INMA ORGANIZATIONAL CHART



2.3. SPECIALIZATION AREA OF INMA

a. According to UNESCO classification

3313 – Mechanical technology and engineering;
3102 – Agricultural engineering (technologies and equipment)
3309 – Tehnologies/equipment for food industry;
3328 – Technological processes;
3308 – Engineering and technology of environment.

b. According to CAEN classification

7219 – Research-development of physical and natural sciences;
7120 – Activities of testings and technical analyses;
6201 – Editing programmes;
6203 – IT data processing;
7022 – Activities of business and management consultancy.

2.4. DIRECTIONS FOR RESEARCH AND DEVELOPMENT / RESEARCH OBJECTIVES / RESEARCH PRIORITIES

2.4.1. R & D Directions

- INMA performs activities of scientific research (fundamental and applicative), innovation and development in the field of processes, technologies and technical equipment of mechanization and automation of agricultural and food industry operations within the context of harmonizing the institute whole activity to the policies applied by the National Agency for Scientific Research in Romania.

a. Main domains of research-development

- Scientifically substantiating the processes in agriculture, food industry and creating new technologies, technical devices and equipment competitive and appropriate to European research area, specific to concepts of SUSTAINABLE AGRICULTURE, FOOD SAFETY AND SECURITY;
- Renewable sources of energy (biomass, biofuels) technologies and technical equipment for using them efficiently, ensuring life, health and environment protection;
- Rural development and life quality improvement by technological transfer and outcome demonstrations performed by the institute.;
- Strengthening the research infrastructure (human resources, logistics, researching instruments) and achieving partenerships for joining ERA, including the compliance with European technological platforms.
- Activities of training, professional specialization and personnel certification in the field of mechanizing technologies.

b. Secondary research domains

- Assessing and certifying the conformity of technical equipment in regulated and non-regulated field of EU.;
- Performing periodical technical controls of mechanizing technologies and TE for agriculture and food industry;
- Technological transfer and innovative business through the accredited technological icubator: INMA-ITA.

c. Services/microproduction

- testing technical equipment;
- certifying the products conformity;
- training and competences evaluation;
- performing periodical technical inspections for all types of motor vehicles;
- manufacturing plastic components.

2.4.2. Research Objectives

- High valorisation of the production potential of agricultural lands by the substantiation, development and implementation of intelligent technical systems of mechanization and automation, adapted to climate change;
- Promoting the development of bio-industries in the rural area in the context of increase of the added value of the non-food products and the improvement of the quality of life;
- Enhancing of the on-going professional training and acquiring of new competencies for the personnel from the rural area.

2.4.3. Research Priorities

- The development of mechanization technologies and innovative technical systems intended for soil tillage establishment, maintenance and harvesting of agricultural, horticultural, livestock and agro-forestry crops, under the conditions of environmental resources conservation, combating of desertification and droughts;
- The substantiation and development of new intelligent technical systems, specific to the concept of "PRECISION AGRICULTURE" for the superior capitalization of the production potential of agricultural lands under conditions of sustainable exploitation;
- Development of expert technical systems to achieve of production virtual maps, monitoring of agricultural crops and applying of an appropriate management;
- The substantiation and development of new technologies for mechanization and automation in agriculture and food industry: conditioning, processing, storage and storage of primary agricultural products, non-agricultural and aquaculture products according to efficiency, safety and security conditions;
- Efficient technical solutions for the development of bio-industries in the rural area for the superior capitalization of non-food bio-resources;

2.5. STRATEGIC MODIFICATIONS IN INCD ORGANIZATION AND FUCTIONING- NO

3. MANAGEMENT STRUCTURE

3.1. MANAGEMENT COUNCIL

1. **Prof.PhD.Eng. PIRNĂ Ion - president**
2. **PhD.Eng. MURARU VERGIL - vicepresident**
3. **Ec. CHITUC NICOLETA - member**
4. **Ec. COLCER TANŢA - member**
5. **Ec. HALALAIE ELENA - member**
6. **Prof.PhD eng. VOICU GHEORGHE - member**
7. **Lect.Ph. D.Eng. MAICAN EDMOND - member**
8. **Legal adviser CÂRCEL CRISTINA - secretary**
9. **PhD.Eng. NEDELCU MIHAIL - permanent guest**

REPORT on the INMA Managing Board activity (Annex 1)

3.2. GENERAL MANAGER

- **Prof.PhD.Eng. PIRNĂ ION**

REPORT on the activity of the general manager (Annex 1.1)

3.3. SCIENTIFIC COUNCIL

1. **PhD. Eng. Muraru Vergil - president**
2. **PhD. Eng. Ciupercă Radu - vicepresident**
3. **PhD. Eng. Ganea Ioan - secretary**
4. **Prof.PhD. Eng. Pirnă Ion - member**
5. **PhD. Eng. Voicu Emil - member**
6. **PhD. Eng. Vlăduţ Valentin - member**
7. **Eng. Ioniţă Ghiţă - member**
8. **PhD. Eng. Muraru Cornelia - member**
9. **PhD. Eng. Găgeanu Paul - member**
10. **PhD. Eng. Pop Augustin - member**
11. **PhD Std.eng. Coţa Constantin - member**
12. **PhD. Eng. Constantin Nicolae - member**
13. **PhD. Eng. Drâmbei Petronela - member**
14. **PhD. Eng. Marin Eugen - member**
15. **PhD. Eng. Bădănoiu Bianca - member**
16. **PhD. Eng. Nedelcu Mihail - member**
17. **PhD Std.eng. Matache Mihai - member**
18. **Eng. Neagoe Valerica - member**
19. **PhD. Eng. Păun Anişoara - member**

3.4. STEERING COMMITTEE

1. **General Manager - Prof.PhD. Eng. Pirnă Ion - president**
2. **Scientific Manager - PhD. Eng. Vlăduţ Valentin - member**
3. **Economic Manager - Ec. Rusu Mircea - member**
4. **Head of RDI Department-Ph.D.Eng.Paun Anisoara**
5. **Head of Testing Department – PhD std.eng. - Matache Mihai - member**
6. **Manufacturing Division - Eng. Marian Mihai - member**
7. **Head of IT Department - PhD. Eng. Muraru Vergil - member**
8. **Head of Projects & International Relations Department - PhD. Eng. Drâmbei Petronela - member**
9. **Head of Department I.T.A. - PhD. Eng. Muraru Cornelia - member**
10. **Head of SMCS Collective - PhD. Eng. Bădănoiu Bianca - member**
11. **Head of Financial Accounting Office - Ec. Gheorghe Mariana - member**
12. **Head of Office of Administration, Personnel, Organization - Eng. Dumitru Cristinel - member**
13. **Legal adviser - Cârcel Cristina - member**
14. **Head of Office Plan - Eng. Neagoe Valerica - secretary**
15. **Representative of employees from INMA – PhD. Eng. Nedelcu Mihail - permanent guest**

4. ECONOMIC AND FINANCIAL SITUATION OF INMA

4.1. The patrimony established based on the financial reports on December 31, 2014

	2013	2014
The patrimony established based on the financial reports on December 31	21,311,377	17,751,359

Structured, the assets are as it follows:

	31.12.2013	31.12.2014
Tangible assets	145,231	21,053
Tangible assets	12,392,557	11,180,765
Current assets	8,773,589	6,549,541
Total PATRIMONY	***21,311,377***	***17,751,359***

4.2. Total income, of which:

	2013	2014
Total incomes	11,560,303	10,773,665
- Incomes obtained from RD contracts publicly funded (distributed on national and international sources)	7,529,410	6,868,415.33
- Incomes obtained from RD contracts funded from private funds (specifying the sources)	451,943	1,008,124.64
- Incomes from economic activities (services, microproduction, exploitation of intellectual property rights)	3,554,562	2,873,411.03
- Subsidies / transfers	-	-
- Financial incomes	24,388	23,714

Financial and economic situation of INMA:

Incomes INMA (lei)	2013	2014
♦ Income from RDI	7,981,353	7,876,540
♦ Income from economic activities	3,554,562	2,873,411
♦ Financial income	24,388	23,714

ANNEX 2

- **Incomes obtained from RD contracts publicly funded**

Annex 2.1

DEn.No.	Contract No.	Project Title	INMA role in the project	Total Value 2014 (lei)	from which:	
					INMA	Partners
PROGRAM OF PARTNERSHIPS IN PRIORITIES AREAS				***501,146***	***320,254***	***180,892***
1.	35	Promoting in Romania of energetic willow cultivation technology (SALIX VIMINALIS) as an alternative source of clean energy	Holder	284,200	160,308	123,892
2	112	Interdisciplinary researches regarding the seeds treatment with collagen hydrolyzed for increasing the	Partner	30,000	30,000	-

DEn.No.	Contract No.	Project Title	INMA role in the project	Total Value 2014 (lei)	from which:	
					INMA	Partners
		quality indicators, reducing pesticides and ensuring the sustainable development of agricultural production				
3	181	Conservative technology for soil processing (ConsTillTech)	Partner	74,946	74,946	-
4	182	Elaboration of a technology of sturgeons breeding within recirculating water systems in extra season (TESAR acronym)	Holder contractor	112,000	55,000	57,000
IDEAS PROGRAMME				***120,000***	***120,000***	***-***
5.	284	Research on improvement of physical and mechanical properties and of the structure of biodegradable materials for packing from indigenous materials	Holder contractor	120,000	120,000	-
INNOVATION PROGRAM: SUBPROGRAM Development of Products - Systems - Technologies				***171,999***	***171,999***	-
6.	30 DPST	Development of technical innovative equipment designed to lawn rational valorization technology under climate change conditions	Partner	*99,999*	*99,999*	-
7	20 DPST	Multifunctional innovative self-propelled equipment, endowed with working installation designed to small-sized farm works.	Partner	*72,000*	*72,000*	-
SECTORAL PLANNING OF THE MINISTRY OF AGRICULTURE AND RURAL DEVELOPMENT				***416,210***	***373,977***	***42,233***
8.	135	Innovative technology and technical equipment with active driven parts for loosening in depth and increasing of soil fertility	Holder contractor	89,775	89,775	-
9.	311	Technology of mechanization and technical equipment for conditioning and calibration of apples, intended for semi-subsistence fruit growing farms	Holder contractor	172,535	130,302	42,233
10.	736	Mechanization technologies and technical equipment suitable for efficiently harvesting, transportation and conservation of forage plants	Holder contractor	153,900	153,900	-
NUCLEUS PROGRAM				***4,823,505***	***4,823,505***	***0***
11	15N	Researches regarding the development and automation of a technical equipment designed to cleaning and screening of cereal seeds from agricultural producers, in order to reduce processing loss of raw materials from food chain	Holder contractor	35,280	35,280	-
12	15N	Innovative technology aiming to irrigation and climate control in greenhouses	Holder contractor	1,100,000	1,100,000	-
13.	15N	Research and substantiation of a technology of mechanization for establishing and maintaining the energetic poplar crop	Holder contractor	850,000	850,000	-
14.	15N	Innovative technology for conditioning the horticultural products designed to fresh state consumption	Holder contractor	800,000	800,000	-
15.	15N	Researches on performing an integrated system for obtaining extracts with foliar bio-fertilizer/bio-insecticide role in ecological farming	Holder contractor	613,021	613,021	-
16.	15N	Modern technologies and installations for treating, aerating, degasificating and oxygenating the water necessary to ensure the optimum conditions in recirculating aquiferous systems for fish superintensive breeding	Holder contractor	405,204	405,204	-
17.	15N	Researches on intelligent methods and equipment for testing soil and certain agricultural products	Holder contractor	180,000	180,000	-

DEn.No.	Contract No.	Project Title	INMA role in the project	Total Value 2014 (lei)	from which:	
					INMA	Partners
18.	15N	Researches on performing an ecological system for the management of vegetal and animal waste, designed to livestock farms and households	Holder contractor	840,000	840,000	-
CROSS BORDER COOPERATION PROGRAMME ROMANIA - BULGARIA 2007 – 2013				***563,365.30***	***563,365.30***	-
19.	38543	Network and web platform to improve the public awareness on environmental management and protection in the cross-border area Giurgiu-Rousse and adjacent cross-border area	Holder contractor	563,365.30	563,365.30	-
SCIENTIFIC EVENTS				***16,064.52***	***16,064.52***	-
20.	84M	International Symposium «Agricultural and mechanical engineering ISB - INMA TEH` 2014", 30 - 31.10.2014	Holder	8,000	8,000	-
21.	1339	Researcher and Designer Day in Romania - 19 November	Holder	8,064.52	8,064.52	-
INTERREGIONAL COOPERATION PROGRAMME INTEREG IV C				***256,125.51***	***256,125.51***	
22.	1014 R4	Clusters for European Innovation Cross – Linking	Partener	256,125.51	256,125.51	-
TOTAL RESEARCH - DEVELOPMENT CONTRACTS PUBLICLY FUNDED = 22 contracts				**6,868,415.33**	**6,645,290.33**	**223,125**

- **Incomes obtained from research - development contracts financed from private funds**

Annex 2.2

Den. No.	Contract No.	Contract name	Value 2014 (lei)
1.	151	Performing researches designed to determine the resistance: Static resistance tests for special parts - 3 specimens, code: ACV - 051 - 055, according to CS no. 141 / 1990, Chap. 6.15; -Endurance tests for special working parts - 7 specimens; ACV-051-055, according to CS no.141 / 1990, Chap.17	10,812.99
2.	217	Researches on finding out the resistance of a forestry tractor cabin by: static resistance tests ROPS accord. to D2009/75/CEE; static resistance tests FOPS accord.to ISO 8083;2006; static resistance tests OPS accord.to ISO 8084:2003	24,610.24
3.	286	Testing the improved system of drilling the planting holes by establishing an orchard plantation in fallow land	1,200.00
4.	506	Researches on designing a lavender harvesting equipment	11,770.16
5.	719	Researches on determination of resistance: static resistance tests for special parts-3 specimens code: ACV-051-055, accord to. CS no. 141/1990, Chap. 6.15; Endurance tests of special working parts - 7 specimens: ACV-051-055, accord to. CS no. 141/1990, Chap.6.17	10,543.03
6,	869	Researches performed by the provider on separation of parasite seeds, using the magnetic separator. Buyer's acquisition of a magnetic separator for removing the parasite seeds from alfalfa seeds	75,311.70
7.	80	Innovative technology for establishing the onion crop from seeds	270,528.00
8.	80	Researches on increasing the degree of automation in technological livestock processes by implementing a dosing/packing software of nutritive substances	148,833.00
9.	80	Researches on manufacturing a technical equipment designed to ecological maintenance works in orchards.	156,954.00
10.	80	Researches on management and high capitalization of vegetal and organic waste as bioenergy (BIOGAS)	234,568.00
11.	1446	Researches on manufacturing an equipment for obtaining the essential	57,569.26

		oils (500 l) by distillation	
12.	545	Researches regarding the analysis of metallic structures	1,466.83
13.	369	Researches on analysis of assembly marks from cattle breeding stables	2,189.00
14.	826	Researches on analysis of assembly marks of hydraulic installations	1,546.74
15.	1426	Static tests in voluntary regime, designed to cabin apparata, according to SR EN 81 – 21:2010 paragraph 5.7.5 character C	221.69
TOTAL			**1,008,124.64**

- **Incomes obtained from economic activities** (services, microproduction, exploitation of intellectual property rights)

Annex 2.3

Den. No.	Contract No.	Contract name	Value 2014 (lei)
CONTRACTS REGARDING THE ASSESSMENT FOR THE PURPOSE OF GRANTING THE CERTIFICATION OF PRODUCTS CONFORMITY			**64,386.41**
1.	478(P)	Snow removal plow, model FCS 125, FCS 150, FCS 170, FCS 180, FCS 200, FCS 230, FCS 250	865.11
2.	464 (P)	Soil cutter RS-1000; RS-1100; RS-1200; RS-1300; RS-1400; RS-1500; RS-1600; RS-1700	1,649.53
3.	463 (P)	Corn sowing machines 2BYF-3; 2BYF-4	941.31
4.	482(P)	Towed machine for applying herbicides: MET-1500; MET-2000; MET-2500; MET-3000; MET-4000	5,961.15
5.	483(P)	Sprinkling machine for vineyards and orchards: ATOM-300; ATOM-400; ATOM-1000; ATOM-1500	4,021.35
6.	484(P)	Universal hammer mill:MCU-2,2; MCU-7,5; MCU-11; MCU-22; MCU-30	4,034.63
7.	485(P)	Structural mill: MS-15; MS-18; MS-22; MS-30; MS-37; MS-45	4,034.63
8.	486(P)	Machine for applying herbicides AgriPLA GD 4000	1,802.40
9.	470(P)	Refrigerator swing doors: HINDER 70; HINDER GV, HINDOR 90, HINDOR 120; sliding doors: SLIDER 70; SLIDER 90, SLIDER GV; SLIDOR 120; technical doors: HINDON; WINDON	813.45
10.	471(P)	Motor cultivator KDT 610C (without accessories)	804.51
11.	006(M)	Horizontal mobile endless saw FMP 101; FMP 101M	6,361.30
12.	007(M)	Hydraulic press, type PH 1000	4,533.41
13.	427(P)	Centrifugal pump with thermal engine, model WTH 40	664.62
14.	428(P)	Centrifugal pump with thermal engine model WTH 60	664.62
15.	444(P)	Class of machines designed to seeds treatment MTS/PC (MTS-3; MTS-5; PC-20)	2,493.30
16.	473(P)	Motor cultivator KDT 410C (without accessories)	789.84
17.	009(M)	Cabin as 2150.1.0	11,882.67
18.	459 (P)	Motopump for impure water GTP 80	443.38
19.	008M	Hydraulic press with open frame PHC-80 type	4,539.74
20.	005 (M-A)	Cabin for forestry tractor TAF 2012	1,289.43
21.	445 (P)	Forestry hinged tractor TAF 690.OP; TAF 901. OP	2,539.26
22.	477(P)	Forestry hinged tractor TAF 2012	2,464.45
23.	476(P)	Motor cultivator KDT 910E (without accessories)	792.32
INCOMES FROM SERVICE PROVISION			***2,809,024.62***
TOTAL			**2,873,411.03**

4.3. Total expenses

	2013	2014
Total expenditures	11,477,317	10,693,655

4.4. Gross profit

	2013	2014
Profit before tax	82,986	80,010

4.5. Gross loss: -

4.6. The situation of arrears: -

Economic and financial strategy of the institute establishes the reduction up to elimination of back payments. Thus, on 25.01.2015, the institute has not have any back payments.

4.7. Economic and social policies implemented (cost / effect)

	2013	2014
Economic and social policies implemented (cost / effect):	-	-

4.8. Evolution of economic performance:

	2013	2014
Financial rate of return (FRR = Net profit / Own assets), %	0.28	0.1
General solvency ratio (GSR = Total current assets / Current debts), %	770.28	625.41
Financial autonomy rate (FAR= Own assets / Permanet capital), %	97.56	130.09
Economic rate of return (RE = Gros profit / Permanet capital), %	0.95	1.22
Work productivity W = Turnover / average personnel number / 12 months), lei/person/month	4,646.62	4,437.30

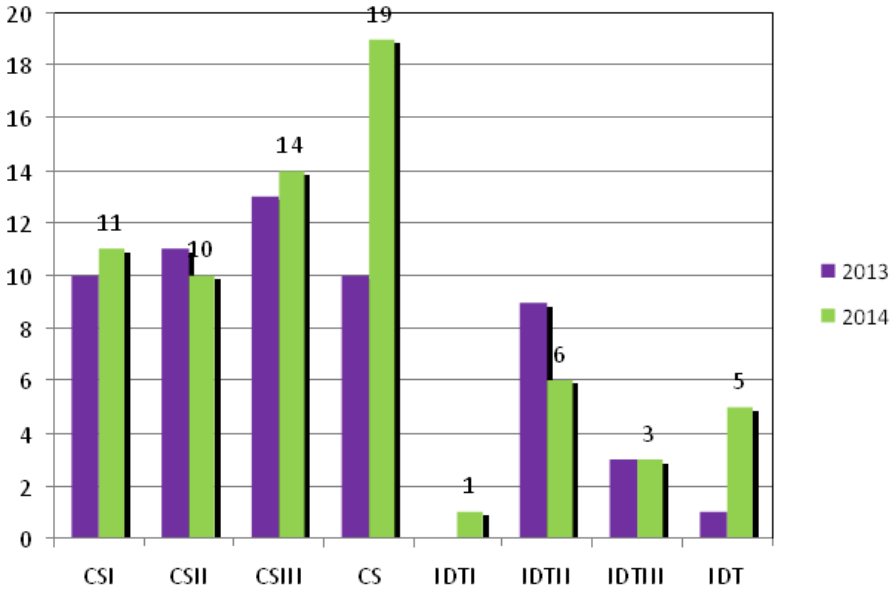
5. STRUCTURE OF R & D HUMAN RESOURCE

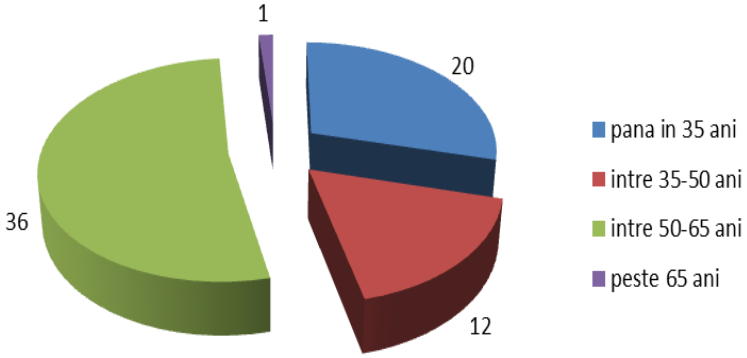
5.1. Total personnel, of which:

Year	2013	2014
TOTAL PERSONNEL	**175**	**157**
R&D PERSONNEL, of which:	**141**	**126**
a) R & D attested personnel with higher education	57	69
b) number of PhD rulers	-	-
c) number of PhDs	29	28

STRUCTURE OF RD PERSONNEL ON PROFESSIONAL DEGREES

Personnel engaged in scientific research		***Personnel who carry out technological development***	
ATTESTED: 69			
CS I	**11**	***TDE I***	**1**
SR II	**10**	***TDE II***	**6**
SR III	**14**	***TDE III***	**3**
SR	**19**	***TDE***	**5**
UNATTESTED: 6			
SRA	***4***	***ENG.***	***2***
TOTAL	**58**	**TOTAL**	**17**





Number of PhDs: 28

Den.No.	Name and Surname	Professional Degree	Ph.D. thesis year
1.	Alexandru Isabela	SR III	1999
2.	Bădănoiu Bianca	SR II	2004
3.	Bodea Codruţ	SR III	2008
4.	Brăcăcescu Carmen	SR III	2011
5.	Cioica Nicolae	SR I	2006
6.	Ciupercă Radu	SR II	1999
7.	Cozar Onuc*	SR I	1970
8.	Danciu Aurel	SR III	2013
9.	Drâmbei Petronela	SR I	2003
10.	Ganea Ioan	TDE II	2009
11.	Găgeanu Paul*	SR I	2002
12.	Ivan Gheorghe	TDE I	2009
13.	Koloszvary Constantina	SR III	2008
14.	Manea Dragoş	SR III	2011
15.	Mateescu Marinela	SR II	2004
16.	Marin Eugen	SR II	2004
17.	Muraru-Ionel Cornelia	SR I	1998
18.	Muraru Vergil*	SR I	2001
19.	Nedelcu Ancuta	SR II	2004
20.	Nedelcu Mihail	SR III	2010
21.	Nicolescu Mircea*	SR I	2007
22.	Păun Anişoara	SR I	2004
23.	Pirnă Ion*	SR I	1997
24	Pop Augustin	SR I	2000
.25.	Popa Lucreţia	SR II	2004
26.	Sorică Cristian	SR III	2011
27.	Vişan Alexandra Liana	SR III	2012
28.	Vlăduţ Valentin*	SR I	2004

* Member in Ph.D commissions

PhD Students: 27	MS students: 1
1. Vlăduţoiu Laurenţiu **2.** Andrei Sorin **3.** Matache Mihai **4.** Muscalu Adriana **5.** Nagy Elena Mihaela **6.** Sima Daniela **7.** Voicea Iulian **8.** Ciobanu Valeria Gabriela **9.** Sorică Elena **10.** David Alexandru Dorin **11.** Radu (Cristea) Oana Diana **12.** Mitu Mariana **13.** Niţu Mihaela **14.** Zaica Alexandru **15.** Dumitraşcu Andrei **16.** Pruteanu (Stanciu) Mirabela **17.** Coşniţă Daniel **18.** Perşu Cătălin **19.** Zaica Ana **20.** Ivancu Bogdan **21.** Lazăr George **22.** Petcu Albert **23.** Cujbescu Dan **24.** David Evelin Anda **25.** Ştefan Vasilica **26.** Coţa Constantin	**1.** Gheorghe Gabriel

27. Găgeanu Iuliana	

5.2. Information on activities of improving the human resource (personnel involved in training processes - training courses, refresher training)

- **Pedagogical activity**
  - **Associate Professor: 7**
    - U.P. Bucharest - Faculty of Engineering of Biotechnical Systems: Prof.PhD. Eng. Pirnă Ion, PhD. Eng. Vlăduţ Valentin, PhD. Eng. Păun Anişoara, PhD. Eng. Manea Dragoş, PhD. Eng. Mateescu Marinela;
    - Babes Bolyai University Cluj-Napoca - Faculty of Chemistry: Prof.PhD. Eng. Cozar Onuc;
    - Technical University of Cluj-Napoca, Department of Road Vehicles and Transports: PhD. Eng. Cioica Nicolae.
  - **Referrers doctoral commissions: 3**
    - Pirnă Ion, Vlăduţ Valentin, Cozar Onuc.
  - **Cycle of practical training activities for students:**
    - USAMV Bucharest, Faculty of Biotechnology: 114 students;
    - University Politehnica of Bucharest, Faculty of Biotechnical Systems Engineering: 138 students (47-licence, 91-master).
  - **Cycle of documentation and consulting activities for bachelor / master / doctorate:**
    - Polytechnic University of Bucharest, Faculty of Biotechnical Systems Engineering;
    - Transilvania University of Brasov, Faculty of Food and Tourism;
    - University of Craiova, Faculty of Agriculture and Horticulture.
- **Personnel involved in the training process** within the ***Training Center* – INMA**: **49**
  - training program for the occupation **"***Operator in computer-aided design*" / INMA Bucharest / 9 students / 28.07 – 1.08.2014 / lecturers: *Ph.D. Eng. Marin Eugen, Ph.D. Eng. Manea Dragoş, Math. Cârdei Petru;*
  - training program for the occupation "*Specialist in computer-aided design*" / INMA Bucharest / 15 students / 4-8.08.2014 / lecturers: *Math. Cârdei Petru, Ph.D.. Eng. Muraru Vergil, Ph.D.Eng. Manea Dragoş;*
  - training program for the occupation "*Trainer*" - Series VII / INMA Bucharest / 25 students / 24-28.11.2014 / lecturers: *Prof. Ph.D. Eng. Pirnă Ion, Ph.D.. Eng. Bădănoiu Bianca.*
- **Personnel involved in internal training of staff within INMA Bucharest, in 2014**: **12**

- Training the specialized personnel for the occupation of "Welder" for: Preparing the welding/cutting operation; Performing the welding/cutting process; Performing the post welding operations, achieved on 15.04.2014 / 2 students / lecturer – *Asst. eng. Marian Mihai;*
- Training of personnel specialized in "*Control, diagnosis and reparation of electric installations*" / 17.04.2014 / 2 students / lecturer – *Eng. Pop Florin;*
- Training of personnel specialized in "*Technical conditions- roughness provided in drawings of manufacturing the agricultural machines parts*" / 30.09.2014 / 12 students / lecturer – *Ph.D. Eng. Ivan Gheorghe*;
- Training of personnel specialized in "*Computer- aided design with Solid Works program*" / 14.10.2014 / 11 students / lecturer – *Ph.D. Eng. Marin Eugen;*
- Training of personnel specialized in "*Tolerances and fits in machinery building"*/ 17.10.2014 / 11 students / lecturer – *Ph.D.. Eng. Ciupercă Radu;*
- Training of personnel specialized in "*Choosing materials, rougnesses and treatments in machinery and technical equipment building*" / 24.10.2014 / 11 students / lecturers: *Ph.D. Eng. Nedelcu Ancuţa*, *Ph.D. Eng. Popa Lucreţia;*
- Training of personnel specialized in "*Indirect transmissions*" / 29.10.2014 / 11 students / lecturers *Ph.D. Eng.. Păun Anişoara, Ph.D. Eng . Găgeanu Paul;*
- Training of personnel specialized in Enforcement of *NPM, PSI and technical provisions ISCIR. Documents Completion*" / 24.10.2014 / 1 student / lecturer: *Eng. Pop Florin;*
- Training of personnel specialized in "*Assembling/desassembling of equipment and finding out their failures; Exploitation and maintenance of tool machines; with fulfillment of NTSM and PSI*" / 28.11.2014 / 1 student / lecturer: Asst. e*ng. Marian Mihai;*
- Training of personnel specialized in "*Intern audit of quality*" / 21.11.2014 / 18 students / lecturer: *Ph.D. Eng. Bădănoiu Bianca.*

5.3. Information on the development policy of research and development of human resources

Emergence of advanced research results developed at the institute is possible due to multidisciplinary research teams (technical training engineering, technology, agriculture, management, etc.) and the quality of the human resource.

In this regard the following strategic measures were implemented:

- Attracting young people in the approach research, development and innovation specific to mechanization technologies and construction of technical equipment for agriculture and food industry;
- Supporting young people in shaping careers in the scientific research and the creation of appropriate facilities for information and communication activities;
- Personnel motivation and stimulation concurrently with the qualitative and responsible involvement;
- Encouraging of researchers by doctorate, specialization, training and development;
- The occupation of positions in the research system promoted by the institute is achieved only through competition.

In INMA, the personnel policy aims to enhance professionalism, relevant intellectual values in compliance with international competitivennes criteria.

Policy of human resources development includes a series of strategic objectives within which development directions with specific objectives aiming to optimize the institute activity, are very important.

1. **Efficiency of existing human resources**, as a strategic objective will be achieved through the following development directions:
   - increasing the standard performance of researchers according to national/international requirements;
   - real and rigorous integration of ph.D Students within the institute research activity;
   - making the support staff more efficient by a superior organization and diversification of cooperation and communication forms;
   - ensuring of result-oriented personnel;

- diversifying the methods of motivating the staff;
- introducing specific reward methods for the research staff.

2. **Employing of new, competitive personnel**:
   - establishing multidisciplinary teams of specialists, able to tackle border inter or pluridisciplinary areas (biology, chemistry, electronics-IT, etc);
   - diversifying the forms of personnel recruitment and selection for attracting high competitiveness specialists;
   - measures of rapid and efficient integration of youngsters by making them aware of institute objectives through different incentives (facilities granted to beginners, superior motivation by accelerating the comparative advantage principle).
3. **Ongoing training of personnel**, in compliance with institute aims and specific activities.
   - flexible and efficient policy of field specialization by training activities, training and skill improving courses, internal training, experience exchange;
   - periodical (annual) evaluation of performances, as an enhancing method of scientific production and career promotion;
   - identification of more efficient methods of communication with personnel;
   - permanent evaluation and competences optimization;

   INMA Bucharest is authorized to provide vocational training through :

✓ Centre of Vocational Training – Authorization of functioning, series B no. 0002352/30.07.2008.
✓ Centre of Evaluation and Certification of Professional Competences - Authorization of functioning series A no. 00866/25.11.2010.

- **Involvement in employees occupational health**, as a continous concern and important component of human resources management in INMA is achieved by
- assuring the periodical medical assessment of personnel;
- periodical investigation of employee satisfaction.

5. **Efficient management of support (technical and-administrative) personnel :** within the human resources strategy, it is necessary to focus on making more efficient the support personnel activity, as well as the technical and and administrative personnel, by implementing a high quality management according to European standards.
   - running training programs for increasing the employee competence;
   - drawing up the job description based on scientific criteria for implementing a high quality management .

♦ Personnel participating in internal trainings during 2014

Den.No.	Name and surname	Course of training / qualification
1.	Ciobanu Valeria-Gabriela	COMPUTER-AIDED DESIGN WITH SOLID WORKS PROGRAM
2.	David Alexandru Dorin	
3.	Găgeanu Iuliana	
4.	Gheorghe Gabriel	
5.	Ivancu Bogdan	
6.	Lazăr George	
7.	Petcu Albert-Silviu	
8.	Ştefan Vasilica	
9.	Vişan Alexandra	
10.	Zaica Ana	
11.	Zaica Alexandru	
1.	Ciobanu Valeria-Gabriela	MATERIAL CHOOSING
2.	David Alexandru Dorin	
3.	Gageanu Iuliana	
4.	Gheorghe Gabriel	
5.	Ivancu Bogdan	
6.	Lazăr George	
7.	Stefan Vasilica	
8.	Toderaşc Petruta	
9.	Petcu Albert -Silviu	
10.	Visan Alexandra Liana	

11.	Zaica Ana	
12.	Zaica Alexandru	
1.	Ciobanu Valeria-Gabriela	TECHNICAL CONDITIONS-ROUGNESS PROVIDED BY MANUFACTURING DRAWINGS OF AGRICULTURAL MACHINERY PARTS
2.	David Alexandru Dorin	
3.	Găgeanu Iuliana	
4.	Gheorghe Gabriel	
5.	Ivancu Bogdan	
6.	Lazăr George	
7.	Petcu Albert-Silviu	
8.	Ştefan Vasilica	
9.	Vişan Alexandra	
10.	Zaica Ana	
11.	Toderaşc Petruţa	
12.	Zaica Alexandru	
1.	Ciobanu Valeria-Gabriela	INDIRECT TRANSMISSIONS
2.	David Alexandru Dorin	
3.	Găgeanu Iuliana	
4.	Gheorghe Gabriel	
5.	Ivancu Bogdan	
6.	Lazăr George	
7.	Petcu Albert-Silviu	
8.	Ştefan Vasilica	
9.	Vişan Alexandra	
10.	Zaica Ana	
11.	Zaica Alexandru	
1.	Ciobanu Valeria-Gabriela	CHOOSING THE TOLERANCES AND FITS
2.	David Alexandru Dorin	
3.	Găgeanu Iuliana	
4.	Gheorghe Gabriel	
5.	Ivancu Bogdan	
6.	Lazăr George	
7.	Petcu Albert-Silviu	
8.	Ştefan Vasilica	
9.	Vişan Alexandra	
10.	Zaica Ana	
11.	Zaica Alexandru	
1.	Radu Marin	ELECTRICIAN
2.	Drăgoi Petre	
1.	Gheorghe Costel	WELDER
2.	Grigore Elena	
1.	Ungureanu Ion	STOKER
1.	Dumitru Florin	MAINTENANCE MECHANIC

Personnel which benefited of external training during 2014

Den.No.	Name and surname	Training course / Provider company
1.	Cârcel Cristina Virginia	**INSPECTOR / HUMAN RESOURCES COUNCELLER /** SC EXTREME TRAINING SRL
1.	Vlădutoiu Laurenţiu	**MANAGEMENT OF A CLUSTER AND FINANCING POSSIBILITIES /** GEA STRATEGY & CONSULTING
1.	Petcu Albert-Silviu	**HYDRAULIC AND PNEUMATIC DRIVING /** IHP-INOE 2000
2.	Lazăr George	
3.	Gheorghe Gabriel	
4.	Ştefan Vasilica	
5.	Seltea Valeriu	
6.	Ene Cristian	

1.	Matache Mihai Gabriel	**PRESENTATION OF REQUIREMENTS FOR LABORATORY OF TESTING AND SRI STANDARDI SR EN ISO 17025:2005 /** RENAR
2.	Sorică Cristian Marian	
3.	Voicea Iulian Florin	
1.	Voicea Iulian Florin	**MANAGEMENT OF EMERGENCY SITUATIONS /** CIOLPANI (IGSU-CNPMSU-UM nr. 0490)
1.	Persu Catalin	**EVALUATION OF MEASURING INCERTITUDE IN LABORATORIES OF TESTING-COMPUTER DEVICES /** FIATEST
1.	Vişan Alexandra-Liana	**PROJECT EVALUATOR /** AVAMGARDE BUSINESS GROUP S.R.L
1.	Vişan Alexandra-Liana	**EXPERT IN ACCESSING STRUCTURAL AND EUROPEAN COHESION FUNDS /** S.C. STRUCTRAL EURO FOOD & TRAINING S.R.L. Bucharest
1.	Niţu Mihaela	**RESPONSIBLE OF QUALITY MANAGEMENT OF AN ACCREDITED/IN COURSE OF BEING ACCREDITED LABORATORY- SPECIFIC REQUIREMENTS OF STANDARD SR EN ISO 17025:2005 /** FIATEST
1.	Vişan Alexandra-Liana	**PROJECT MANAGER /** S.C. STRUCTRAL EURO FOOD & TRAINING S.R.L. Bucharest
1.	Constantinescu Lidia	**WORKPLACE HEALTH AND SAFETY INSPECTOR /** SC PRINCIPIO CONSULTING SRL
1.	Andrei Sorin	**TRAINER /** Centre of Vocational Training INMA Bucharest
2.	Bogdanof Constantin	
3.	Bunduchi George	
4.	Ciobanu Valeria	
5.	Cujbescu Dan	
6.	Ganea Ioan	
7.	Ivancu Bogdan	
8.	Gheorghe Gabriel	
9.	Lazar George	
10.	Milea Dumitru	
11.	Mitu Mariana	
12.	Nitu Mihaela	
13.	Persu Catalin	
14.	Zaica Alexandru	
15.	Petcu Albert	
16.	Pruteanu Augustina	
17.	Radu Oana	
18.	Ştefan Vasilica	
19.	Vişan Alexandra	
20.	Vlăduţoiu Laurentiu	

6. R&D INFRASTRUCTURE, RESEARCH FACILITIES

6.1. R & D Laboratories:

- Laboratory for Advanced Research for technologies of agricultural works mechanization;
- R&D laboratory for biofuels;
- R&D laboratory for biogas;
- Laboratory of irrigation and phytosanitary treatments;
- Laboratory of research and development, recovery of medicinal plants;
- Laboratory for the assessment of the mechanization technologies;
- R & D Laboratory for technologies for the superintensive fish rearing in recirculating systems - Branch of Timişoara;
- R & D Laboratory for Biopolymers - Branch of Cluj;
- R & D Laboratory for technologies, installations and technical equipment intended for the storage and processing of cereals and technical plants seeds;
- R & D Laboratory for technologies for food industry – LCTIA;
- R & D Laboratory for mechanization technologies for soil, adapt to climate change at Euroregional level and for agricultural crops establishment in conservative system;
- R & D Laboratory for harvesting, transport and handling of agricultural products and forages;
- R & D Laboratory for feeding stuffs harvesting and food preparation in livestock;
- R & D Laboratory for soil fertilization, according the concept of sustainable agriculture;
- R & D Laboratory for afforestation works and the establishment of protective forest belts of agricultural crops.

ADVANCED RESEARCH LABORATORY FOR MECHANIZATION TECHNOLOGIES OF AGRICULTURAL WORKS

DESCRIPTION

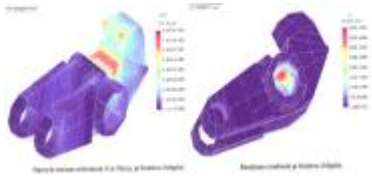
The laboratory's mission is to perform advanced research based on information technology, computerized engineering, mathematical modelling and numerical simulation for the mechanization technologies of the agricultural works and adjacent areas and their related fields. The secondary activity is represented by the participation in all other research themes of the institute (mathematical modelling, simulation, optimization, software development, etc.).

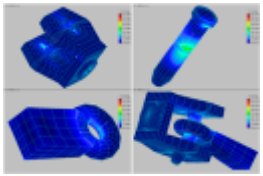
The laboratory has technical equipment of top: PCs of high capacity with licensed software (MATHCAD, COSMOS / M, MATLAB, MATHEMATICA, AutoCAD Civil 3D, FLAC 6.0, 5.1 LIMA, VERIS, including license of Microsoft Office, Visual Studio and Visual FoxPro database) laptops , laser printers, color and black and white A4 and A3, integrator sonometer, mini weather station, penetrometer, moisture meter, water analysis system, GPS, cereal flow measurement equipment at combines, mobile communication unit with amenities of GPRS, SMS and Internet. For the presentation of the activity, the laboratory has performant photo and video equipment.

KEYWORDS: information technology, computerized engineering, mathematical modelling, numerical simulation, optimization, software development

RESEARCH DIRECTIONS

- Interaction of mechanization technologies - agriculture - environment;
- classical and advanced systems and technologies for the precision agriculture, new and advanced systems and technologies in the sustainable agriculture;
- Information System for agriculture, including databases;
- Mathematical modelling and numerical simulation of processes and phenomena related to agricultural mechanization technologies of mechanizing the agricultural works for improvement , optimization greening agriculture;;
- Structural analysis;
- Environmental problems (erosion, landslides, changes in soil organic matter in the light of changing the environmental parameters);
- Experimental data processing services and mathematical modelling of the processes investigated experimentally;
- precision agriculture; agricultural soil analysis services.






R & D LABORATORY FOR BIOFUELS

DESCRIPTION

The LABORATORY has the mission to research and develop modern technologies of obtaining vegetal oils from oil plant seeds (rape, sunflower soya, flax, castor oil, pumpkin, camelin, etc.).

Installation consists in three modules: preparation of seeds, obtaining the oil, purifying the oil, each module being able to operate independently, but an interdependency existing within each module; technical equipment operating by interblocking system and ensuring the obtaining of the pure oil without the degumming operation.

KEYWORDS: pilot installation, biofuel, energy independence, clean energy

RESEARCH DIRECTIONS

- research and development of processes, technologies and technical equipment designed for processing of oleaginous seeds;
- identification of new resources for obtaining renewable energy resources;;
- promoting the concept of ENERGETIC INDEPENDENCE OF THE ROMANIAN FARMER and also the reduction of the classical fuel consumption, big polluters of the environment due to emissions of greenhouse gases
- new technologies for full recovery of byproducts (groats) resulting when obtaining of vegetable oils;
- new strategies for the capitalization of research results in small and medium farms.

R&D LABORATORY FOR BIOGAS

DESCRIPTION

The laboratory aims the R & D oriented to the creation of new mix recipes in order to obtain biogas, in different fermentation regimes. It has a modern research base consisting of a pilot plant for biogas obtaining in small and medium-sized farms, equipped with monitoring and control system for converting biogas into electricity and photovoltaic system capable of ensuring the energy independence of the installation. The monitoring and control system of biogas pilot station allows the user to modify the operating parameters of the installation and anaerobic fermentation process specific parameters.

KEYWORDS: biogas, pilot installation, energy independence, environmental protection

RESEARCH DIRECTIONS

- identification of new sources of biomass with fermentative potential for obtaining of renewable energy;
- performing of biogas recipes with various fermentative substrates, for different fermentation regimes, to meet the demands of small and medium farmers;
- microbial and viral inactivation technologies for digestate;
- valorisation in the form of natural fertilizer of the digestate resulted after the anaerobic fermentation;
- management strategies on the integrated capitalization of biogas in the small and medium-sized farms.

LABORATORY OF IRRIGATION AND PHYTOSANITARY TREATMENTS

DESCRIPTION

The LABORATORY has as task the research-development and investigation of irrigation and equipment systems and the application of phytosanitary treatments in agriculture.

The system for investigating of the application of irrigation in agriculture includes automated pumping stands of various powers, a data acquisition and control system with SCADA station, transducers for flow, temperature and a testing equipment to determine the coefficient of variation of the droppers of dripping irrigation lines, flow - pressure curve and the response at hydrostatic pressure.

The system for investigating of the application of phytosanitary treatments of agricultural crops includes testing equipment, phytosanitary machines in high culture, a testing equipment of phytosanitary machines for vineyards and orchards and a combined stand for testing of pumps and manometers and the flow rate calibration of phytosanitary machines in the high culture, orchards and vineyards.

KEYWORDS: irrigations, phytosanitary treatments, testing, environment protection

RESEARCH DIRECTIONS

- research and development of processes, technologies and technical equipment for crop protection in the context of a sustainable agriculture;
- increasing the accuracy of determination of qualitative indices for irrigation, in order to implement in the INMA laboratory of the requirements of EU regulations;
- verification of the conditions with which must comply the machines for the application of phytosanitary treatments in relation to hazards related to the safety of the operator performing the testing, to the potential danger of environmental contamination and to the optimal protection of the plants by the application of an optimal amount of plant protection substances;
- identification, development and testing of new systems of irrigation of agricultural crops in the context of the energy crisis and of the more obvious danger of desertification at Romania level and of the central area of the European Union;
- elaboration of management systems for irrigation processes, of data collection and of mechatronic systems for monitoring of the irrigation process parameters.

R & D LABORATORY FOR CAPITALIZATION OF MEDICINAL PLANTS

DESCRIPTION

The LABORATORY has as task the research and development directed towards the full capitalization of the medicinal and aromatic plants in the form of teas, volatile oils, tinctures, food additives etc. requiring the diversification and modernization of technological processes and performing of thechnical equipment with high technical and economic parameters. For this, it is necessary that in Romania exists a diversified offer of technological installations complying with the rules and regulations in force in the EU on quality, life safety and environmental protection. In this portfolio of offers the processing installations of this natural wealth- cultivated plants or from the spontaneous flora, which can contribute to the increasing of quality of life in rural areas, has to be present.

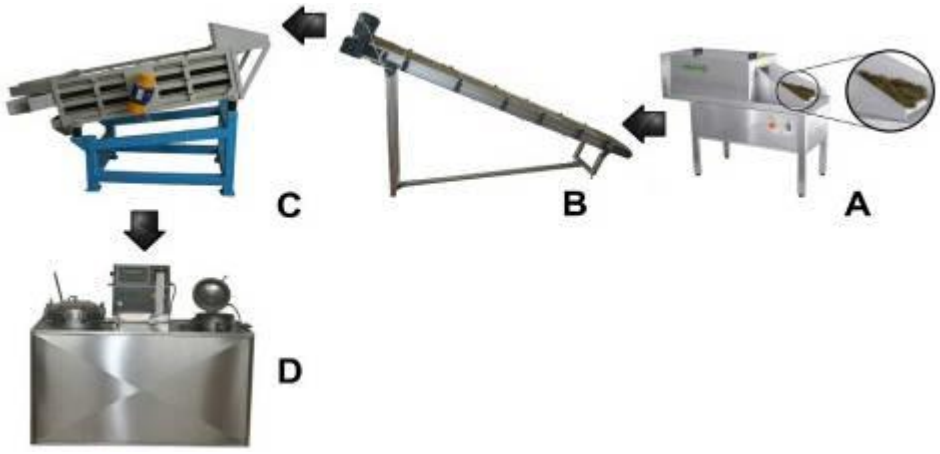
The equipment for primary processing of medicinal and aromatic plants successively takes plant material subjected to processing; primary processing equipment being placed in line, they being able to be placed in different forms, depending on site or available precint of the user. The primary processing line of medicinal and aromatic plants contains the following equipment:

- cutting machine for plants;
- inclined conveyor with band;
- sorter of cut plants;
- drip pan.

KEYWORDS: medicinal plants capitalization, extracts biologically active, food supplements

RESEARCH DIRECTIONS

- better use of local plant resources;
- identifying new sources of medicinal plants cultivated or wild flora potentially beneficial to human health;
- the primary processing of different types of medicinal plants to obtain different kinds of bioactive extract containing various types of biochemical substances beneficial to the health of the human population;
- the identification of new bioctive substances with beneficial role on human health
- obtaining of new extracts with role of food supplements;
- the opportunity of subsequently performing of a range of machines with different processing capacities to adapt to local conditions in terms of plant species and quantities to be processed;
- management strategies regarding the superior capitalization of medicinal plants of the territory of Romania.



LABORATORY FOR THE EVALUATION OF MECHANIZATION TECHNOLOGIES

DESCRIPTION

The LABORATORY has as task the research and development of studies and researches in the field of mechanization technologies of the works in agriculture (soil tillage, crop establishment and maintenance) adapted to regional conditions and aligned to the concept of sustainable agriculture.

KEYWORDS: tillage, establishment, maintenance, agricultural crops, sustainable agriculture.

RESEARCH DIRECTIONS

- research on the processes, technologies and machinery for mechanization and automation of works in agriculture and food industry adapted the concept of *sustainable agriculture;*
- studies and research on the impact of soil works mechanization technologies, establishment and maintenance of crops, in order to adopt the systems of agricultural land sustainable use adapted to regional conditions which prevent or minimize soil degradation, restore the productive capacity and degraded soil processes and provide increases of food production.




R & D LABORATORY FOR TECHNOLOGIES AIMED TO SUPERINTENSIVE BREEDING OF FISH IN RECIRCULATING SYSTEMS

DESCRIPTION

The LABORATORY has as task the research and development of new technologies designed to fish superintensive breeding in a recirculating system with the optimization of technological parameters and assuring of sanitary and veterinary protection.

KEYWORDS: acvacole recirculating systems, sturgeons, pike perch reproduction

RESEARCH DIRECTIONS

- fundamental and technological development research applied in the field of processes, technologies and technical equipment within aquiferous systems, especially the recirculating systems.
- promoting sustainable agriculture to diversify fish production and marketing of valuable species for which there is a demand and consumption tradition;
- using heat pumps, solar cells and photovoltaic alternative energy source for heating / cooling and water heating / cooling hall and additions;
- promotion and expansion of developed technologies and machinery resulting in the establishment of new farms in aquaculture in Romania to obtain material for consumption and populating fish in a natural environment.



R & D LABORATORY FOR BIOPOLYMERS

DESCRIPTION

The LABORATORY has as task the research and development of new recipes of mixtures in order to obtain environmentally friendly biodegradable materials, of the type of bioplastics from renewable sources. It is endowed with a modern research base which comprises an extrusion lamination installation consisting in: laboratory extruder with two co-rotating screws type ZK25x30D, with microprocessor for control with the possibility of adjusting and maintaining the temperature in the five areas of work and in the mold; granulation plant and rolling mill, all manufactured by Collins company, Germany. In the component of the installation also enter a volumetric dispenser starch with double screens with continuous regulation of the flow rate between 0.3 and 10 kg/h, two peristaltic dosing pumps for supplying the liquid components, an installation for cooling of rollers and vacuum pumps for degasing. In order to perform of analysis and measurements, the laboratory is equipped with a precision balance Partner type WLC 0.6 / B1, a device for measuring the melting point Kruss KSP 1N Programmable Rheometer Brookfield DV-III Ultra type and a circular bath Brookfield type TC150SD..

The monitoring and control system of the installation allows the user to change its operating parameters according to the materials that make up the recipe.

KEYWORDS: biopolymers, bioplastics, extrusion, rolling, environmental protection

RESEARCH DIRECTIONS

- Creation of different recipes of bioplastics with various compositions;
- Research in the field of identification and control of nanostructure processes ,especially in terms of compatibility components, physicochemical transformations during processing mixtures and biodegradation products;
- Studies on products comparison based on biological materials with non-biological ones in terms of price, performance, availability and environmental benefits;
- Diversification and increase of farmers' income by capitalization of potential of biopolymer-based products;
- Studies on behavior of the user of renewable resources biodegradable products and their opininon regarding the benefits and their use;
- Management strategies for exploitation of biopolymers in SMEs.



R & D LABORATORY FOR "*TECHNOLOGIES, EQUIPMENT AND TECHNICAL INSTALLATIONS FOR THE STORAGE AND PROCESSING OF CEREAL AND TECHNICAL PLANT SEEDS*"

DESCRIPTION

The LABORATORY has as task to conduct scientific research (fundamental, applied and technological development) in the field of processes, technologies and machinery storage and processing of grain and seed crops in the context of tracing a healthy food chain and its vision of a healthy and equitable world.

KEYWORDS: primary processing, seed processing, chemical treatment, processing, storage;

RESEARCH DIRECTIONS

- research and development of processes, technologies and machinery for obtaining seeds;
- research and development of processes, technologies and technical equipment for chemical treatment of seeds;
- research and development of processes, technologies and machinery for obtaining concentrated fodder;
- research and development of processes, technologies and technical equipment for the storage of grain and seed crops;
- research and development of processes, technologies and machinery for processing cereal seed.

R & D LABORATORY FOR FOOD INDUSTRY TECHNOLOGIES – LCTIA

DESCRIPTION

The LABORATORY has as its task the research and development in order to substantiate of innovative technologies in the food industry, enabling small businesses to get new products, competitive on market. The laboratory has a comprehensive research infrastructure consisting of modern equipment with multiple functions: Soxhlet extraction system, HEI-VAP Rotavapor type BASIC 1 / G1B, Abbe refractometer manual, hectoliter weight determination, moisture analyzer, analytical balance, oven roasting, oven , sieving system, rotational viscometer, double distillator.

KEYWORDS: food industry, innovative technologies

RESEARCH DIRECTIONS

- Physico-chemical characterization of vegetable oils;
- Determination of fat in foodstuffs;
- Physical characteristics (moisture, ash, grit, density, viscosity, refractive index, surface tension) of food products;
- Research into the identification of functional foods;
- Identification of innovative technologies for processing products direct application in the food industry.

R & D LABORATORY FOR TECHNOLOGIES FOR MECHANIZATION OF SOIL WORKS, ADAPTED TO CLIMATE CHANGES AT EUROREGIONAL LEVEL AND FOR ESTABLISHMENT OF AGRICULTURAL CROPS IN CONSERVATIVE SYSTEM

DESCRIPTION

The Research and Development Laboratory has as mission, at the request of farmers, the promotion of new generations of machinery and technologies of tillage mechanization adapted to climatic conditions in reducing emissions of greenhouse gases, preventing or minimizing soil degradation, contributing to the restoration of productive capacity and life processes of soil.

KEYWORDS: agricultural equipment and technologies, soil degradation, climate conditions.

RESEARCH DIRECTIONS

- development of R & D projects in partnership with economic entities in order to transfer research outcome concretized in manufacturing products of competitive price and market demand.
- the elaboration of mechanization technologies of high productivity regarding the decompaction and aeration in depth of the poor soils concomitantly with the administration of nutrient elements;
- promotion of the system of works for soil conservation that ensure competitive quantitative and qualitative production, with low costs and high profit;
- adapting the system of machines for soil conservation works by achieving of new active bodies and technical equipment.
- research and development of processes, technologies and technical equipment intended for the establishment of crops of hoeing plants in the context of a sustainable agriculture;
- research and development of processes, technologies and technical equipment designed to the establishment of cereal crops in sustainable system;
- the elaboration of a mechanization technology of agricultural works to promote the energetic plant Miscanthus in Romania, as a renewable source.

R&D LABORATORY FOR HARVESTING, TRANSPORT AND HANDLING OF AGRICULTURAL PRODUCTS AND OF FORAGE

DESCRIPTION

The LABORATORY has as task the research, substantiation and development of systems and technical equipment for the harvesting, transport and handling of agricultural and horticultural products, addressed in the context of increasing the quality of works, enhancing the safety in exploitation, of energetic efficiency and the reduction of labour force and financial consumptions.

KEYWORDS: agricultural and horticultural products, transport, harvesting

RESEARCH DIRECTIONS

- Researching of mechanization technologies and of technical equipment for the harvesting of the agricultural and horticultural products;
- Design of experimental models and prototypes of technical equipment;
- Demonstration, dissemination and technology transfer of research results;
- Increasing the quality of work of harvesting, transport and handling;
- Development of methods of gathering, transport and handling in order to achieve total reliability and safety of operation;
- Protection of soil, environment and transport infrastructure;
- Use of environmentally friendly materials component systems;
- Efficient energy harvesting systems, transport and handling;
- Development of multifunctional technical equipment.

LABORATORY FOR R&D FOR FORAGES HARVESTING AND PREPARATION OF FOOD IN ANIMAL HUSBANDRY

DESCRIPTION

The LABORATORY has as its task the research (fundamental, applied and technological development) in the field of technologies, processes and of technical equipment for the harvesting and fodder conservation, preparation and distribution of animal feed from the livestock farms and individual households, for obtaining of productions that correspond to the requirements of the demand for healthy food and of high quality.

KEYWORDS: conservation of feed, food distribution, livestock farms.

RESEARCH DIRECTIONS

- the scientific research (fundamental, applicative and technological development) on the mechanization technologies and technical equipment suitable for harvesting, transporting and efficient preservation of fodder plants;
- scientific research (fundamental, applicative and technological development) on the mechanization technologies and appropriate technical equipment for the preparation and distribution of animal feed from the livestock farms or from the individual households;
- optimization of the technical equipment system for animal husbandry for the maintenance and for handling of products;
- implementation of new technologies that are more economical and have a minimal impact on the environment.

R & D LABORATORY FOR SOIL FERTILIZATION, ACCORDING TO THE CONCEPT OF SUSTAINABLE AGRICULTURE

DESCRIPTION

The LABORATORY has as task the research (fundamental, applied and technological development) in the field of processes, technologies and of technical equipment for the soil fertilization under the concept of sustainable agriculture, eco-friendly, with a favorable impact on the environment and consumer health.

KEYWORDS: soil fertilization, sustainable agriculture, eco-friendly.

RESEARCH DIRECTIONS

- Research and development of processes, technologies and of technical equipment for soil fertilization with chemical fertilizers under the concept of sustainable agriculture, precision agriculture;
- Research and development processes, technologies and of technical equipment for soil fertilization with organic fertilizers under the concept of organic farming;
- Research and development processes, technologies and of technical equipment for soil fertilization with green manure under the concept of organic farming;
- Implementation of technologies for chemical and organic fertilizer according to current guidelines for developing sustainable agriculture and environment;
- Develop activities to disseminate widely the results of research conducted;
- Integration into existing technology platforms at European level.



LABORATORY OF R&D FOR AFFORESTATION WORKS AND ESTABLISHING OF FOREST BELTS FOR AGRICULTURAL CROPS PROTECTION

DESCRIPTION

The LABORATORY has as task conducting research on technologies and technical equipment for mechanization of the afforestation works and establishment of forest belts in view of protecting the agricultural crops and combating the drought phenomenon, as well as other issues related to the protection of spontaneous flora from the forested areas and its high.

KEYWORDS: forest belts, afforestation works, protection of spontaneous flora.

RESEARCH DIRECTIONS

- research and development of technologies and technical equipment in view of the establishment of forest belts in totally processed field;
- research and development of technologies and technical equipment in view of the establishment of forest belts in field processed in strips;
- technologies for establishing of nurseries.



6.2. Accredited / non-accredited testing laboratories

6.2.1. Accredited testing laboratories

■ **Testing Tractors and Technical Equipment Department for Agriculture and Food Industry – TD** (No. accreditation certificate LI 451/2010, acc. SR EN ISO/CEI 17025:2005):

- **Laboratory of Tractor Testing and Technical Equipment for Agriculture and Food Industry – DITRMA;** domain: *constructive determinations; determining the performances; determinations for the working process characterization; Security and Safety determinations;*
- **Testing laboratory on spraying machines – LIMS**; domain: *tests for determination of performances.*

6.2.2. Non-accredited testing laboratories

- **LABORATORY of Resistance Tests of the Technical Components And Machine Parts - LIRCT**;
- **LABORATORY of Testing Engines - LIM;**
- **LABORATORY of Testing of Agricultural Machines and Trailers - LIMAR;**
- **LABORATORY OF Dynamic Tests - LID**.

6.3. Installations and objectives of national interest

INSTALLATION FOR TESTS UNDER SIMULATED AND ACCELERATED REGIME OF HYDROPULSE TYPE

The installation for performing tests under simulated and accelerated regime type Hydropulse, belonging to INMA Bucharest is *a unique installation at national level* which can perform expertises, analysis and optimizations of the elements and systems ensuring the safety and security in the air and surface transportation, to antiseismic platforms, to energetic equipment with special applications, to the machines, to the agriculutural equipment and of those from the machine building industry, etc.

Fig. 1 – Testing platforms with vibration isolation systems

The installation for performing tests under simulated and accelerated regime type Hydropulse is a complex of equipment, appliances, electric motors and hydraulic subsystems, installations and auxiliary constructions, designed to ensure technical requirements for static tests (Resistance to static loads, deformations) and dynamical (alternatives or pulsating stresses for endurance, vibrations tests) and it consists of:

1) four energetic units that ensure the hydraulic-electro-mechanical actuation systems, for the purpose to make the expertise of the tested systems.

Fig. 2 - Pumping aggregates

Fig. 3 - The monitoring system of pumping aggregates

2) Twelve hydraulic cylinders constituting the execution elements for the application of mechanical stresses; the cylinders used in the INMA have capabilities for the forces of 10, 25, 100 and 250 KN, displacement (stroke) performed being up to 200 mm (or ± 100 mm against the mechanical zero position) for all the cylinders.

Fig. 4 - Hydraulic cylinders placed for the vertical operation

Fig. 5 - Hydraulic cylinders placed for the horizontal operation

3) Twelve control cabinets (grouped 8 + 4), each providing control functions for operation of a single one hydraulic cylinder. Each control cabinet contains:

- the electronic control system for automatically adjusting in the two operating modes on the application of the stresses;
- actuation with the control of the force, the displacement resulting from the plastic or elastic deformations of the strained structure,
- actuation with the control of the displacement, the force resulting from the reaction of the tested structure at an imposed deformation;
- electronic devices for measuring the functional parameters: force, displacement, oil pressure;
- electronic protection equipment when overcoming of the normal functional parameters;
- the electrical and electronic installation for operation of the hydraulic cylinders.

Fig. 6 – The twelve control panels (8 - in the back and 4 - in the front)

Fig. 7 - The control panels - 8 (seen of nearly)

4) installations and auxiliary constructions:
- three testing platforms with vibration isolation systems: S_1 = 25 m^2, m_1 = 15t; S_2 = 50 m^2, m_2 = 30t; S_3 = 100 m^2, m_3 = 60t;
- hydraulic installation for supply and distribution;
- control room;
- transport and lifting installations (overhead crane, cranes);
- devices for mounting the tested structures on the stand.

Fig. 8 - Supply and distribution hydraulic system

Fig. 9 - The command room of the installation type Hydropulse

Data acquisition systems

Data acquisition systems have been implemented on Hydropulse plant to take control of the operator by desktop or laptop computers, using the facilities provided by the manufacturer of the equipment through the input-output analog and digital connections inside the control panels, and allowed the achievement of the following numeric control functions:
- measurement of the force and stroke;
- generation of the reference signal (setpoint) to achieve the desired strains;
- selection in decadal steps of the control parameters (P, I, D);
- taking over the signaling functions of the control panels operation;
- signaling the intervention of protections.

Data acquisition systems provide additional features towards the above:
- Acquisition of data files previously processed and applied as control signals to mechanical stress; these data may result from data of measurements made under real operation of testing structures and from complex signals performed with mathematical calculation programs (MATHCAD, NSOFT or other);
- Acquisition of additional measuring signals from transducers installed in other measurement points than those of direct application of stress on structures tested;
- Synchronization of multiple cylinders drive tests with multiple points of application;
- Measurement signal processing while executing tests: arithmetic processing, graphics, or complex mathematical (Fast Fourier Transform);
- Development of higher-level control loops (loops containing control provided by control panels) to control stress in other sections of the structures than those of direct application;

The data acquisition systems with which is provided the installation type Hydropulse are as follows:

1. Fixed type data acquisition systems:
- computers type PC;
- data acquisition boards DAP 3200e/214, DAP 5200, with digital, analogue input modules, digital outputs and analogue outputs:
  - 16 analogue inputs, expandable to 512;
  - 2 analogue outputs, expandable to 66;
  - 16 digital inputs, expandable to 1024;
  - 16 digital outputs, expandable to 1024;
  - accessories: terminal boards of Input / Output, connection cables.

2. Portable data acquisition system consisting of:
   - acquisition module DATEKPCI-3110;
   - accesories (STP3110, CAB307, CAB308);
   - external module of data acquisition CB2;
   - portable microcomputer FUJITSU-SIEMENS C1110;

Also in the process of measurement and control is used a wide range of transducers and signal amplifiers of the latest generation that allow performing of quality researches:

- Force transducers for the hydraulic cylinders of 50 kN, U2B/50 kN;
- Force transducers for the hydraulic cylinders of 50kN, U2B/100 kN;
- Measuring Amplifiers with connectors AE 101;
- Displacement transducers WA/500 mml;
- Measuring Amplifiers with connectors MP 55;

Systems for automatic adjustment of forces and displacements

The main technical requirement of control is to ensure continuous precise control of strain applied to mechanical structures tested (forces and displacements) at the point of application, for a real reproduction of the test program. This is effected by the automated control systems that electrically control the inlet and outlet servo valves inlet of hydraulic oil from cylinders of strain applying, to obtain the variation function of force or displacement.

The Hydropulse installation within the INMA can perform two working modes for the tests in static or dynamic regime of the mechanical structures:

1) The working mode in force, when it imposes a desired amount of the applied force, the force being the controlled size and the displacement resulting from the elasticity and plasticity characteristics of the tested structure.

2) The working mode in displacement, in which case it is necessary a deformation of the structure, controlling the displacement of the tested structure elements in the place of contact, and the force resulting from the mechanical strength characteristics.

The control system of each driving of a cylinder cabinet is composed of two independent control systems, one to regulate the force acting on the test structure and the other for adjusting the stroke (displacement) of the hydraulic cylinder. The two control systems are identical as structural function, the difference between them consisting of different transducers for ensuring the negative reaction to one dose of force and strain gauge bridge with DC excitation, the other inductive displacement transducer and measuring amplifier being with AC excitation. There were also considered the disturbances that may occur due to gap of structural joints tested in the assembling areas with screws and rivets, especially towards the end of the samples when these gaps can produce major disturbances, the control system having to compensate for additional vibration and "downtime" without introducing its own oscillations. Perturbations can occur because of the mounting method on stand of structure tested, gaps in clamping and alignment areas, or even because of deformation of fixing devices.

- **Applications performed on the Hydropulse plant**

Based on expertise, analysis and optimization of technical solutions, as a research result , this infrastructure leads to design and modern architecture and updated products to market demand and competitive technology (machines, equipment, installations), with accessible manufacturing costs.

Due to the complexity of the system and the different use possibilities, the fields of applications are many, of which we can mention:

- subassemblies that contribute to the safety of road traffic (couplings from tractors and trailers, agricultural trailers couplings and automotive safety devices against overturning from tractors to trailers anti-wedging bars, resistance structures, etc..) ;
- electrical equipment (seismic tests for power transformers, switches and other devices for specific electricity distribution stations);
- equipment for the aeroplane industry (safety features, special systems for aircraft, etc..)
- auto bumpers / special purpose equipment (arms industry, earthquake, etc);
- agricultural machinery (plows, harrows, sprayers, straw balers, etc.);
- - subassemblies for agricultural machinery (seed distribution hoses, suspension trailers, etc.).

- equipment, assemblies and subassemblies for transportation: cars bogie frames, railcars, trailers, etc..

Tests of endurance and resistance to vibration applied on various technological equipment can be performed to verify the reliability and safety of their operation. Thus, we can identify and remedy any defects in design and / or implementation avoiding the production of technological accidents in operation. Also may be tested vital equipments (electrical transformers, etc..), checking their behavior in case of earthquake (natural disaster).

The testing installation under simulated and accelerated regime of Hydropulse type is the only one in the country performing endurance tests under simulated regime for:

- ✓ the coupling elements between towing vehicles and tanks with special loads (nitrogen, O2, sulfuric acid, biofuels, etc..) that in case of breakage can produce technological accidents and even disasters;
- ✓ technical equipment (TE) providing of electricity distribution, in case of disaster (earthquake);
- ✓ technique of national security and safety (assemblies and parts for fighter aircraft, etc).

In the field of vocational training, increasing the skills and career development in scientific research, *the installation for testing under simulated and accelerated regime Hydropulse type is used as*:

- ✓ support for demonstrating the experiments in achieving the doctoral theses and post-doctoral works;
- ✓ infrastructure for achieving the Masters dissertation, laboratory works and demonstrations;
- ✓ practice for students in mechanical engineering, mechatronics and industrial systems.

6.4. Measures to increase the R&D capacity related to ensuring of an optimal utilization degree

- providing the necessary competence of personnel serving and using research-development infrastructure so as to ensure a level of optimum use;
- ensuring a high degree of staff information regarding recent developments in research facilities so that the purchase of new equipment to be made under controlled conditions;
- identifying new market research opportunities which require to complete the existing infrastructure or to purchase of new state of the art equipment, according to market requirements;
- contracting works with third parties that require experimental research for validating concepts, products, ideas that involve optimal use of research infrastructure;
- enhancing the activity of *CENTRE OF RESEARCH FOR DESIGNING, PERFORMING AND TESTING THE INTELLIGENT MACHINES, INSTALLATIONS AND TECHNICAL EQUIPMENT* - CCCRT, in order to diminish the period of implementation of institute research results in economic environment, by investing in modernization and strengthening the research infrastructure and high-tech equipment.

7. RESULTS OF RESEARCH AND DEVELOPMENT ACTIVITY

7.1. The structure of R & D results

		No.
7.1.1	Scientific / technical papers in ISI specialized journals **Annex 3**	10
7.1.2	Cumulative impact factor of ISI quoted works	1.283
7.1.3	Citations in ISI quoted specialized journals	13
7.1.4	Patents (requested / granted) **Annex 4**	15 / 9
7.1.5	Citations in the ISI system of patented researches	0
7.1.6	*Products / services / technologies* resulting from research activities based on patents, homologations or own innovations **Annex 5**	11/1/4
7.1.7	Scientific / technical papers in journals without ISI quotation **Annex 6**	111
7.1.8	Scientific communications presented at international conferences **Annex 7**	67
7.1.9	*Prospective and technological studies, norms, procedures, methodologies and technical plans,* new or improved, ordered or used by the Beneficiary **Annex 8**	15/0/7/ 12/23
7.1.10	Copyright protected ORDA or in similar legal systems	0

7.1.1. Scientific / technical papers in ISI specialized journals: 13

Scientific / technical papers in ISI specialized journals	2013	2014
Quantification	13	10

Annex 3

Den. No.	Article	Authors
1.	**ROMANIAN JOURNAL OF MATERIALS** vol. 44(4), ISSN: 1583-3186 **STUDY ON VARIABILITY OF SOIL CHEMICAL PROPERTIES IN ROMANIA**, pg. 375-381 *Impact factor = 0.538*	**Muraru V., Pirnă I., Muraru-Ionel C., Ioniţă Gh., Cârdei P., Ganea I.**
2.	**ROMANIAN JOURNAL OF PHYSICS** ISSN1221-146X **NMR AND SEM INVESTIGATION OF EXTRUDED NATIVE CORN STARCH WITH PLASTICIZERS** *Impact factor = 0.745*	**Cioica N.,** Fechete R., Filip C., Cozar B., **Nagy E. M., Cota C.**
3.	**APPLIED MECHANICS AND MATERIALS** Vol. 656, ISSN 1662 - 8985 **THEORETIC ASPECTS OF SEED MOTION ON DRUM SURFACE OF ELECTROMAGNETIC SEPARATION MACHINES**, pg. 305-314	Căsăndroiu T., **Ciobanu V.,** Moise V., **Vişan A.L.**
4.	**The 8th International Conference INTER-ENG 2014 - Interdisciplinarity in Engineering A MATHEMATICAL MODEL OF CHOPPED MISCANTHUS BRIQUETTING PROCESS**	**Voicea I.,** Voicu Gh., **Cardei P., Vlăduţ V.,** Biriş S.
5.	**STUDIA UNIVERSITATIS BABES-BOLYAI CHEMIA** ISSN 1224-7154 **WATER ABSORPTION AND DEGRADATION OF PACKAGES BASED ON NATIVE CORN STARCH WITH PLASTICIZERS**	**Cioica N.,** Fechete R., Chelcea R., **Cota C.,** Todica M., Pop V.C., **Cozar O.**
6.	**Proceedings of the 42st International Symposium on Agricultural Engineering "Actual Tasks on Agricultural Engineering" 25 – 28 February 2014, Opatija, Croatia, ISSN 1848-4425**	**Matache M., Cârdei P., Vlădut V.,**

	RESEARCHES REGARDING EXPERIMENTAL VALIDATION OF STRUCTURAL ANALYSIS PERFORMED ON RESISTANCE STRUCTURES OF AGRICULTURAL MACHINERY, pg 149-160	Voicu Gh.
7.	**Proceedings of the 42st International Symposium on Agricultural Engineering "Actual Tasks on Agricultural Engineering" 25 – 28 February 2014, Opatija, Croatia, ISSN 1848-4425** **INFLUENCE OF AGRICULTURAL AND FORESTRY BIOMASS PHYSICAL CHARACTERISTICS ON COMPACTING/PELLETING**, pg. 386-396	**Voicea I., Vlăduţ V., Matache M., Danciu A.,** Voicu Gh.
8.	**Proceedings of the 42st International Symposium on Agricultural Engineering "Actual Tasks on Agricultural Engineering" 25 – 28 February 2014, Opatija, Croatia, ISSN 1848-4425** **MEDICINAL VEGETAL MATERIAL CHOPPED, SUBJECTED TO SORTING**, pg. 273÷282	**Vlăduţ V., Pirnă I.,** Florea C., Popescu C., Brătucu Gh., Kabas O., Păunescu D.
9.	**Proceedings of the 42st International Symposium on Agricultural Engineering "Actual Tasks on Agricultural Engineering" 25 – 28 February 2014, Opatija, Croatia, ISSN 1848-4425** **THEORETICAL MODELING OF WORKING PROCESS OF COVERING DEVICES TO MISCANTHUS RHIZOMES PLANTERS**, pg. 137÷148	Voicu Gh., Poenaru I.C., Paraschiv G., Dincă M., **Vlăduţ V.**
10.	**Proceedings of the 42st International Symposium on Agricultural Engineering "Actual Tasks on Agricultural Engineering" 25 – 28 February 2014, Opatija, Croatia, ISSN 1848-4425** **USING OF LOGISTIC FUNCTION FOR THE ANALYSIS OF GRANULOMETRIC CHARACTERISTICS OF PRODUCTS FROM THE TECHNOLOGICAL FLOW OF A CEREAL MILL**, pg. 305÷314	Constantin G., Voicu Gh., Stefan E. M. Maican E., Boureci A., **Vlăduţ V.**

7.1.2. Cumulative impact factor of ISI quoted works: 1,283

7.1.3. Citations in ISI quoted specialized journals: 13

7.1.4. Patents (requested / granted) 15 / 9

Patents (requested / granted)	2013	2014
Number of patents requested (applications)	14	15
Number of patents granted	3	9

- ***Requested invention patents (applications registered):*** **15**

Annex 4

Den. No.	TITLE	Authors	Registration no. OSIM
1.	INSTALLATION OF EXTRACTING THE STONES FROM CHERRIES AND SOUR CHERRIES	**Ioniţă Ghiţă Păun Anişoara Pirnă Ion Ganea-Christu Ioan**	**A-00463 19.06.2014**
2.	METHOD OF VULCANIZTION OF FITTINGS FOR SILICONED RUBBER CANNULAS	**Ioniţă Ghiţă Păun Anişoara Pirnă Ion**	**A-00464 19.06.2014**
3.	APPARATUS DESIGNED TO CATTLE ARTIFICIAL BREATHING	**Ganea-Christu Ioan** Drăgolici Victor Drăgolici Ecaterina **Ion Alexandru**	**A-00557 21.07.2014**
4.	AUTOMATED INSTALLATION OF IRRIGATION AND FERTIGATION BY DROPPING AND/OR MICRO-SPRINKLING	**Marin Eugen Pirnă Ion Manea Dragoş Matache Mihai Sorică Cristian-M**	**A-00567 28.07.2014**
5.	INSTALLATION DESIGNED TO AERATE THE BULK HAY WITH COLD AND HOT AIR	**Nedelcu Ancuţa Ciupercă Radu Matache Mihai G. Popa Iucreţia Ciobanu Valeria Lazăr George**	**A-00699 18.09.2014**

6.	EQUIPMENT OF SORTING-CALIBRATING SMALL FRUITS, WITH SIMULTENAOUS ADJUSTMENT OF ROLLERS POSITION	**Popa Lucreţia Ciupercă Radu Ştefan Vasilica Nedelcu Ancuţa**	**A-00795 27.10.2014**
7.	PRECISION IRRIGATION INSTALLATION	**Marin Eugen Manea Dragoş Păun Anişoara Mateescu Marinela Gheorghe Gabriel**	**A-00919 27.11.2014**
8.	MODULATED EQUIPMENT FOR ENERGETIC PLANT CROPS MAINTENANCE	**Manea Dragoş Marin Eugen Pirnă Ion Mateescu Marinela Gheorghe Gabriel**	**A-00920 27.11.2014**
9.	SYSTEM OF REDUCING THE POWER REQUIRED TO DRIVE THE MACHINES FOR HARVESTING AND CHOPPING ENERGETIC WILLOW	**Găgeanu Paul Ivancu Bogdan Milea Dumitru Zaica Alexandru**	**A-00921 27.11.2014**
10.	COMBINED INSTALLATION FOR GRAPES CRUSHING AND PRESSING	**Păun Anişoara Ioniţă Ghiţă Ciupercă Radu Pirnă Ion**	**A-00926 28.11.2014**
11.	INTEGRATED SYSTEM AND METHOD OF OBTAINING EXTRACTS WITH FOLIAR BIO-FERTILIZING / BIO-INSECTICIDE ROLE IN ECOLOGICAL FARMING	**Voicea Iulian Florin Matache Mihai Gabriel Vlăduţ Nicolae Valentin Cujbescu Dan Iulian Persu Cătălin Mihai Marian**	**A-00963 08.12.2014**
12.	DISTRIBUTION DEVICE FOR PRECISION SOWING MACHINES WITH GPS CONTROL	**Muraru Vergil Pirnă Ion Muraru Cornelia Sfîru Raluca Ţicu Tania**	**A-00972 10.12.2014**
13.	INSTALLATION OF DECONTAMINATING THE EXTERNAL SURFACES OF HORTICULTURAL PRODUCTS	**Sorică Cristian M. Pirnă Ion Grigore Ion Sorică Elena** Păunescu Dan Dorian	**A-01028 30.12.2014**
14.	HYDROSTATIC TRANSMISSION FOR GARDEN TILLERS	**Ivan Gheorghe Ciupercă Radu** Stroe Marius	**A-00220 20.03.2014**
15.	SYSTEM OF SAMPLING, NUMBERING AND DISTRIBUTING THE BIG SEEDS FOR DETERMINIG THE GERMINATION	Epure Doru-Gabriel Cioineag Cristian Horoias Roxana Gâdea Mihai Udroiu Nicoleta-Alina Epure Lenuţa Mitroi Adrian Cernat Sorina **Manea Dragoş Marin Eugen** Gaidău Carmen Niculescu Mihaela Stepan Emil Butoianu Andreea Radu Elena	**A-00625 14.08.2014**

- ***Invention patents granted by OSIM:*** **9**

Den. No.	TITLE	Authors	Patent No. / year
1.	MECHANISM DESIGNED TO ADJUST THE PLOWS WORKING WIDTH ACCORDING TO TRACTOR'S TRACKI	**Niţescu Vasile, Gângu Vergil, Constantin Nicolae, Cojocaru Iosif, Koloszvari C-tina, Neniţă Florin**	**A – 01008/ 22.12.2006**
2.	ZONAL GEOMETRY SHAKER FOR CEREAL HARVESTING COMBINES	**Ivan Gheorghe, Gângu Vergil, Cojocaru Iosif, Hrubaru Theodor**	**A-00041/ 16.01.2008**
3.	SYSTEM OF SIMULTENEOUS DRIVE AND ADJUSTMENT OF NORM OF CHEMICAL SOLID FERTILIZERS SPREADERS	**Cojocaru Iosif, Cristea Mircea, Pirnă Ion, Marin Eugen,** Andrei Livian Victor	**A-00944/ 28.11.2008**

4.	**ALTERNATIVE SYSTEM OF COUPLING AND TRACTION FOR DISK HARROWS**	**Constantin Nicolae, Cojocaru Iosif, Gângu Vergil, Niţescu Vasile,** Leu Ioan Constantin	**A-00946/ 28.11.2008**
5.	**CHAMBER OF BALING HAY OR STRAW, WITH CONSTANT VOLUME, ENDOWED WITH EVACUATING ROLLER**	**Mircea Radu, Pirna Ion, Ganea Ioan, Robe Eugeniu**	**A-00444/ 12.06.2008**
6.	**FEEDING SYSTEM FOR HAY OR STRAW BALING CHAMBERS**	**Mircea Radu, Gângu Vergil, Ganea Ioan, Ciupercă Radu**	**A-00670/ 29.08.2008**
7.	**CEREAL HOPPER RETAINING SYSTEM FOR SWINGING**	**Stanciu Lucian, Mircea C. Radu, Pirnă Ion, Robe Eugeniu**	**A-00980/ 12.12.2008**
8.	**TURNING DEVICE WITH SWIVEL WHEEL**	**Constantin Nicolae, Pirnă Ion, Ganea-Christu Ioan, Neniţă Florin,** Mocanu Vasile, Hermenean Ioan	**A-01009/ 19.12.2008**
9.	***COMPOSITE WITH IRON MATRIX USED AS FRICTION MATERIAL AND METHOD OF OBTAINING IT***	*Popa Enuţa-Angela Coman Emanuil Cristi Macovei Costică Cândea Viorel-C-tin Jumate Nicolae* ***Matache Mihai Gabriel Vlăduţ Nicolae Valentin*** *Predescu Cristian Matei Ecaterina Sohaciu Mirela-Gab* ***Univ. POLITEHNICA Buc***	***A-00697/ 11.09.2008***

7.1.5. Citations in the ISI system of patented researches: -

7.1.6. Products / services / technologies resulting from research activities based on patents, homologations or own innovations

Annex 5

Products / services / technologies resulting from research activities based on patents, homologations or own innovations	2013	2014
Number of homologated PRODUCTS	9	11
Number of homologated SERVICES	2	1
Number of homologated TECHNOLOGIES	2	4

7.1.6.1. HOMOLOGATED PRODUCTS: 11

No.	Research contract / Comercial Contract Beneficiary	Result	Reporting deadline / Delivery (month)	Technical data	Field of use
1.	Mechanizing technology and technical equipment for conditioning and calibrating the apples designed to semi-subsistence orchards Research contract no. 311 / 27.10.2011 Order: 561/ 2011 – 2014 Contracting Authority: MADR Beneficiary: ASSOCIATION OF AGRICULTURAL MACHINERY AND TRACTOR MANUFACTURERS IN ROMANIA - PACTMAR Protocole no. 1556 / 12.11.2007	Homologation of product: *Technical equipment for sorting and calibrating apples, ECM* Dossier number :190	June 2014	- Capacity of work per hour: about. 450 kg/h (without additional charging time); - Dimensional sorting groups: < 60 mm; 60…65 mm 65…70 mm; 70…75 mm; 75…80 mm; 80…85 mm; > 85 mm.	- Sorting and calibrating apples in 7 dimensional groups depending on their size
2.	Mechanizing equipment and technologies suitable to harvesting,transport and efficient conservation o fodder plants Research contract no. 736 / 27.10.2011 Order: 562/ 2010 – 2014 Contracting Authority: MADR Beneficiary: ASSOCIATION OF AGRICULTURAL MACHINERY AND TRACTOR MANUFACTURERS IN ROMANIA ROMANIA - PACTMAR Protocole no. 1556 / 12.11.2007	Homologation of product: *Drying installation of stack hay by aeration with cold or hot air IVF* Dossier number :189	April 2014	- Drying installation type: with cold or hot air; - Method of heating the air: • with assembled panel with solar collectors; • with polyethylene or other material tubes Aerating equipment: - driving engine speed, rot/min 1410; - power of driving engine, kW: 5.5; - air flow rate: 12 m^3/s.	- Harvesting,drying and conservation of fodder plants as hay

No.	Research contract / Comercial Contract Beneficiary	Result	Reporting deadline / Delivery (month)	Technical data	Field of use
3.	Innovative technologies for conditioning the fresh horticultural products designed to consumption Research contract no . 15N/2009/ AA 2/2014 Order: 609/ 2009 - 2014 Contracting Authority: MEN Beneficiary: ASSOCIATION OF AGRICULTURAL MACHINERY AND TRACTOR MANUFACTURERS IN ROMANIA ROMANIA - PACTMAR Protocole no. 1556 / 12.11.2007	Homologation of product: *Installation of decontamination of horticultural products external surfaces,IDPH-0* Dossier number : 192	September 2014	- Working width:600 mm; - Length of conveyor: approx. 1500 mm; - Type of UV generator :discharge lamp low pressure mercury lamp; - Length of emitted radiation wave: 253.7 nm (UV-C); - Lamp power UV-C: 55 W; - Number of lamps UV-C: 5 pcs.	- conditioning of fresh horticultural products designed to consumption by decontaminating the external surfaces
4.	Innovative technologies for conditioning the horticultural products designed to consumption in fresh state Research contract no . 15N/2009/ AA 2/2014 Order: 609/ 2009 - 2014 Contracting Authority : MEN Beneficiay: ASSOCIATION OF AGRICULTURAL MACHINERY AND TRACTOR MANUFACTURERS IN ROMANIA ROMANIA - PACTMAR Protocole no. 1556 / 12.11.2007	Homologation of product: *Automated installation for temporary storing the horticultural products, IDT-0* Dossier number: 193	September 2014	- Volume of storing chamber: 26 m^3; - Conservation temperature: -2º +8º C; - Number of air recirculations (per hour): approx. 12; - Average utilization time of lamp UV-C: 8000 hours; - Lamp power UV-C: 55 W; - Number of lamps UV-C: 12 pcs.	- Temorary storing of horticultural products in optimum humidity and temperature, ensuring an aseptic climate within the storing precint, by using UV –C generators.
5.	Research and substantiation of a mechanizing technology for establishing and maintaining the energetic poplar crop Research contract no . 15N/2009/ AA 4/2014 Order 615/ 2009 - 2014 Contracting Authority : MEN Beneficiary: ASSOCIATION OF AGRICULTURAL MACHINERY AND TRACTOR MANUFACTURERS IN ROMANIA ROMANIA - PACTMAR Protocole no. 1556 / 12.11.2007	Homologation of product: *Equipment for hoeing and precision applying herbicide in strips - MEP* Dossier number: 196	December 2014	- Type of equipment: carried; - Tractor power: 45 HP; - Capacity of solution tank: 500 l; - Pump type: with membranes; - Pump flow rate: 104 l/min; - Max flow rate.: 75 l/min; - Number of hoeing and herbicide applying sections: 3; - Number of spraying nozzles on section: 2; - Distance between the spraying nozzles: 300 mm.	- hoeing and herbicide applying simultaneously protected between energetic crop rows
6.	Research and substantiation of a mechanizing technology for establishing and maintaining the energetic poplar crop Research contract no . 15N/2009/ AA 4/2014	Homologation of product : *Installation of localized irrigation - II*	December 2014	- Tractor power: 80 HP; - Number of planting sections: 2; - Capacity of water tank: 300l; - Quantity of water required for one sapling: 0.1...0.3	- irrigation concomitantly with planting of energetic or forestry crops.

No.	Research contract / Comercial Contract Beneficiary	Result	Reporting deadline / Delivery (month)	Technical data	Field of use
	Order: 615/ 2009 - 2014 Contracting Authority : MEN Beneficiary: ASSOCIATION OF AGRICULTURAL MACHINERY AND TRACTOR MANUFACTURERS IN ROMANIA ROMANIA - PACTMAR Protocole no. 1556 / 12.11.2007	Dossier number: 195		l/sapling; - Minimum distance between saplings in row: 70 cm.	
7.	Researches on designing a lavender harvesting equipment Research contract no. 560 / 07.05.2014 Order: 616 / 2014 - 2014 Contracting authority: PFA IAKOB IOAN MARIA Beneficiary: PFA IAKOB IOAN MARIA	Homologation of product : *Technical equipment for lavender harvesting ERL - 0* Dossier number: 191	August 2014	- length: max. 2370 mm; - width / height: 1525 / 1300mm; - front/rear track: 1400 / 1238mm; - wheel base: max. 1917 mm (with rear-oriented swivel wheels); - adjustable cutting height: 100 ...550 mm; - cutting width: 900 mm. - mass: approx. 48 kg - engine: T320 Mitsubishi, Japonia; - maximum power: 2.2 kW;	- lavender harvesting in small and average surfaces
8.	Researches performed by provider on separation of parasite seeds by means of magnetic separator. Acquiring by the buyer of a magnetic separator which removes prasite seeds from alfalfa seeds Research contract no. 869/2014 Order: 619/ 2014 - 2014 Contracting authority: SC CIPROMA SEM SRL Beneficiary: SC CIPROMA SEM SRL	Homologation of product : *Magnetic separator SM* Dossier number: 195	Decembrie 2014	- number of magnetic drums: 2 in cascade; - diameter / width of drums: 410 / 700 mm; - number of screened products obtained: 5; - installed power: 2.7 kW.	- removing dodder seeds out of perennial fodder vegetable seeds (flax, hemp, carrots, spinach, chives tomatoes, etc.) by means of iron grinding

No.	Research contract / Comercial Contract Beneficiary	Result	Reporting deadline / Delivery (month)	Technical data	Field of use
9.	Researches on performing an ecological system of vegetal and animal waste management, deigned to livestock farms and households Research contract no . 15N/2009/ AA 3/2014 Order: 623/ 2009 - 2014 Contractig Authority: MEN Beneficiary: ASSOCIATION OF AGRICULTURAL MACHINERY AND TRACTOR MANUFACTURERS IN ROMANIA ROMANIA - PACTMAR Protocole no. 1556 / 12.11.2007	Homologation of product *Ecological system of vegetal and animal waste management - SEG* Dossier number: 194	November 2014	- concrete platform: - total length [m]: 12.4; - total width [m]: 9.3; - thickness [m]: 0.25;. - surface of composting area: 20…25 [m^2]; - composting capacity: approx.. 10 [t]; - aeration installation with ventilator: - driving power: 1.1 [kW]; - maximum air flow: 1790 [m^3/h]; - diameter of pipes of flowing and collecting system: 125 / 110 mm; - volume of collecting tank: 1.8 [m^3]; - system of measuring and controlling the compost parameters.	- ecological management of vegetal and animal waste for a high capitalization in agricultural production, greenhouses and solariums as compost-organic fertilizer
10.	Researches on performing an integrated system for obtaining extracts with bio-fertilizer/bio-insecticide role for plant leaves in ecological agriculture Research contract no .. 15N/2009/ AA 5/2014 Order 626/ 2009 - 2014 Contractig Authority: MEN Beneficiary: ASSOCIATION OF AGRICULTURAL MACHINERY AND TRACTOR MANUFACTURERS IN ROMANIA ROMANIA - PACTMAR Protocole no. 1556 / 12.11.2007	Homologation of product: *Equipment for obtaining ecological bio-fertilizers / bio-insecticides EXTBIO* Dossier number: 198	December 2014	• overall dimensions: ✓ length: 1.000 mm; ✓ width: 970 mm; ✓ height 1.600 mm. • mass of equipment 100 kg • working pressure max 10 bar; • supplying tension 220 Vca; • electric power: 4 kW; • useful working volume: 35 litri;	- obtaining active substances with bio-fertilizer/bio-insecticide role from medicinal and aromatic herbs

No.	Research contract / Comercial Contract Beneficiary	Result	Reporting deadline / Delivery (month)	Technical data	Field of use
11.	Researches on designing an equipment for obtaining essential oils (500 l) through distillation Research contract no .. . 1446/18.11.2014 Order: 633/ 2014 - 2014 Contractig Authority: PFA JAKOB IOAN MARIA Beneficiary: - PFA JAKOB IOAN MARIA	Homologation of product : *Equipment for obtaining essential oils through distillation EUV-500* Dossier number: 199	December 2014	- mobile, functioning based on Diesel oil; - tension: 230 V / or supplied by an accumulator of 12 V; - pressure of vapours: 9 bar; - temperature of outlet vapour from cauldron: 180° C; - water tank: 27 l; - water consumption: 0,7 l/min or 42 lhour; - tank capacity 500 l	- extraction of essential oils from culture medicinal and aromatic herbs of from spontaneous flora by steam driving.

1. Product name:

Technical equipment for sorting and calibrating apples (ECM)

No. of homologation dossier:190

2. Product name:

Installation for stack hay drying by cold or hot air ventilation IVF

No. of homologation dossier:189

3. Product name:

Installation for decontamination of external surfaces of horticultural products IDPH-0

Nr. dosar omologare: 192

4. Product name:

Automated installation for temporary storing of horticultural products IDT-0

No. of homologation dossier: 193

5. Product name:

Equipment for precision band hoeing and herbicide applying - MEP

No. of homologation dossier: 196

6. Product name:

Localized irrigation installation

No. of homologation dossier: 197

7. Product name:

Technical equipment for lavender harvesting ERL-0

No. of homologation dossier: 191

8. Product name:

Magnetic separator SM

No. of homologation dossier: 195

9. . Product name:

Ecological system for management of vegetal and animal waste - SEG

No. of homologation dossier: 194

10. Product name:

Equipment for obtaining ecological biofertilizers / bioinsecticides EXTBIO

No. of homologation dossier: 198

11. Product name:

Equipment for obtaining essential oils by distillation, EUV-500

No. of homologation dossier: 199

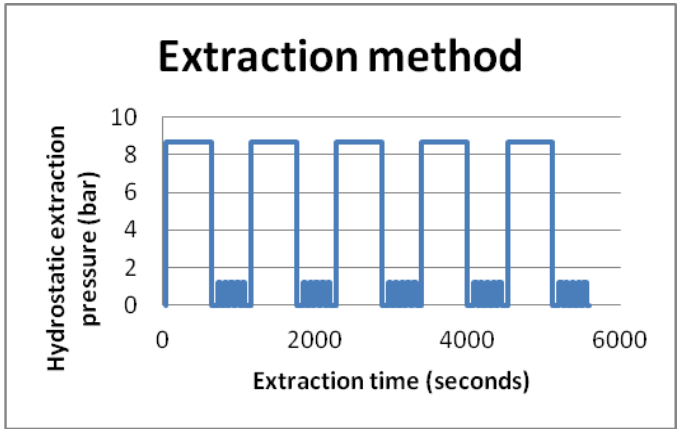
7.1.6.2.HOMOLOGATED SERVICES: 1

Den. no.	Research contract Commercial contract Beneficiary	Result	Reference / delivery deadline (month)	Technical data	Utilization field
1.	Researches on performing an integrated system for obtaining extracts with biofertilizer / bioinsecticide role for plant leaves in ecological farming Research Contract no. 15 N / 27.02.2009 / Add. act no. 4/2014 Order 626/ 2014. – 2014 Contracting Authority: MEN Beneficiary: ASSOCIATION OF MANUFACTURERS OF AGRICULTURAL TRACTORS AND MACHINES IN ROMANIA - PACTMAR Protocole no. 1556 / 12.11.2007	homologation of service: *Obtaining bioactive extracts with ecological biofertilizer / bioinsecticide role for plant leaves* Dossier number :49	December 2014	- extraction time: 5600 sec.; - high extraction pressure: 8.7 bar; - low extraction pressure:1.25 bar; - number of cycles at high pressure: 5 cycles - extraction temperature: 37 °C	- producing bioactive vegetal extracts containing substances with biofertilizer / bioinsecticide role for plant leaves

1. Service name:

Obtaining bioactive extracts with ecological biofertilizer / bioinsecticide role for plant leaves

No. of homologation dossier: 49



7.1.6.3. HOMOLOGATED TECHNOLOGIES: 4

Den. no.	Research contract Commercial contract Beneficiary	Result	Reference / delivery deadline (month)	Technical data	Utilization field
1.	Innovative technology and technical equipment with active parts driven for soil deep loosening and fertility increasing Research Contract no . 135 / 27.10.2011 / Add. act no. .5/2014 Order: 560/ 2011 – 2014 Contracting Authority : MADR Beneficiary: ASSOCIATION OF MANUFACTURERS OF AGRICULTURAL TRACTORS AND MACHINES IN ROMANIA - PACTMAR Protocole no. 1556 / 12.11.2007	Homologation of the technology: *Technology for soil deep loosening and fertility increasing* Dossier number: 45	June 2014	- carried-type-equipment; - tractor power:: (220...240 HP; - number of active parts: 2; - type of active parts: vibratory; - maximum working depth: 80 cm;	- primary or secondary diminishing of podzol-reddish-brown soil,, vertisol soils, marshy soils and heavy alluvial soils by deep loosening operations
2.	Innovative technology of irrigation and climate control in vegetable greenhouses Research Contract no . 15 N / 27.02.2009 / Add. act no. 2/2014 Order: 608/ 2014 – 2014 Contracting Authority: ANCS Beneficiary: ACADEMY OF AGRICULTURAL AND FORETRY STUDIES - ASAS Protocole no. 1552 / 08.11.2007	Homologation of the technology: *Innovative technology of irrigation and climate control in vegetable greenhouses* Dossier number: 46	August 2014	- diameter of hole drilled: 140 mm; - flow rate of solar pump: 5 m^3/h; - electric power of solar pump: 150 W; - maximum power of photovoltaic panel: 240 W; - power of irrigation electropump: 0.37 kW; - maximum water flow of irrigation band: 0.64 l/hour/dropping device, 0.64; - engine power for greenhouse windows opening: 0.37 kW	- irrigation before establishing the crops; - irrigation for ensuring the seedlings roots after establishing the crops; - irrigation during plant growing for ensuring the optimum level of water in soil; - automatically supplying the nutritive solution necessary according to climate factors and plants growing stages.
3.	Innovative technology for conditioning the horticultural products designed to consumption in fresh state Research Contract no . 15N/2009/ AA no. 2/2014 Order 609/ 2009 - 2014 Contracting Authority : MEN Beneficiary: ASSOCIATION OF MANUFACTURERS OF AGRICULTURAL	Homologation of the technology : *Innovative technology for conditioning the horticultural products designed to consumption in fresh state* Dossier number: 47	September 2014	- electric tension supplied: 220 Vca; - electric power installed approx 5 kW - storing volume: 26 m^3 - generator type UV: mercury discharge lamp at low pressure - wave length of radiation emitted: 253,7 nm (UV-C); - storing temperature: -2º +8º C; - number of air recirculations (per hour): 12	- conditioning by combined utilization of two treatments methods after harvesting: decontamination of external surfaces of horticultural products (using non-ionized ultraviolet radiation UV-C) and products conservation in optimum conditions by

Den. no.	Research contract Commercial contract Beneficiary	Result	Reference / delivery deadline (month)	Technical data	Utilization field
	TRACTORS AND MACHINES IN ROMANIA - PACTMAR Protocole no. 1556 / 12.11.2007				refrigerating them in cooling precints with normal atmosphere
4.	Research and substantiation of a mechanizing technology for establishing and maintaining energetic poplar crop Research Contract no 15N/2009/ AA no. 2/2014 Order: 615/ 2009 - 2014 Contracting Authority : MEN Beneficiary. ASSOCIATION OF MANUFACTURERS OF AGRICULTURAL TRACTORS AND MACHINES IN ROMANIA - PACTMAR Protocole no . 1556 / 12.11.2007	Homologation of the technology : *Mechanizing technology for establishing and maintaining energetic poplar crop* Dossier number: 48	December 2014	- assures the preparation of field in order to plant and maintain the energetic crops; - assures the water necessary to plants growing by using equipment IL and MEP; - water and herbicide saving; - improving environment quality and diminishing the polluting sources	- assures the enhancement of mechanizing level in process of establishing and maintaining the energetic crops of willow and poplar

1. Technology name:

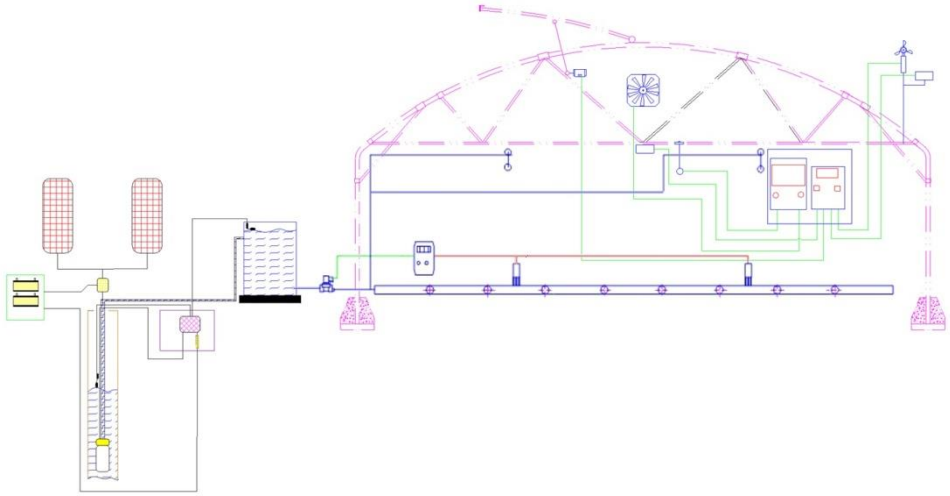
Technology for soil deep loosening and fertility increasing (EAA)

No.of homologation dossier: 45

2. Technology name:

Innovative technology of irrigation and climate control in vegetable greenhouses

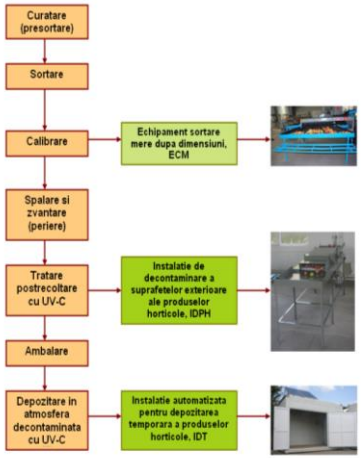
No.of homologation dossier: 46



3. Technology name:

Technology of conditioning the horticultural products designed to consumption in fresh state

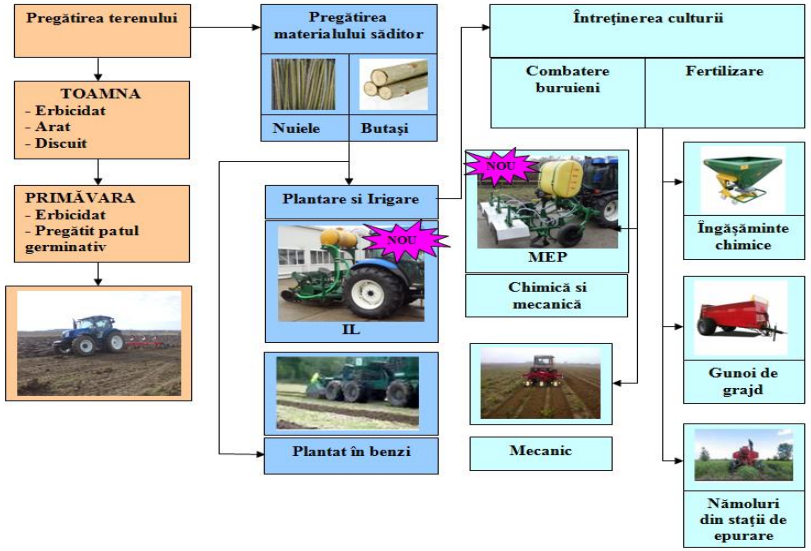
No.of homologation dossier: 47



4. Technology name:

Mechanizing technology for establishing and maintaining the poplar crop

No.of homologation dossier: 48



7.1.7. Scientific/technical papers in speciality journals without ISI quotation 111

Scientific/ technical papers published in speciality journals without ISI quotation	2013	2014
Number	13	111

Annex 6

Den .No.	JOURNAL / ARTICLE / AUTHORS
	I. INMATEH – AGRICULTURAL ENGINEERING, vol. 42, no. 1/2014, Jan-Apr. 2014 **Print ISSN 2068-2239; Electronic ISSN 2068-4215**
1.	**SCIENTIFIC RESEARCHES ON THE QUALITATIVE WORKING INDEXES OF THE SOWING BODY OF A MODERN TECHNICAL HOEING PLANT SOWING EQUIPMENT** **Marin E., Bolintineanu Gh., Sorică C., Manea D.,** Herak D., Croitoru Ş., **Grigore I.**, pg. 19-26
2.	**EXPERIMENTS REGARDING THE INFLUENCE OF WORKING PARAMETERS ON HOEING CROPS SOWING** **Cujbescu D.,** Voicu Gh., **Bolintineanu Gh., Persu C.,** Kabaş Ö., Bungescu S., Biriş S., pg. 27-32
3.	**THEORETICAL STUDY ON FEEDING THE TANGENTIAL THRESHING SYSTEM OF CONVENTIONAL COMBINE** **Ivan Gh.,** Usenko M., pg. 33-40
4.	**INTEGRATED TECHNOLOGY FOR OBTAINING AGRIPELLETS** **Voicea I., Danciu A.,** Selvi K.Ç., **Vlăduţ V.,** Voicu Gh., Paraschiv G., **Grigore I.,** pg 129-136
5.	**RESEARCHES ON REDUCING OF LOSSES AT FODDER HARVESTING WITH THE WINDROVERS** **Bogdanof C.G., Păun A.** Ertekin C., **Neagoe V.,** pg 41-48
6.	**RESEARCHES ON AUTOMATION OF WEIGHING AND SACKING PROCESS OF FINISHED AGRICULTURAL PRODUCTS** **Milea D., Matache M., Brăcăcescu C., Păun A.,** Żelaziński T., Csatlos C., **Găgeanu I.**, pg 61-68
7.	**THEORETICAL CONTRIBUTIONS TO THE DRIVE OF CEREAL CLEANING TECHNICAL EQUIPMENT ENDOWED WITH NON BALANCED VIBRATION GENERATING SYSTEMS** **Brăcăcescu C., Sorică C., Manea D.,** Yao Guanxin, Constantin G.A., pg. 69-74
8.	**WAYS TO OPTIMIZE THE ELECTROMAGNETIC WAVES APPLICATIONS IN AGRICULTURE AND FOOD INDUSTRY** **Ludig, M., Cârdei P., Muraru V.,** Mihailov N., pg. 75-82
9.	**DEFINITION OF MOVEMENT TRAJECTORY AND FORCES ACTING ON THE COULTER WITH MECHANISM** Usenko M., Voitovich V., **Popa L.,** Iordache S., pg. 97-102
10.	**INFLUENCE OF BLENDING CONDITIONS ON MORPHOLOGY AND RESISTANCE AT IMPACT OF TERNARY BIOPOLYMERS BLENDS OF PLA/PBAT/PA** Fodorean G., **Cioica N., Nagy M.,** Atanasov At., Covaliu C., pg 123-129
11.	**INTEGRATED TECHNOLOGY FOR OBTAINING AGRIPELLETS** **Voicea I., Danciu A.,** Selvi K.Ç., **Vlăduţ V.,** Voicu Gh., Paraschiv G., **Grigore I.,** pg. 129-136
	II. INMATEH – AGRICULTURAL ENGINEERING, vol. 43, no. 2/2014, May-August 2014 **Print ISSN 2068-2239; Electronic ISSN 2068-4215**
12.	**COMPARATIVE STUDY OF STRUCTURAL ANALYSIS APPLIED TO AGRICULTURAL MACHINES BODIES AND ACCOMPLISHED WITH SOLID WORKS AND AUTODESK INVENTOR PROGRAMS** **Sîru R., Constantin N., Ludig M., Cârdei P., Muraru V.,** pg. 5-14
13.	**STUDIES REGARDING A PNEUMATIC EQUIPMENT FOR SOWING SMALL SEEDS IN CUPS** Sărăcin I., Pandia O., Bozgă I., **Ganea I.**, pg. 15-20
14.	**THE DETERMINATION OF THE RESISTANT FORCES FOR DEEP LOOSENING OF SOIL MACHINES WITH ACTIVE PARTS** **David Al.,** Voicu Gh., **Persu C., Gheorghe G.,** pg. 21-28
15.	**KINEMATIC ANALYSIS OF THE DRIVING MECHANISM OF ECCENTRIC SEPARATOR WHICH IS A COMPONENT PART OF HARVESTING MACHINERY FOR MISCANTHUS RHIZOMES** **Sorică E., Pirnă I., Sorică C.,** David L., pg. 73-80
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17.	**RESEARCHES REGARDING APPLES SORTING PROCESS BY SIZE** **Popa L., Ciupercă R., Nedelcu A.,** Voicu E., **Ştefan V., Petcu A**., pg 97-102
18.	**TESTING IN SIMULATED AND ACCELERATED REGIME OF RESISTANCE STRUCTURES** **Matache M., Persu I.,** Voicu Gh., Manea I., Biriş S.Şt., pg 153 - 160
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19.	**INFLUENCE OF TILLAGE TOOLS CUTTING EDGE WEAR OVER TECHNICAL AND ECONOMICAL MARKERS** Fechete Tutunaru L.V., **Nagy E. M., Coţa C.,** pg. 5-12
20.	**INNOVATIVE TECHNOLOGY FOR IRRIGATION AND CLIMATE CONTROL IN VEGETABLE GREENHOUSES** **Marin E., Pirnă I., Manea D., Matache M.,** pg. 43-52
21.	**KINEMATIC STUDY OF THRESHING PROCESS CONDUCTED BY TANGENTIAL THRESHING SYSTEM OF CONVENTIONAL CEREAL HARVESTING COMBINES** **Ivan Gh., Vlăduţ V.,** pag. 59-68
22.	**OPTIMIZATION OF THE DOSING PUMP FUNCTIONAL PARAMETERS USED FOR AGRICULTURAL CROPS FERTIGATION** Biolan I., **Visan A.L.,** Vulpe G., Biolan C., pag. 129-136
IV. ANNALS OF FACULTY ENINEERING HUNEDOARA, International Journal of Engineering, Tome XII, FASCICLE 3 **ISSN 1584-2665**	
23.	**STUDY OF TRACTOR SHAFT BRAKING FORCES DISTRIBUTION INFLUENCE ON WHEELED TRACTORS BRAKING** Iordache S., Bădescu M., Boruz S., Usenko M., **Cujbescu D., Vlăduţ V.,** pg 325-330
24.	**CONSIDERATIONS REGARDING THE OPTIMIZATION OF THE MECHANICAL CONDITIONING PROCESS OF GRAIN INTO THE INDENTED CYLINDER SEPARATORS** **Sorică C., Bracăcescu C., Manea D., Sorică E., Epure M.,** Covaliu C., pg. 335 – 338
25.	**THEORETICAL STUDY OF THE SYSTEM OF FORCES AND MOMENTS ACTING ON TRACTOR-SEMITRAILER AGGREGATE, INTO RECTILINEAR MOTION** Bădescu M., Iordache S., **Ivancu B., Persu C.,** Bunduchi G., **Epure M., Vlăduţ V.,** pg. 221-228
26.	**ANALYSIS OF THE DAMPING SYSTEM OF THE EQUIPMENT WITH VIBRATORY MOTION BY USING FINITE ELEMENT METHOD** **Ivancu B.,** Voicu Gh., pg. 129–132
V. ANNALS OF FACULTY OF ENGINEERING HUNEDOARA, International Journal of Engineering, Tome XII, FASCICLE 4 **ISSN 1584-2673**	
27.	**THE STUDY OF BRAKING DYNAMICS ON TRACTORS WITH WHEELS AND INFLUENCE OF THE FORCES WHICH APPEAR AT MOVEMENT ON BRAKING CAPABILITY** Iordache S., Boruz S., **Vlăduţ V., Sorică C., Manea D., Brăcăcescu C., Epure M.,** pg. 73-78
28.	**NITRATES IONS EFFICIENT REMOVAL FROM WATER USING THREE NANOADSORBENTS** Trăistaru G.A., Covaliu C.I., Paraschiv G., Gallios G., **Vlăduţ V., Manea D., Sorică C.**, pg. 325-328
29.	**ANALYSIS OF FORCES AND REACTION MOMENTS ACTING ON TRACTOR SEMITRAILER AGGREGATE ON SLOPED ROADS** Bădescu M., Iordache S., **Manea D., Sorică C., Brăcăcescu C.,** Boruz S., **Epure M., Vlăduţ V.,** pg. 29-36
VI. ANNALS "FRUIT RESEARCH INSTITUTE" **Pitesti - Maracineni, Vol. XXIX** **ISSN 2286–0304, ISSN–L 2286–0304**	
30.	**STUDIES REGARDING THE EVOLUTION OF APPLE FRUIT CHARACTERISTICS DURING THEIR STORING IN REFRIGERATING PRECINTS** Tănăsescu N, Chiţu E, **Popa L.**
VII. ANNALS OF THE UNIVERSITY OF CRAIOVA - AGRICULTURE, MONTANOLOGY,	

CADASTRE SERIES, vol. 44, no. 1 /2014 **ISSN 1841-8317, ISSN CD-ROM 2066-950X**	
31.	**EVALUATION OF SAFFLOWER CULTURE (CARTHAMUS TINCTORIUS) AS AN ALTERNATIVE CULTURE FOR SUNFLOWER CULTURE (HELIANTHUS ANNUUS) IN THE ARID AREAS OF SOUTHERN ROMANIA** **Ivan Gh.,** Catalina T.**,** pg. 127-132
VIII. ANNALS OF THE UNIVERSITY OF CRAIOVA - AGRICULTURE, MONTANOLOGY, CADASTRE SERIES, vol. 44, no. 2 /2014 **ISSN 1841-8317, ISSN CD-ROM 2066-950X**	
32.	**CURRENT STATUS IN THE CONSTRUCTION OF EQUIPMENTS FOR DEEP CHISELING OF THE SOIL WORLDWIDE** Bădescu M., Croitoru Şt., **Marin E., Ivan Gh., Petcu A.,** Boruz S., Kabas O., **Vlăduţ V.,** Caba I., **Cujbescu D., Manea D.,** pg. 12-24
33.	**CONSTRUCTION EVOLUTION OF DEEP SOIL LOOSENING EQUIPMENT IN ROMANIA IN THE COUNTRY SPECIFIC SOIL CONDITIONS** Bădescu M., Croitoru Şt., **Petcu A., Marin E.,** Boruz S., **Ivan Gh., Vlăduţ V., Matache M., Cujbescu D., Voicea I.,** pg. 25-34
34.	**CONSIDERATIONS REGARDING THE PROCESS OF COMPACTION AND SOIL LOOSENING** Croitoru Şt., Bădescu M., Boruz S., **Ivancu B., Marin E., Vlăduţ V., Manea D., Cujbescu D.,** Caba I., pg. 50-60
35.	**RESEARCH ON THE APPLICATION OF AGRICULTURAL CONSERVATIVE TECHNOLOGIES WITH DEEP LOOSENING WORKS IN ROMANIA AND WORLDWIDE** Croitoru Şt., Bădescu M., Ungureanu N., Boruz S., **Vlăduţ V.,** Usenko M., **Marin E., Manea D.,** Caba I., **Cujbescu D.,** pag. 61-71
36.	**PROTECTED AREAS MANAGEMENT IN AGRICULTURE AND FORESTRY** **Epure M., Găgeanu I., Eng. Sorică C.,** Voicu P., **Ivancu B.,** pag. 86-90
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62.	**SPECTROSCOPIC TESTS ON STRUCTURAL CHANGES FROM AUTOCHTHONOUS STARCH FROM CORN WITH PLASTIFIERS** **Cioica N.,** Fechete R., Filip C., Cozar B., **Nagy E. M., Cota C.**
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64.	**GRASSLANDS MANAGEMENT THROUGH OVERSEEDING TO REDUCE THE RISK OF DEGRADATION** **Manea D.,** Paraschiv G., Voicu Gh., **Marin E.**
XVII. 5th European Workshop on Standardized Procedure for the Inspection of Sprayers in Europe- SPISE 5, Montpellier, Franta, 15-17.10.2014	
65.	**IMPLEMENTATION STATUS OF MANDATORY INSPECTION OF SPRAYERS IN ROMANIA** **Nagy E.M.,** Boroş V., **Manea D.,** Bungescu S., Ranta O.

7.1.9. Prospective and technological studies, norms, procedures, methodologies and technical plans, new or improved, ordered or used by the beneficiary

OUTCOME NAME	2013	2014
Prospective and technological studies	6	15
Norms	10	0
Procedures	1	7

Methodologies	**17**	**12**
New or improved technical plans	**9**	**23**

Annex 8

7.1.9.1. PROSPECTIVES AND TEHNOLOGICAL STUDIES 15

Den. no.	Project Research contract / Commercial contract Beneficiary	Outcome	Reference/delivery deadline (month)
1.	Researches on achieving a lavender harvesting equipment Research contract no.506 / 07.05.2014 Order: 616 / 2014 - 2014-09-01 Contracting Authority: PFA IAKOB IOAN MARIA Beneficiary : PFA IAKOB IOAN MARIA	Prospective study regarding the technologies and equipment used at world level for lavender harvesting	August 2014
2.	Researches on achieving an equipment for obtaining essential oils (500 l) through distillation Research contract no. 1446/18.11.2014 Order :633/ 2014 - 2014 Contracting Authority: PFA JAKOB IOAN MARIA Beneficiary: PFA JAKOB IOAN MARIA	Prospective study regarding the equipment and technology of obtaining essential oils	December 2014
3.	Researches regarding the development and automation of a technical equipment designed to clean and screen the cereal seeds from agricultural producers, in order to reduce processing losses of raw materials within the food chain. Research contract no 15 N / 27.02.2009 / Add. act.no.1/2014 Contracting Authority: : M.E.N. Order: 607 / 2014 - 2014 Beneficiary: ACADEMY OF AGRICULTURAL AND FORESTRY SCIENCE- ASAS Collaboration protocol no. 1552 / 08.11.2007	Technological study on substantiation of technology of cleaning, sorting the cereal seeds and technical plants during the primary processing	March 2014
4.	Innovative technology of irrigations and climate control in vegetable grenhouses Research contract no 15 N / 27.02.2009 / Add.act.no.1/2014 Contracting Authority: M.E.N. Order 608 / 2014 - 2014 Beneficiary: ACADEMY OF AGRICULTURAL AND FORESTRY SCIENCE- ASAS Collaboration protocol no. 1552 / 08.11.2007	Technological study regarding the technologies of irrigations and climate control in vegetable greenhouses	March 2014
5.	Innovative technology of conditioning the fresh horticultural products designed to consumption Research contract no 15 N / 27.02.2009 / Add. act.no.1/2014 Contracting Authority: M.E.N. Order: 609 / 2014 - 2014 Beneficiary: ACADEMY OF AGRICULTURAL AND FORESTRY SCIENCE- ASAS Collaboration protocol no. 1552 / 08.11.2007	Technological study regarding the conditioning of horticultural products designed to consumption in fresh state	March 2014
6.	Modern technologies and installations for water treatment, degasification and oxygenation for ensuring optimum conditions in aquiferous recirculating systems designed to fish superintensive breeding	Technological study regarding the water treatment, aeration, degasification and oxygenation in SAR of	March 2014

Den. no.	Project Research contract / Commercial contract Beneficiary	Outcome	Reference/delivery deadline (month)
	Research contract no 15 N / 27.02.2009 / Add. act no.1/2014 Contracting Authority : M.E.N. Order: 610 / 2014 - 2014 Beneficiary: ACADEMY OF AGRICULTURAL AND FORESTRY SCIENCE- ASAS Collaboration protocole no. 1552 / 08.11.2007	fish superintensive breeding	
7.	Research and substantiation of a mechanizing technology for establishing and maintaining the energetic poplar crop Research contract no 15 N / 27.02.2009 / Add. act.no.2/2014 Contracting Authority : M.E.N. Order: 615 / 2014 - 2014 Beneficiary: ACADEMY OF AGRICULTURAL AND FORESTRY SCIENCE- ASAS Protocol of collaboration no. 1552 / 08.11.2007	Technological study regarding the technology of establishing and maintaining the energetic poplar crop	July 2014
8.	Conservative technology of processing the soil (ConsTillTech) Research contract no . 181/ 2014 Contracting Authority : UEFISCDI (PARTNERSHIPS) CD: 620 / 2014 - 2016 Beneficiary: MASCHIO - Gaspardo Romania SRL Agreement of partnership no. 11554 / 08.07.2014	Technological study regarding the conservative technologies for soil processing	November 2014
9.	Conservative technology of soil processing (ConsTillTech) Research contract no. 181/ 2014 Contracting Authority :: UEFISCDI (PARTENERIATE) Order: 620 / 2014 - 2016 Beneficiary: MASCHIO - Gaspardo Romania SRL Agreement of partnership no . 11554 / 08.07.2014	Technological study regarding the methods of applying the composite materials/nano-technologies to active parts of technical equipment	November 2014
10.	Researches regarding the achievement of an ecological system of managing the vegetal and animal waste, aimed to livestock farms and households Research contract no. 15 N / 27.02.2009 / Add. act.no.3/2014 Contracting Authority : M.E.N. Order: 623 / 2014 - 2014 Beneficiary: ACADEMY OF AGRICULTURAL AND FORESTRY SCIENCE- ASAS Collaboration protocol no. 1552 / 08.11.2007	Technological study regarding the manner in which vegetal and animal waste are managed in Romania and abroad according to current laws in the field	October 2014
11.	Researches regarding the achievement of an integrated system of obtaining bio-fertilizing/bio-insecticide extracts in ecological farming Research contract no 15 N / 27.02.2009 / Add. act.no.4/2014 Contracting Authority : M.E.N. Order: 626 / 2014 - 2014 Beneficiary: ACADEMY OF AGRICULTURAL AND FORESTRY SCIENCE- ASAS Collaboration protocol no. 1552 / 08.11.2007	Technological study regarding bio-fertilizers/bio-insecticides and relevant technical equipment	December 2014
12.	Innovative technology for establishing the onion crop from seed Research contract no . CS (PVR) no. 80/21.01.2014 Order: 629/ 2014 - 2015 Beneficiary: ACADEMY OF AGRICULTURAL AND	Technological study regarding the technology of sowing onion from seeds	November 2014

Den. no.	Project Research contract / Commercial contract Beneficiary	Outcome	Reference/delivery deadline (month)
	FORESTRY SCIENCE- ASAS ; PACTMAR Collaboration protocol no. 1552 / 08.11.2007		
13.	Researches regarding the increment of automation level within the technological livestock processes by implementing a soft of dosage/packing the fodder Research contract no . CS (PVR) no. 80/21.01.2014 Order: 630/ 2014 - 2014 Beneficiary: ACADEMY OF AGRICULTURAL AND FORESTRY SCIENCE- ASAS PACTMAR Collaboration protocole no. 1552 / 08.11.2007	Technological study regarding the optimization of fodder dosage/packing processes	October 2014
14.	Researches regarding the achievement of a technical equipment designed to ecological maintenance works in orchards Research contract no CS (PVR) no. 80/21.01.2014 Order.: 631/ 2014 - 2014 Beneficiary: ACADEMY OF AGRICULTURAL AND FORESTRY SCIENCE- ASAS PACTMAR Collaboration protocol no. 1552 / 08.11.2007	Technological study regarding the works mechanization in orchards - EIPP	October 2014
15.	Researches regarding the management and high capitalization of vegetal and organic waste as bioenergy (BIOGAS) Research contract no. CS (PVR) no. 80/21.01.2014 Order: 632/ 2014 - 2014 Beneficiary: ACADEMY OF AGRICULTURAL AND FORESTRY SCIENCE- ASAS PACTMAR Collaboration protocol no. 1552 / 08.11.2007	Technological study regarding the current methods and technologies of management and high capitalization of vegetal waste as bioenergy (BIOGAS)	November 2014

7.1.9.2. NORMS 0

7.1.9.3. PROCEDURES 7

Den.no.	Project Research contract/ Commercial contract Beneficiary	Result	Reporting deadline/delivery (month)
1.	Development of innovative technical equipment designed to technology of rational capitalization of lawns under climate change conditions Contracting Authority: UEFISCDI Order: 598 / 2013 - 2015 Beneficiary: SC MECANO FUC SA Collaboration agreement no.1186 / 13.08.2013	Procedure of laboratory and field tests of experimental model of trailed windrower	August 2014
2.	Development of innovative technical equipment designed to technology of rational capitalization of lawns under climate change conditions Contracting Authority: UEFISCDI Order: 598 / 2013 - 2015 Beneficiary: SC MECANO FUC SA Collaboration agreement no.1186 / 13.08.2013	Procedure of laboratory and field tests of experimental model of machine for lawn regeneration	August 2014

3.	Development of innovative technical equipment designed to technology of rational capitalization of lawns under climate change conditions Contracting Authority: UEFISCDI Order: 598 / 2013 - 2015 Beneficiary: SC MECANO FUC SA Collaboration agreement no.1186 / 13.08.2013	Procedure of tests during operation of experimental model of trailed windrower	August 2014
4.	Development of innovative technical equipment designed to technology of rational capitalization of lawns under climate change conditions Contracting Authority: UEFISCDI Order: 598 / 2013 - 2015 Beneficiary: SC MECANO FUC SA Collaboration agreement no.1186 / 13.08.2013	Procedure of tests during operation of experimental model of machine for lawns regeneration	August 2014
5.	Innovative technology for irrigations and climate control in vegetable greenhouses Research contract no. 15N / 27.02.2019 / Add. act 2 / 2014 Contracting Authority: MEN Order: 608 / 2014 - 2014 Beneficiary: ASSOCIATION OF MANUFACTURERS OF AGRICULTURAL MACHINES AND TRACTORS FROM ROMANIA - PACTMAR Protocol no. 1556 / 12.11.2007	Procedure of testing the innovative irrigation technology and climate control in vegetable greenhouses	August 2014
6.	Research and substantiation of a mechanizing technology for establishing and maintaining the energetic poplar crop Research contract no 15 N / 27.02.2009 / Add. act.no.2/2014 Contracting Authority: M.E.N. Order 615 / 2014 - 2014 Beneficiary: ASSOCIATION OF MANUFACTURERS OF AGRICULTURAL MACHINES AND TRACTORS FROM ROMANIA - PACTMAR Protocol no. 1556 / 12.11.2007	Testing method of installation of localized irrigation	December 2014
7.	Research and substantiation of a mechanizing technology for establishing and maintaining the energetic poplar crop Research contract no 15 N / 27.02.2009 / Add. act.no.2/2014 Contracting Authority: M.E.N. Order 615 / 2014 - 2014 Beneficiary: ASSOCIATION OF MANUFACTURERS OF AGRICULTURAL MACHINES AND TRACTORS FROM ROMANIA - PACTMAR Protocole no. 1556 / 12.11.2007	Testing method of precision equipment of banded herbicide application	December 2014

7.1.9.4. METHODOLOGIES 12

Den. no.	Project Research contract/ Commercial contract Beneficiary	Result	Reporting deadline/delivery (month)

1.	Promoting in Romania of the technology of energetic willow cultivation (SALIX VIMINALIS) as alternative source of clean energy Contract no. 35 / 02.07.2014 Order 583 / 2012 - 2016 Contracting Authority :EFISCDI Beneficiary: SC MECANICA CEAHLAUL SA; ASSOCIATION GREEN ENERGY Beneficiary: ACADEMY OF AGRICULTURAL AND FORESTRY SCIENCE - ASAS Collaboration protocole n. 1552 / 08.11.2007	Method of testing a technical equipment for harvesting and chopping energetic willow, ETSE	May 2014
2.	Promoting in Romania of the technology of energetic willow cultivation (SALIX VIMINALIS) as alternative source of clean energy Contract no. 35 / 02.07.2014 Order 583 / 2012 - 2016 Contracting Authority : UEFISCDI Beneficiary: SC MECANICA CEAHLAUL SA; ASSOCIATION GREEN ENERGY Beneficiary: ACADEMY OF AGRICULTURAL AND FORESTRY SCIENCE - ASAS Collaboration protocol no.. 1552 / 08.11.2007	Method of testing a technical equipment for harvesting and chopping energetic willow, ETSE	May 2014
3.	Development of innovative technical equipment designed to technology of rational capitalization of lawns under climate change conditions Contracting Authority : UEFISCDI Order: 598 / 2013 - 2015 Beneficiary: SC MECANO FUC SA Partnership agreement no.1186 / 13.08.2013	Method of practical demonstration of functionality of experimental model of lawn regenerating machine	August 2014
4.	Development of innovative technical equipment designed to technology of rational capitalization of lawns under climate change conditions Contracting Authority : UEFISCDI Order: 598 / 2013 - 2015 Beneficiary: SC MECANO FUC SA Partnership agreement no .1186 / 13.08.2013	Method of practical demonstration of functionality of experimental model of trailed windrower	August 2014
5.	Innovative multifunctional self-propelled equipment with working device, designed to small-sized agricultural farm works Contract no. 20DPST/20.08.2013\ Order: 599 / 2013 - 2015 Beneficiary : SC RURIS IMPEX SRL Partnership agreement no 1186 / 13.08.2013	Method of testing the operation of an innovative multifunctional self-propelled equipment	October 2014
6.	Innovative multifunctional self-propelled equipment with working device, designed to small-sized agricultural farm works Contract no. 20DPST/20.08.2013 Order: 599 / 2013 - 2015 Beneficiary: SC RURIS IMPEX SRL Partnership agreement no .1186 / 13.08.2013	Method of testing in laboratory and field of an innovative multifunctional self-propelled equipment	October 2014
7.	Innovative technology for conditioning the fresh horticultural products designed to consumption Research contract no. 15 N / 27.02.2009 / Act.ad.nr.1/2014 Contracting Authority: M.E.N. Order: 609 / 2014 - 2014 Beneficiary: ACADEMY OF AGRICULTURAL AND FORESTRY SCIENCE - ASAS Collaboration protocol no. 1552 / 08.11.2007	Method for testing the installation of external surfaces decontamination	September 2014

8.	Innovative technology for conditioning the fresh horticultural products designed to consumption Research contract no. 15 N / 27.02.2009 / Add. act.no.1/2014 Contracting Authority: M.E.N. Order 609 / 2014 - 2014 Beneficiary: ACADEMY OF AGRICULTURAL AND FORESTRY SCIENCE - ASAS Collaboration protocol no 1552 / 08.11.2007	Testing method of automated installation for temporary storing of horticultural products	September 2014
9.	Researches regarding the achievement of a lavender harvesting equipment Contract no.506 / 07.05.2014 Order: 616 / 2014 - 2014-09-01 Contracting Authority : PFA IAKOB IOAN MARIA Beneficiary: PFA IAKOB IOAN MARIA	Method of testing an equipment for lavender harvesting ERL - 0	August 2014
10.	Researches regarding the achievement of an ecological system of vegetal and animal waste management designed to livestock farms and households Research contract no. 15 N / 27.02.2009 / Add act no.3/2014 Contracting Authority: M.E.N. Order: 623 / 2014 - 2014 Beneficiary: ACADEMY OF AGRICULTURAL AND FORESTRY SCIENCE - ASAS Collaboration protocol no . 1552 / 08.11.2007	Method of testing an ecological system of vegetal and animal waste management - SEG	November 2014
11.	Researches regarding the achievement of an integrated system of obtaining extracts with biofertilize/bioinsecticide role, for plant leaves in ecological farming Research contract no. 15 N / 27.02.2009 / Add. act.no.4/2014 Contracting Authority: M.E.N. Order: 623 / 2014 - 2014 Beneficiary: ACADEMY OF AGRICULTURAL AND FORESTRY SCIENCE - ASAS Collaboration protocol no . 1552 / 08.11.2007	Method regarding EM testing for localizing the extracts with biofertilize/bioinsecticide role, for plant leaves	December 2014
12.	Researches regarding the achievement of an equipment for obtaining essential oils (500 l) by distillation Research contract no. 1446/18.11.2014 Order: 633/ 2014 - 2014 Contracting Authority: : PFA JAKOB IOAN MARIA Beneficiary: PFA JAKOB IOAN MARIA	Method of testing a technical equipment for obtaining essential oils (500 l) by distillation	December 2014

7.1.9.5. TECHNICAL PLANS 23

Den. No.	Project Research contract/ Commercial contract Beneficiary	Result	Reporting deadline/delivery (month)
1.	Innovative technology for irrigations and climate control in vegetable greenhouses Research contract no. .15 N / 27.02.2009 / Add. act.no.1/2014 Contracting Authority: MEN Order: 608 / 2014 – 2014 Beneficiary: ACADEMY OF AGRICULTURAL AND FORESTRY SCIENCE - ASAS Collaboration protocol no . 1552 / 08.11.2007	Technical plan: *Innovative technology for irrigations and climate control in vegetable greenhouses TICS-O*	March 2014

2.	Innovative technology for conditioning the horticultural products designed to consumption in fresh state Research contract no. .15 N / 27.02.2009 / Add. act.no.1/2014 Contracting Authority: MEN Order: 608 / 2014 – 2014 Beneficiary: ACADEMY OF AGRICULTURAL AND FORESTRY SCIENCE - ASAS Collaboration protocol no . 1552 / 08.11.2007	Technical plan : *Installation of decontaminating the external surfaces of horticultural products*	July 2014
3.	Innovative technology for conditioning the horticultural products designed to consumption in fresh state Research contract no. .15 N / 27.02.2009 / Add. act.no.1/2014 Contracting Authority: MEN Order: 608 / 2014 – 2014 Beneficiary: ACADEMY OF AGRICULTURAL AND FORESTRY SCIENCE - ASAS Collaboration protocol no . 1552 / 08.11.2007	Technical plan *Automated installation for temporary storing of horticultural products*	July 2014
4.	Modern technologies and installations for water treatment, aeration, degasification and oxygenation for ensuring the optimum conditions in aquiferous recirculating systems for fish superintensive breeding Research contract no. . 15 N / 27.02.2009 / Add.act no.2/2014 Contracting Authority: : M.E.N. Order: 610 / 2014 - 2014 Beneficiary: ACADEMY OF AGRICULTURAL AND FORESTRY SCIENCE - ASAS Collaboration protocol no 1552 / 08.11.2007 Beneficiary: ASSOCIATION OF MANUFACTURERS OF AGRICULTURAL MACHINES AND TRACTORS IN ROMANIA - PACTMAR Collaboration protocol no 1556 /12.11.2007	Technical plan : *Installation of water degasification in aquiferous recirculating systems - DG 20*	June 2014
5.	Modern technologies and installations for water treatment, aeration, degasification and oxygenation for ensuring the optimum conditions in aquiferous recirculating systems for fish superintensive breeding Research contract no. 15 N / 27.02.2009 / Add act.no.2/2014 Contracting Authority: M.E.N. Order: 610 / 2014 - 2014 Beneficiary: ACADEMY OF AGRICULTURAL AND FORESTRY SCIENCE - ASAS Collaboration protocole no . 1552 / 08.11.2007 Beneficiary: ASSOCIATION OF MANUFACTURERS OF AGRICULTURAL MACHINES AND TRACTORS IN ROMANIA - PACTMAR Protocol no. 1556 / 12.11.2007	Technical plan : *Sludge settler for aquiferous recirculating systems - DN 4*	June 2014
6.	Modern technologies and installations for water treatment, aeration, degasification and oxygenation for ensuring the optimum conditions in aquiferous recirculating systems for fish superintensive breeding Research contract no 15 N / 27.02.2009 / Add. act.no.2/2014 Contracting Authority: M.E.N. Order: 610 / 2014 - 2014 Beneficiary: ACADEMY OF AGRICULTURAL AND FORESTRY SCIENCE - ASAS Collaboration protocol no . 1552 / 08.11.2007 Beneficiary: ASSOCIATION OF MANUFACTURERS OF AGRICULTURAL MACHINES AND TRACTORS IN ROMANIA - PACTMAR Protocole no. 1556 / 12.11.2007	Technical plan : *Sludge settler for aquiferous recirculating systems (stainless steel variant) - DN 4i*	June 2014

7.	Modern technologies and installations for water treatment, aeration, degasification and oxygenation for ensuring the optimum conditions in aquiferous recirculating systems for fish superintensive breeding Research contract no . 15 N / 27.02.2009 / Add. act.no.2/2014 Contracting Authority : M.E.N. Order: 610 / 2014 - 2014 Beneficiary: ACADEMY OF AGRICULTURAL AND FORESTRY SCIENCE - ASAS Collaboration protocol no . 1552 / 08.11.2007 Beneficiary: ASSOCIATION OF MANUFACTURERS OF AGRICULTURAL MACHINES AND TRACTORS IN ROMANIA - PACTMAR Protocol no. 1556 / 12.11.2007	Technical plan : *Sludge settler for aquiferous recirculating systems DN 8*	June 2014
8.	Modern technologies and installations for water treatment, aeration, degasification and oxygenation for ensuring the optimum conditions in aquiferous recirculating systems for fish superintensive breeding Research contract no . 15 N / 27.02.2009 / Add. act.no.2/2014 Contracting Authority : M.E.N. Order 610 / 2014 - 2014 Beneficiary: ACADEMY OF AGRICULTURAL AND FORESTRY SCIENCE - ASAS Collaboration protocole no . 1552 / 08.11.2007 Beneficiary: ASSOCIATION OF MANUFACTURERS OF AGRICULTURAL MACHINES AND TRACTORS IN ROMANIA - PACTMAR Protocol no. 1556 / 12.11.2007	Technical plan : *Sludge settler for aquiferous recirculating systems DN 16*	June 2014
9.	Modern technologies and installations for water treatment, aeration, degasification and oxygenation for ensuring the optimum conditions in aquiferous recirculating systems for fish superintensive breeding Research contract no . 15 N / 27.02.2009 / Add. act.no.2/2014 Contracting Authority : M.E.N. Order 610 / 2014 - 2014 Beneficiary: ACADEMY OF AGRICULTURAL AND FORESTRY SCIENCE - ASAS Collaboration protocol no . 1552 / 08.11.2007 Beneficiary: ASSOCIATION OF MANUFACTURERS OF AGRICULTURAL MACHINES AND TRACTORS IN ROMANIA - PACTMAR Protocol no. 1556 / 12.11.2007	Technical plan: *Installation for water treatment with oxygen in aquiferous recirculating systems ITO 15*	June 2014
10.	Modern technologies and installations for water treatment, aeration, degasification and oxygenation for ensuring the optimum conditions in aquiferous recirculating systems for fish superintensive breeding Research contract no . 15 N / 27.02.2009 / Add. act.no.2/2014 Contracting Authority : M.E.N. Order 610 / 2014 - 2014 Beneficiary: ACADEMY OF AGRICULTURAL AND FORESTRY SCIENCE - ASAS Collaboration protocole no . 1552 / 08.11.2007 Beneficiary: ASSOCIATION OF MANUFACTURERS OF AGRICULTURAL MACHINES AND TRACTORS IN ROMANIA - PACTMAR Protocol no. 1556 / 12.11.2007	Technical plan: *Installation for water treatment with oxygen in aquiferous recirculating systems ITO 30*	June 2014

11.	Modern technologies and installations for water treatment, aeration, degasification and oxygenation for ensuring the optimum conditions in aquiferous recirculating systems for fish superintensive breeding Research contract no . 15 N / 27.02.2009 / Add. act.no.2/2014 Contracting Authority : M.E.N. Order 610 / 2014 - 2014 Beneficiary: ACADEMY OF AGRICULTURAL AND FORESTRY SCIENCE - ASAS Collaboration protocol no . 1552 / 08.11.2007 Beneficiary: ASSOCIATION OF MANUFACTURERS OF AGRICULTURAL MACHINES AND TRACTORS IN ROMANIA - PACTMAR Protocol no. 1556 / 12.11.2007	Technical plan: *Installation for water treatment with oxygen in aquiferous recirculating systems ITO 60*	June 2014
12.	Modern technologies and installations for water treatment, aeration, degasification and oxygenation for ensuring the optimum conditions in aquiferous recirculating systems for fish superintensive breeding Research contract no . 15 N / 27.02.2009 / Add. act.no.2/2014 Contracting Authority : M.E.N. Order 610 / 2014 - 2014 Beneficiary: ACADEMY OF AGRICULTURAL AND FORESTRY SCIENCE - ASAS Collaboration protocol no . 1552 / 08.11.2007 Beneficiary: ASSOCIATION OF MANUFACTURERS OF AGRICULTURAL MACHINES AND TRACTORS IN ROMANIA - PACTMAR Protocol no. 1556 / 12.11.2007	Technical plan: *Installation for water treatment with oxygen in aquiferous recirculating systems ITO 90*	June 2014
13.	Modern technologies and installations for water treatment, aeration, degasification and oxygenation for ensuring the optimum conditions in aquiferous recirculating systems for fish superintensive breeding Research contract no . 15 N / 27.02.2009 / Add. act.no.2/2014 Contracting Authority : M.E.N. Order 610 / 2014 - 2014 Beneficiary: ACADEMY OF AGRICULTURAL AND FORESTRY SCIENCE - ASAS Collaboration protocol no . 1552 / 08.11.2007 Beneficiary: ASSOCIATION OF MANUFACTURERS OF AGRICULTURAL MACHINES AND TRACTORS IN ROMANIA - PACTMAR Protocol no. 1556 / 12.11.2007	Technical plan: *Installation for UV water treatment in aquiferous recirculating systems UV 80*	June 2014
14.	Modern technologies and installations for water treatment, aeration, degasification and oxygenation for ensuring the optimum conditions in aquiferous recirculating systems for fish superintensive breeding Research contract no . 15 N / 27.02.2009 / Add. act.no.2/2014 Contracting Authority : M.E.N. Order 610 / 2014 - 2014 Beneficiary: ACADEMY OF AGRICULTURAL AND FORESTRY SCIENCE - ASAS Collaboration protocol no . 1552 / 08.11.2007 Beneficiary: ASSOCIATION OF MANUFACTURERS OF AGRICULTURAL MACHINES AND TRACTORS IN ROMANIA - PACTMAR Protocol no. 1556 / 12.11.2007	Technical plan: *Water aeration installation in aquiferous recirculating systems - IA 20*	October 2014

15.	Modern technologies and installations for water treatment, aeration, degasification and oxygenation for ensuring the optimum conditions in aquiferous recirculating systems for fish superintensive breeding Research contract no . 15 N / 27.02.2009 / Add. act.no.2/2014 Contracting Authority : M.E.N. Order 610 / 2014 - 2014 Beneficiary: ACADEMY OF AGRICULTURAL AND FORESTRY SCIENCE - ASAS Collaboration protocol no . 1552 / 08.11.2007 Beneficiary: ASSOCIATION OF MANUFACTURERS OF AGRICULTURAL MACHINES AND TRACTORS IN ROMANIA - PACTMAR Protocol no. 1556 / 12.11.2007	Technical plan : *Installation of localized irrigation*	July 2014
16.	Research and substantiation of a new mechanizing technology for establishing and maintaining the energetic poplar culture Research contract no. 15 N / 27.02.2009 / Add. act. no.2/2014 Contracting Authority : M.E.N. Order: 615 / 2014 - 2014 Beneficiary: ACADEMY OF AGRICULTURAL AND FORESTRY SCIENCE - ASAS Collaboration protocol no . 1552 / 08.11.2007 Beneficiary: ASSOCIATION OF MANUFACTURERS OF AGRICULTURAL MACHINES AND TRACTORS IN ROMANIA - PACTMAR Protocol no. 1556 / 12.11.2007	Technical plan: *Precision equipment for applying herbicides in bands*	July 2014
17.	Researches on manufacturing a lavender harvesting equipment Research contract no. 506 / 07.05.2014 Contracting entity: PFA JAKOB JOAN MARIA Order: 616 / 2014 - 2014 Beneficiary: PFA JAKOB JOAN MARIA	Technical plan: *Lavender harvesting equipment*	August 2014
18.	Researches performed by supplier on separation of parasite seeds by means of magnetic separator. Buyer's purchase of a magnetic separator for removing parasite seeds out of alfalfa seeds Research contract no. 869/21.07.2014 Order: 619 / 2014 Contracting authority: SC CIPROMA SEM SRL Beneficiary: SC CIPROMA SEM SRL	Technical plan : *Magnetic separator for removing parasite seeds out of alfalfa seeds*	December 2014
19.	Researches on achievement of an ecological system for managing vegetal and animal waste, designed to livestock farms and individual households Research contract no.. 15 N / 27.02.2009 / Add. act. no.3/2014 Contracting authority: M.E.N. Order: 623 / 2014 - 2014 Beneficiary: ACADEMY OF AGRICULTURAL AND FORESTRY SCIENCE - ASAS Collaboration protocole no . 1552 / 08.11.2007 Beneficiary: ASSOCIATION OF MANUFACTURERS OF AGRICULTURAL MACHINES AND TRACTORS IN ROMANIA - PACTMAR Protocol no. 1556 / 12.11.2007	Technical plan : *Ecological system for managing vegetal and animal waste, designed to livestock farms and individual households*	October 2014
20.	Researches on achievement of an integrated system for obtaining extracts with foliar biofertilizer / bioinsecticide role in ecological farming Research contract no.. 15 N / 27.02.2009 / Add. act. no.3/2014 Contracting authority: M.E.N. Order: 626 / 2014 - 2014 Beneficiary: ACADEMY OF AGRICULTURAL AND FORESTRY SCIENCE - ASAS Collaboration protocol no . 1552 / 08.11.2007 Beneficiary: ASSOCIATION OF MANUFACTURERS OF AGRICULTURAL MACHINES AND TRACTORS IN ROMANIA - PACTMAR Protocol no. 1556 / 12.11.2007	Technical plan: *Equipment for obtaining ecological biofertilizers / bioinsecticides*	November 2014

21.	Innovative technology for establishing in the field the onion crop from seeds Research contract no. CS (PVR) no. 80/21.01.2014 Order: 629/ 2014 - 2015 Beneficiary: ACADEMY OF AGRICULTURAL AND FORESTRY SCIENCE - ASAS Collaboration protocol no . 1552 / 08.11.2007 Beneficiary: ASSOCIATION OF MANUFACTURERS OF AGRICULTURAL MACHINES AND TRACTORS IN ROMANIA - PACTMAR Protocol no. 1556 / 12.11.2007	Technical plan : *Sowing machine for sowing onion from seeds*	November 2014
22.	Researches on achieving a technical equipment designed to ecological maintenance works in orchards Research contract no . CS (PVR) no. 80/21.01.2014 Order: 631/ 2014 - 2014 Beneficiary: ACADEMY OF AGRICULTURAL AND FORESTRY SCIENCE - ASAS Collaboration protocole no . 1552 / 08.11.2007 Beneficiary: ASSOCIATION OF MANUFACTURERS OF AGRICULTURAL MACHINES AND TRACTORS IN ROMANIA - PACTMAR Protocol no. 1556 / 12.11.2007	Technical plan: *Technical equipment for orchards maintenance EIPP*	September 2014
23.	Researches on achieving a technical equipment designed to ecological maintenance works in orchards Research contract no . CS (PVR) no. 80/21.01.2014 Order: 631/ 2014 - 2014 Beneficiary: ACADEMY OF AGRICULTURAL AND FORESTRY SCIENCE - ASAS Collaboration protocol no . 1552 / 08.11.2007 Beneficiary: ASSOCIATION OF MANUFACTURERS OF AGRICULTURAL MACHINES AND TRACTORS IN ROMANIA - PACTMAR Protocol no. 1556 / 12.11.2007	Technical plan: *Vegetal waste chopper*	September 2014

7.1.10. Copyright protected by ORDA or other similar legal systems: -

7.2. Research-development results capitalized and their effects

RESULT	Contract name	Beneficiary	Patent / Patent application	Effects obtained
Test report	Researches on determination of resistance: Static resistance tests for special parts - 3 specimens code: ACV - 051 - 055, according to CS no. 141 / 1990, Chap. 6.15; - Fatigue tests for special parts - 7 specimens; ACV-051-055, according to CS no.141 / 1990, Chap.17	SC AVIOANE Craiova	-	- checking the resistance to static strains of special parts; - increasing INMA incomes
Test report	Researches on the determination of a forestry tractor cabin resistance through: resistance ROPS according to D2009/75/CEE; Static resistance tests FOPS according to ISO 8083;2006; Static resistance tests OPS according to ISO 8084:2003	SC ROTECA SRL	-	- checking the forestry tractor cabin resistance to static strains; - increasing INMA incomes
Service	Testing the improved system of drilling the planting holes for establishing orchards in fallow land	PFA ILIESCU	-	- checking the future drilling performances of the equipment; - increasing INMA incomes
Product	Researches on manufacturing a lavender harvesting equipment	PFA IAKOB	-	- checking the technical performances of TE; - checking the security requirements fullfiling; – increasing INMA incomes
Test	Researches regarding the resistance determination	SC AVIOANE	-	-- checking the resistance to

report	: Static resistance tests for special parts - 3 specimens code: ACV-051-055, according to CS no. 141/1990, Chap. 6.15; Fatigue tests for special parts - 7 specimens: ACV-051-055, according to. CS no. 141/1990, Chap.6.17	Craiova		static strains of special parts; - increasing INMA incomes
Product	Researches performed by the buyer on parasite seeds separation by means of magnetic separator. Buyer's purchase of a magnetic separator for removing parasite seeds out of alfalfa seeds	SC CIPROMA SA	YES	-checking the technical performances of TE ; -equipment technical assistance and assembling and PIF - checking the security requirements fullfiling - increasing INMA incomes
Product	Researches on manufacturing an equipment for obtaining essential oils (500 l) by distillation	PFA IAKOB	-	-checking the technical performances of TE - ; checking the security requirements fullfiling - increasing INMA incomes
Service	Services of business assistance for innovation and technological transfer in the field of technologies and technical equipment for agriculture and food industry, farms and related fields	SC INNO CONSULT SRL	-	- creating the framework necessary to enhance the innovation capacity of incubated company; - creting partnerships and launching tenders within the European and national programs of RDI; - increasing INMA incomes
Service	Services of business assistance for innovation and technological transfer in the field of technologies and technical equipment for agriculture and food industry, farms and related fields	ASOCIATIA CLUSTERELOR DIN ROMANIA - CLUSTERO	-	- creating partnerships between the members of association incubated and INMA within the sectoral operational programs; - creation of partnerships for organizing scientific events; - increasing INMA incomes
Service	Services of business assistance for innovation and technological transfer in the field of technologies and technical equipment for agriculture and food industry, farms and related fields	SC VALTEC TRACTORS SRL	-	- creating the framework necessary to enhance the innovation capacity of incubated company; - creating partnerships and launching tenders within the European and national programs of RDI and sectoral operational programs; - - increasing INMA incomes

7.3. Opportunities of capitalization of research results

- National Program for Rural Development 2014-2020;
- National Strategy for Romania's Sustainable Development Orizonturi 2013-2020-2030;
- MADR Programme of reconversion and replanting in fruit growing 2014-2020;
- National Programme for establishing forestry belts for protecting highways and national roads (http://ape-paduri.ro/ordonanta-de-urgenta-privind-aprobarea-programului-national-de-realizare-a-perdelelor-forestiere-pentru-protectia-autostrazilor-si-drumurilor-nationale/);
- National System of Agro-forestry curtains (Law No.289 from 15.05.2002 on protection forestry belts);
- Horizon 2020 – Reindustrialization of sectors with significant added value of EU member states
- Drawing up the innovation proposals, appropriate to specification 16.1 "Support for establishing and functioning of operational groups (GO", Rural Development Plan 2014-2020.

7.4. Measures for increasing the socio-economic capitalization degree of research outcome

- Enhancing INMA participation in all regional, national and international fairs /salons;

- Multiplying partnerships of INMA- SMEs including in related domains (exploitation of technologies and technical equipment, maintenance, re-manufacturing);
- Increasing the number of practical demonstrations at potential users/beneficiaries;
- Enhancing the incubation of micro-companies and SMEs within INMA activity field;
- Connecting INMA marketing department and incubator INMA-ITA marketing department to the Network ENTREPRISE EUROPE NETWORK;
- Intensifying the participation in brokerage events and/or licensing;
- Enhancing the partnerships with farmers and agricultural associations in order to directly transfer the innovation offers, focused on mechanizing technologies.

8. MEASURES FOR INCREASING INCD PRESTIGE AND VISIBILITY

8.1. Presentation of collaboration activity through partnerships:

- **developing internal and international partnerships (with personalities / institutions / professional associations) in order to participate in specific national and European programs:**
  - ReNITT – National Network for Innovation and Technological Transfer;
  - ASRO – Standardization Association in Romania;
  - RENAR – Romanian Accrediting Association;
  - RAR – Romanian Auto Register;
  - CNCPIR – National Chamber of Counsellors in Intelectual Property in Romania
  - ASAS – Academy of Agricultural and Forestry Sciences "Gheorghe Ionescu-Sisesti"
  - SIR – Society of Inventors in Romania
  - BIOCARO – Romanian Biofuels Platform;
  - ARoTT – Romanian Association of Technological Transfer;
  - ROCASCO – Committee for Conformity Assesment**;**
  - CT 77 – Technical Committee – Machines and Agricultural Equipment;
  - FOOD for LIVE Technological Platform;
    MANUFUTURE platform;
  - EHEDG - THE EUROPEAN HYGIENIC ENGINEERING & DESIGN GROUP **–** Frankfurt, Germany;
  - S.C. MASCHIO GASPARDO Romania SRL;
  - SC TEHNOFAVORIT SA Bonţida;
  - S.C. MIAGHI IMPEX SRL Brăila;
  - S.C. CRICOSERV SRL Ploieşti.
  - MEMORANDUM OF UNDERSTANDING on co-operation in the field of the agro-industrial clusters development and cluster and innovation policies support within the Danube Region countries - Danu4AgroInd (Danube Agro-Industrial Clusters Network) – Partners from Germany, Romania, Croatia, Slovakia, Hungary, Serbia , Moldavia Republic;
  - PARTNERSHIP AGREEMENT for the project proposal “SOIC - Clusters as drivers of social innovation” submitted within the Financial Mechanism SEE 2009 – 2014 – Partners from Romania (INMA, Maritime University “Mircea cel Batran” Constanta, SC INNO CONSULT SRL) and Norway (Oxford Researc AS);
  - PARTNERSHIP AGREEMENT on implementation of research project «RESEARCHES AIMING TO INTRODUCE INTO MANUFACTURING A CLASS OF HIGH PERFORMANCE VIBRO-COMBINERS, ADAPTED TO EXPLOITATIONS IN ROMANIA» within POS CCE Op.1.3.3 – Partners: Cluster IND-AGRO Vest, INMA, UPB, USAMV Timisoara, University “Vasile Goldis” Arad;
  - PARTNERSHIP AGREEMENT for creating the competitiveness pole IND-AGRO-POL and related to project package submitted by IND-AGRO-POL within POS CCE Op 1.3.1; Partners:
    - ASSOCIATIONS OF AGRICULTURAL TRACTORS AND MACHINES IN ROMANIA - PACTMAR
    - Association of Agricultural Tractors and Machines Importers in Romania – APIMAR;
    - Society of Agricultural Mechanic Engineers in Romania – SIMAR;
    - SC COMPOZITE SRL;
    - SC IMS WERKZEUGBAU SRL;
    - SC DIEM SRL;
    - SC GRUP ROMET SA;
    - SC MECANO FUC SA NEGRESTI;
    - SC RANCON SRL;
    - SC RANCON RECICLARE SRL;
    - SC MIAGHI IMPEX SRL;
    - SC METATECH-CD SRL;
    - SC OMP SRL;

- SC MAT SA;
- SC ISLAZ SA;
- SC RURIS IMPEX SRL;
- SC OLTEANU-IGNATOVICI SRL;
- SC INSTIRIG SA;
- SC SERVOPLANT SRL;
- SC GEDA PRODEXIM SRL;
- SC PROFILAM EXIM SRL;
- SC IRIDEX GROUP IMPORT EXPORT SRL;
- SC Universal Exim SRL;
- SC Valtec Tractors SRL;
- National Institute of Research – Development for Machines and Installations designed to Agriculture and Food Industry – INMA;
- University TRANSILVANIA from BRASOV;
- Institute of Research for Pneumatic Hydraulics INOE IHP;
- National Institute of Research – Development for Electric Engineering ICPE-CA;
- Institute of Biological Science – INSB;
- Institute of Electrotechnical Science – ICPE SA;
- National Institute of Research – Development for Environment Protection;
- National Institute of Research – Development for Mecatronics and Measurement Techniques;
- National Institute of Research – Development for Textile and Leather – INCDTP;
- University of Craiova – Mechanics Faculty;
- University Politehnica from Bucharest – UPB;
- SC IPA SA CIFATT Craiova;
- University of Agricultural Science and Veterinary medicine USAMV Iasi;
- Institute of Research and Technological Design for Machines Building - SC ICTCM SA;
- Romanian Institute of Economic and Social Research and Sounding – IRECSON;
- ADR Sud-Est;
- ADR Nord-Est;
- Chamber of Commerce, Industry and Agriculture Timis;
- Chamber of Commerce, Industry and Agriculture Arad;
- Foundation for Democracy, Culture and Freedom – FDCL;
- SC INPULSE PARTNERS SRL;
- National Institute for Small and medium-sized Enterprises;
- Chamber of Commerce, Industry and Agriculture Calarasi;
- Chamber of Commerce and Industry Bucharest;
- ARoTT – Romanian Association of Technological Transfer;
- SC Inno Consult SRL;
- Chamber of Commerce, Industry and Agriculture Brasov;

- **registering INCD within international data bases which promote partnerships:**
  - ELSEVIER / SciVerse SCOPUS;
  - ULRICHS Web Global Serials Directory;
  - CABI;
  - SCIPIO;
  - INDEX COPERNICUS INTERNATIONAL;
  - PROSME ENTERPRISE EUROPE NETWORK;
  - PROQUEST;
  - Elektronische Zeitschriftenbibliothek;
  - CiteFactor.

- **registering INCD as a member of research networks / member of prestigious professional associations at national / international level:**
  - SIMAR – Society of Agricultural Mechanical Engineers in Romania;
  - EurAgEng - European Society of Agricultural Engineers;

- **Participating in commission of evaluation of national and international competitions:**

- Comission no. 12 – Scientific Events and Fairs;
- Comission of Experts FP7 - Evaluators;
- Comission of Experts UEFISCDI, EUREKA, etc.

- **Scientific personalities who visited INCD:**
  - SIN Gheorghe Prof. Ph.D. eng. – president of Academy of Agricultural Science „Gheorghe Ionescu Şişeşti" – ASAS, Romania;
  - NICOLESCU Mihai, Prof. Ph.D. – vicepresident of Academy of Agricultural Science „Gheorghe Ionescu Şişeşti" – ASAS, Romania;
  - NICOLESCU Mihai, Ph.D. eng – general secretary of Academy of Agricultural Science „Gheorghe Ionescu Şişeşti" – ASAS , Romania;
    Ramzy George Stino, Prof. Ph.D. - Minister of Scientific Research, Egypt;
  - Teoharie Cătălin - Country Manager South-Eastern Europe, ELSEVIER;
  - Schweighofer Karl - General Manager, ARGE AUSTRIAN MISCANTHUS, Austria;
  - Prof. Ph.D. Husrev Mennan - Director of Department of International Relations, Ondokuz Mayis University, Samsun, Turkey;
  - Prof.Ph.D.eng. Bunoiu Madalin, President of Counsulting Colledge for RDI;
  - Manfred Peritsch - IMG Innovation-Management-Group GmbH, Austria,
  - Prof. Ph.D. Essam El-Din Wasif - Director of *AGRICULTURAL ENGINEERING RESEARCH INSTITUTE*, Egypt;
  - Prof. Ph.D.eng. Özcan Mehmet Musa, Pro-rector of Selcuk University, Department of Food Engineering, Turkey;
  - Assoc. Prof. PhD. Eng. Atanasov Zdravkov Atanas - Director of Department Of agricultural Machinery, Faculty of Mechanization for Agriculture, University of Ruse;
  - Zhong Qing YU – Scientific Secretary II, Ambassy of China popular Republic in Romania;
  - Jin HONG – General Manager Deputy, YTO INTERNATIONAL Ltd.

- **Courses and seminaries given by scientific personalities invited:**
  Business. Clusters. Innovation
  - The 5th Conference "Balkan and Black Sea cluster synergy", 30-31.10.2014, Tekirdag-Turkey;
  - Training regarding the mapping technology of competences of RDI enterprises and organizations from clusters, respectively of pilot activity of applying this method within INMA, as cluster of competitiveness pole, that will be organized within the project INTERREG IVC „ClusteriX – Clusters for European Innovation Cross-Linking" (10.11.2014-12.11.2014). Both activities were organized by IMG Innovation-Management-Group GmbH - Austria, Mr. Manfred Peritsch being the lecturer.. Participants: representatives of INMA, Ministry of Economy, Clusters Association from Romania – Clustero;
  - Information and debate seminar withinTRES-Towards Regional Specialisation for Smartgrowth spirit project, organized by ADR Bucharest, Ilfov;
  - Seminar "Intellectual Property and Technological Transfer", organized at Magurele – Institute of Atomic Physics together with Federal Switzerland Institute of Technology from Lausanne/Switzerland;
  - Workshop „Financing of South-Eastern Europe innovation" oraganized by INCDI ICPE CA, organized at Bucharest;
  - „Matchmaking event/b2b meetings – Mission for Growyh 2014 – Reaching the Walloon market and its key players" organized by European Commission, during 3-4.04.2014, in Sevilia and Merida – Spain;
  - International Expert on Clusters and Creative Industries - LUCIA SEEL INTERNATIONAL CONSULTING, Austria;
  - Workshop named "Reindustrialisation by cross-cluster cooperation – regional reflection meeting", with representatives of Ministry of Economy at Bucharest,on 25.10.2014;
  - Training and workshop „Competence mapping training and pilot action" in Bucharest on 10-13.11.2014 and 12.12.2014, in partnership with IMG Innovation – Management – Group, Austria. Worskhop CEI-JRC European Workshop on „Advaced Biofuels,

Biorefinery and Bio-Economy: A Challenge for Central and East European Countries", organized by Faculty of Natural Sciences, University of SS. Cyril and Methodius in Tarnava in cooperation with ICARST- Bratislava, during 24.02.2015-27.02.2015, Slovacia - Bratislava;

- POSDRU courses on sustainability of the project „Vocational training in the field of new materials applied in mechanics and mechatronics – PROFMEC":
  - for the specialists in computer-aided design – 9 students;
  - for the operators in computer-aided design field – 15 students;
- Workshop ASTRICO NE Cluster Development Workshop", 25.11.2014, Piatra Neamt;
- Worskop IMAGO MOL Cluster Development Workshop", 21.11.2014, Piatra Neamt;
- Workshopl TMV Cluster Development Workshop, Focsani, 21.11.2014;

Business & Markets, Production & Funding

- International business and innovation cooperation – Wienfried Senker, East West Management;
- MASCHIO GASPARDO S.P.A., Luca RIGON - Research & Development Department, Italy;
- MASCHIO GASPARDO S.P.A., Martin Rudy - Research & Development Department, Italy.

- **Members in editorial boards of journals ISI recognised (or included within international data bases) and national and/or international editorial boards:**

Members in editorial staffs and boards	2013	2014
• International and/or national conferences/symposia	6	14
• Recognised journals ISI (or included in international data bases)	14	15

Den.No	NAME	JOURNAL / CONFERENCE / SYIMPOSIUM
National or international conferences/symposia		
1.	Vlăduţ Valentin	**TRAKTORI I POGONSKE MASINE** ***JOURNAL OF SCIENTIFIC SOCIETY OF POWER MACHINES, TRACTORS AND MAINTENANCE*** December 2014, Novi Sad, Serbia
2.	Vlăduţ Valentin	**International Scientific Conference on "*ENVIRONMENT AND BIODIVERSITY*" - ECOLOGICA** April, Belgrad - Serbia
3.	Vlăduţ Valentin	**IV International Scientific-Practical Conference „INNOVATIVE TECHNOLOGIES IN THE AGRO-INDUSTRIAL COMPLEX"** June 2014, Ukrain, Lutsk
4.	Vlăduţ Valentin	ISB-INMA TEH' 2014 **INTERNATIONAL SYMPOSIUM** **30th ÷31-st October 2014, Bucharest, Romania**
5.	Pirnă Ion	
6.	Muraru Virgil	
7.	Popa Lucreţia	
8.	Ştefan Vasilica	
9.	Ganea Ioan	
10.	Păun Anişoara	
11.	Matache Mihai	
12.	Marin Eugen	
13.	Persu Cătălin	
14.	Ion Alexandru	
Journals recognised ISI (or included in international databases)		
1.	Vlăduţ Valentin	**ACTA TECHNICA CORVINIESIS - BULLETIN OF ENGINEERING** Hunedoara, Romania, ISSN: 2067-3809

2.	Vlăduţ Valentin	**ANNALS OF FACULTY OF ENGINEERING HUNEDOARA - INTERNATIONAL JOURNAL OF ENGINEERING** Hunedoara, Romania, ISSN 1584-2673
3.	Pirnă Ion	**INMATEH - AGRICULTURAL ENGINEERING** Bucharest, Romania ISSN: 2068 – 2239; ISSN: 2068 – 4215
4.	Vlăduţ Valentin	
5.	Drâmbei Petronela	
6.	Muraru Vergil	
7.	Nedelcu Mihail	
8.	Barbu Mihaela	
9.	Ţicu Tania	
10.	Popa Lucreţia	
11.	Cârdei Petru	
12.	Cioica Nicolae	
13.	Vişan Alexandra	
14.	Vlăduţ Valentin	**3-rd International Conference on Thermal Equipment, Renewable Energy and Rural Development, TE-RE-RD 2014** 12 – 14 June 2014, Mamaia, Romania
15.	Vlăduţ Valentin	**HUNGARIAN AGRICULTURAL ENGINEERING** no. 26, Gödölló, Hungary

8.2. Results obtained at national and international fairs and exhibitions

Fairs and exhibitions	2013	2014
• international	4	5
• national	1	1

- **international fairs and exhibitions**

Den. No.	Salon / Fair name
1.	**International Inventics Salon PROINVENT Cluj-Napoca 2014**
2.	**International Fair "INVEST-INVENT SIR" IASI 2014**
3.	**International Invention Fair INVENTICA IASI 2014**
4.	**International Inventics Salon BUCHAREST 2014**
5.	**International Inventics Salon INNOVA, BRUXELLES, 2014**

- **national fairs and exhibitions**

- **POLIFEST**

POLITEHNICA University of Bucharest, 9 – 11 April

POLIFEST 2014

. International Symposium *ISB-INMA TEH' 2014*
AGRICULTURAL AND MECHANICAL ENGINEERING
30 October – 1 November 2014

- **INMA co-organizer of the Symposium "RESEARCH, DEVELOPMENT AND INNOVATION– SOLUTIONS FOR ECONOMIC AND SOCIAL BREAKTHROUGH"**

on the occasion of the Day of Researcher and Designer in Romania - 19 November -

Salon Of Romanian Research, INVENTIKA and Innovation Forum withinTIB 2014, Bucharest, ROMEXPO, 15-18 October

INDAGRA, Bucharest, ROMEXPO, 29 Oct. – 2 Nov. 2014

Pav. C3, stand 75

Scientific symposium: "TECHNOLOGICAL PROGRESS – RESULT OF RESEARCH", Edition IX-th, AGIR, Bucharest, 22 May 2014

1. Technique of parameter modelling 3D in solidworks of a technical equipment of soil deep loosening
Marin Eugen, Nedelcu Ancuţa

2. Researches performed with the installation for hay drying by ventilation with cold or hot air– IVF
Nedelcu Ancuţa, Popa Lucreţia, Ciupercă Radu

3. Technical equipment designed to sorting the apples by size
Popa Lucreţia, Nedelcu Ancuţa, Ciupercă Radu,
Ştefan Vasilica, Petcu Albert

International Symposium HERVEX, Căciulata, 5 – 7 November 2014

8.3. Prizes obtained following selection process

Prizes obtained by selection process	2013	2014
• international	19	21
• national	1	-

Den.No.	Salon / Fair name	Obtained prizes
1.	**International Salon of Inventions - PROINVENT** Cluj-Napoca, 19 – 21 March 2014	**Excellence Diploma and Gold Medal** **1. EQUIPMENT FOR MULTIDIRECTIONAL SPRAYING** Cota Constantin, Nagy Elena Mihaela, Cioica Nicolae **2. AERATING SYSTEM FOR CEREAL SEEDS STORED IN METALLIC CELLS** Păun Anişoara, Pirnă Ion, Cojocaru Iosif, Ganea-Christu Ioan **Excellence diploma and Silver Medal** **TECHNICAL EQUIPMENT FOR PLANTING ENERGETIC WILLOW** Marin Eugen, Mircea Radu, Manea Dragoş, Găgeanu Paul
2.	**International Salon of Inventions, Research, Innovation and Technological Transfer - INVENTICA 2014** Technical University "Gh. ASACHI" Iaşi 2-4 July 2014	**Diploma and Gold Medal comprising the Thinker of Hamangia** **AERATING SYSTEM FOR CEREAL SEEDS STORED IN METALLIC CELLS** Păun Anişoara, Pirnă Ion, Cojocaru Iosif, Ganea-Christu Ioan **Diploma and Gold Medal** **1. TECHNICAL EQUIPMENT FOR PLANTING ENERGETIC WILLOW** Marin Eugen, Mircea Radu, Manea Dragoş, Găgeanu Paul **2. EQUIPMENT FOR AUTOMATED WEIGHING AND MANAGEMENT OF GRANULATED AND POWDERED PRODUCTS** Milea Dumitru, Păun Anişoara, Matache Mihai, Ion Alexandru **Special Prize and Dipolma** Ganea-Christu Ioan
3.	**INTERNATIONAL SALON OF RESEARCH AND INNOVATION** Bacău 25-27 September 2014	**3 Gold Diplomas and Cup of the Fair** **1. APPARATUS FOR CATTLE ARTIFICIAL RESPIRATION** Ganea-Christu Ioan, Drăgolici Victor, Ion Alexandru **2. PNEUMATIC EQUIPMENT FOR SOWING SMALL SEEDS IN CELLS** Sărăcin Ion, Ganea-Christu Ioan, Pandia Olimpia, Ion Alexandru, Bozgă Ion **3. AUTOMATED INSTALLATION OF IRRIGATION AND FERTIGATION BY DROPPING AND/OR MICRO-SPRINKLING** Marin Eugen, Pirnă Ion, Manea Dragoş, Matache Mihai, Sorică Cristian-M **1 Excellence Diploma ICECHIM** **APPARATUS FOR CATTLE ARTIFICIAL RESPIRATION** Ganea-Christu Ioan, Drăgolici Victor, Ion Alexandru

4.	**INVENTIKA** Bucharest, 15-18 October 2014	**3 Diplomas and Gold Medals** **1. SET OF SOIL LOOSENING PARTS** Constantin Nicolae, Cojocaru Iosif, Pirnă Ion, Marin Eugen, Mateescu Marinela, Ganea-Christu Ioan **2. TECHNICAL EQUIPMENT FOR PLANTING ENERGETIC WILLOW** Marin Eugen, Mircea Radu, Manea Dragoş, Găgeanu Paul **3. EQUIPMENT FOR APPLE GRAVIMETRIC SORTING** Popa Lucreţia, Ciupercă Radu, Drăgan Romeo, Lazăr George **3 Diplomas and Silver Medals** **1. INSTALLATION OF WATER RECONDITIONING FOR RECIRCULATING AQUIFEROUS SYSTEMS** Pop Augustin, David Petru, Despa Gheorghe, Popovici Valentin **2. EQUIPMENT FOR VERIFYING THE CONSTRUCTIVE AND FUNCTIONAL PARAMETERS OF THE MACHINES FOR APPLYING HERBICIDES** Coţa Constantin, Nagy Elena Mihaela, Cioica Nicolae **3. EQUIPMENT FOR PLANTING FORESTRY SEEDLINGS IN PROCESSED FIELD** Mircea Radu, Pirnă Ion, Cristea Mircea, Dumitrescu Corneliu
5.	**INVEST – INVENT** Iaşi, 12-15 October 2014	**3 Diplomas and Gold Medals** **1. PNEUMATIC EQUIPMENT FOR SOWING SMALL SEEDS IN CELLS** Sărăcin Ion, Ganea-Christu Ioan, Pandia Olimpia, Ion Alexandru, Bozgă Ion **2. APPARATUS FOR CATTLE ARTIFICIAL RESPIRATION** Ganea-Christu Ioan, Drăgolici Victor, Ion Alexandru **3. AERATING SYSTEM FOR CEREAL SEEDS STORED IN METALLIC CELLS** Păun Anişoara, Pirnă Ion, Cojocaru Iosif, Ganea-Christu Ioan **1 Special Prize** Ganea-Christu Ioan
6.	**INNOVA – EUREKA** Bruxelles, 14-17 November. 2014	**2 Diplomas and Gold Medals** **1. EQUIPMENT FOR APPLE GRAVIMETRIC SORTING** Popa Lucreţia, Ciupercă Radu, Drăgan Romeo, Lazăr George **2. TECHNICAL EQUIPMENT FOR PLANTING ENERGETIC WILLOW** Marin Eugen, Mircea Radu, Manea Dragoş, Găgeanu Paul **1 Special Prize-France** **TECHNICAL EQUIPMENT FOR PLANTING ENERGETIC WILLOW** Marin Eugen, Mircea Radu, Manea Dragoş, Găgeanu Paul
	Total: 21 prizes	**14 gold + 4 silver + 3 special prizes**

- **International prizes obtained by selection process:**

PARTICIPAREA INMA LA SALOANELE INTERNATIONALE DE INVENTII - 2014

*** Salonul Internaţional de inventica PROINVENT, Cluj-Napoca, 2014 = 2 Diplome de excelenta si Medalii de Aur; Diploma de excelenta si Medalie de Argint**
*** Salonul naţional al cercetării şi inovării, Bacău 2014 = 3 Diplome si Medalii de Aur si Cupa Targului; 1 Premiu special**
*** TÂRGUL Internaţional "INVEST- INVENT SIR", Iasi, 2014 = 3 Diplome de excelenta si Medalii de Aur, 1 Premiu special**
*** Salonul international de inventii – INVENTICA, Iasi, 2014 = 3 Diplome si Medalii Aur, 3 Diplome si Medalii de Argint**
*** Salonul international de inventii INVENTIKA, Bucuresti, 2014 = 3 Diplome si Medalii de Aur, 3 Diplome si Medalii de Argint**
*** Salonul international de inventii INNOVA – EUREKA, Bruxelles, 2014 = 2 Diplome si Medalii de Aur, 1 Premiu special**

8.4. Presentation of advertising activity:

- Media passages (interviews)
- Participation in debates TV. and radio broadcasted

Activities of advertising	2013	2014
Number	3	1

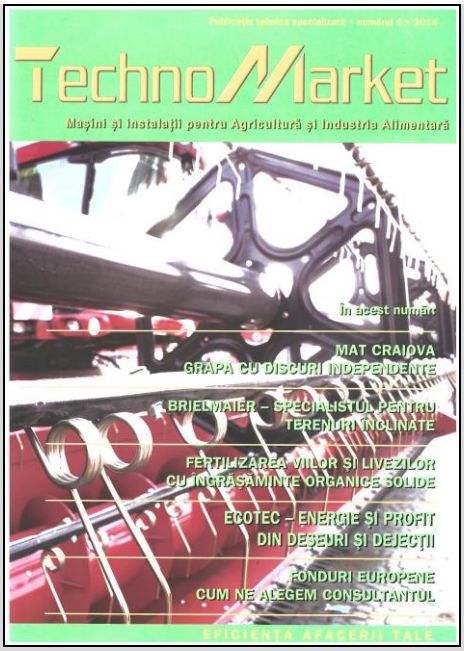
1. Prizes of Romanian Innovation

2014 Premiile Inovației Românești
parte a campaniei 3M PRIMIAZĂ INOVAȚIA

Ioan Ganea-Christu**, interview "about the efforts of Romanian inventors of upgrading the Romania's agricultural machinery**

Ioan Ganea-Christu **is member of the team of National Institute of Research-Development for Machines and Installations designed to Agriculture and Food Industry, that has obtained one Silver Medal at INNOVA Salon, Bruxelles.**

2. "TechnoMarket"Journal no. 1, 2, 3 and 4 / 2014




echipamente speciale

INSTALAȚIE DE ÎNCERCĂRI ÎN REGIM SIMULAT ȘI ACCELERAT TIP HIDROPULS

Instalația de încercări în regim simulat și accelerat tip Hidropuls, aparținând INMA București este o instalație unică la nivel național, ce poate executa expertize, analize și optimizări ale: elementelor și sistemelor ce permit asigurarea siguranței și securității în transportul de suprafață și aerian, platformelor antiteroriste, echipamentelor din energetică cu aplicații speciale, mașinilor, echipamentelor agricole, din industria constructoare de mașini, etc.

Aplicații realizate pe instalația Hidropuls

Pe baza expertizei, analizei și optimizării soluțiilor tehnice, ca rezultat al activităților de cercetare, această infrastructură conduce la: design și arhitectură modernă și actualizată la cerințele pieței de produse și tehnologii (mașini, echipamente, instalații) competitive, cu costuri de fabricație accesibile.

Datorită complexității instalației și posibilităților foarte diversificate de utilizare a acesteia, au rezultat numeroase domenii de aplicații și anume:

- subansamble care concură la siguranța circulației pe drumurile publice (dispozitive de cuplare de la tractoare și remorci, dispozitive de cuplare a remorcilor agricole și auto, dispozitive de protecție antiîncastrare de la tractoare, bare antiîmpiedicare de la remorci, structuri de rezistență, etc.);
- echipamente electrice (încercări antiseismice pentru transformatoare de forță, pentru întrerupătoare și alte aparate specifice stațiilor de distribuție energie electrică);
- echipamente pentru industria aeronautică (elemente de siguranță, sisteme speciale pentru avioane, etc.);
- amortizoare auto / cu destinații speciale (industria de armament, seism, etc);
- mașini agricole (pluguri, grape cu discuri, mașini de stropit, prese de balotat paie, etc.);
- subansamble pentru mașini agricole (furtunuri distribuție semințe, suspensii remorci, etc.);
- echipamente de transport (remorci);

Se pot efectua testări de rezistență, la anduranță și vibrații pe diverse echipamente tehnologice pentru a se verifica fiabilitatea și siguranța în funcționare a acestora. Astfel se pot identifica și remedia eventualele defecte de proiectare și/sau execuție evitându-se producerea unor accidente tehnologice în funcționare. De asemenea, se pot testa echipamente de importanță vitală (transformatoare electrice, etc.), verificându-se comportamentul acestora în caz de cutremur (calamitate naturală).

În domeniul pregătirii profesionale, creșterea competențelor și dezvoltarea carierelor în cercetarea științifică, instalația de încercări în regim simulat și accelerat, tip Hidropuls este utilizată ca:

- suport pentru demonstrarea experimentelor în realizarea tezelor de doctorat și lucrări postdoctorală;
- infrastructură pentru realizarea lucrărilor de disertație în masterat, lucrări de laborator și demonstrații;
- practică pentru studenți în domeniul inginerei mecanice, mecatronică și sisteme industriale.

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E-mail: icsit@inma.ro
http://www.inma.ro

septembrie - octombrie 2014 • tehnoMarket 1

3. Transmission of achievements and partnerships with 30 Agricultural County Chambers as CD-s.

9. SOURCES OF INFORMATION AND DOCUMENTATION FROM INCD TECHNICAL AND SCIENTIFIC PATRIMONY

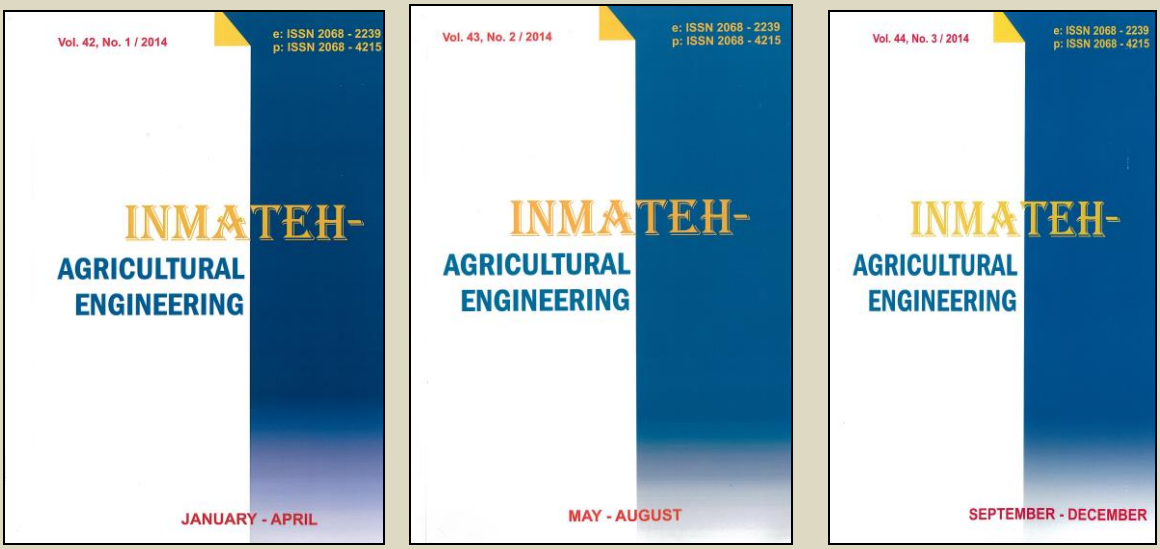
Technical archive – 1000 projects
Library – 11,000 technical specialty books and journals
Data base
Webpage: inma.ro; inmateh.eu

Institute journal «**INMATEH – Agricultural Engineering**»

indexed in 8 international data bases and in course of being evaluated/indexed by THOMPSON REUTERS and other 5 data bases, with the following codes

***on line*: ISSN 2068-2239 and *print*: ISSN 2068-4215,**

continued to be issued, with numbers **42, 43** and **44 / 2014,** which were edited.



The journal has been indexed in the following international data bases:

ULRICHS mai - 2010

CABI Trim. III - 2011

Platforma Editoriala Romana SCIPIO - 2011

ELSEVIER /SciVerse SCOPUS - Nr.1 / 2012

Index Copernicus International - 2012

Elektronische Zeitschriftenbibliothek Nr. 2 2014

EBSCO Nr. 2 2014

citefactor.org Nr. 3 2014

And is available online, at addresses:
http://www.inma.ro/inmateh-agricultural%20engineering
http://www.inmateh.eu

10. CONCLUSIONS
Technical and scientific results obtained by INMA - SYNTHESIS

Den. No.	Name	Achieved
1.	Scientific/technical papers published in specialty journals ISI quoted	**10**
2.	Books / chapters INMATEH – Agricultural Engineering Journal	**2 / 1** **No. 42, 43,44**
3.	Patent applications INMA, registered Patent issued by OSIM	**15** **9**
4.	Homologated products Homologated services Homologated techologies Prospesctive and technological studies Norms Procedures Methodologies Technical plans Experimental models	**11** **1** **4** **15** **-** **7** **12** **23** **11**
5.	Scientific/technical papers published in specialty journals , without ISI quotation(BDI and other international journals)	**111**
6.	Scientific communications presented in international conferences	**65**
7.	Members of editorial boards of journals ISI recognized (or included in international data bases) and of national and/or international editorial boards	**28**
8.	Participation of INMA in national and international fairs and exhibitions Distinctions and prizes	**6** **21**

11. PERSPECTIVES/ PRIORITIES FOR THE CURRENT YEAR

The 2015 priorities related to RDI activities are focused on:

- testing the specific equipment designed to superior capitalization of crop biomass (miscanthus, camelina, castor-oil plant etc) and biomass resulted as byproduct of main agricultural cultures;
- continuing the researches for achieving integrated technologies of mechanization and automation of medicinal culture plants or endemic plants processing methods;
- continuing the researches for achieving specific methods/procedures of evaluation of the quality of mechanizing technologies used in agriculture (average and long-term impact);
- technical substantiation of technological elements of mechanization and automation of agricultural processes specific to biomass crops, horticulture, farm products primary processing;
- technological transfer of research results to economic agents interested (SC RURIS SRL Craiova, SC Mecanică CEAHLAU SA Piatra Neamţ, SC MECANOFIC SA Iaşi);
- development of projects within the national and cross-border programs (Bulgaria, Hungary) as well as preparation of new proposals;
- identifying of new partners and submitting proposals within the programs: HORIZON 2020, Competitiveness Operational Program (POC), RO-BG, EUREKA, ERASMUS^{+}, RO-HU, SUERD, etc;
- dissemination of results: organization of international symposiums and promotion of the institute Journal „INMATEH - Agricultural Engineering" within new international data bases;
- registering of original technical solutions at OSIM;
- supporting the on-going vocational training of employees from agro-food sector, reguested by the employees, by Training and Vocational Evaluation Centres of the institute;
- continuing and strengthening the connections with the universities in the country for supporting them in order to perform the practice stages on short and long term within the institute;
- investments for the modernization of the research infrastructure: testing stands, systems and pilot stations, etc.;
- extending the range of technical and scientific services in the field of rolling stock and special equipment.

NATIONAL INSTITUTE OF RESEARCH-DEVELOPMENT FOR MACHINES AND INSTALLATIONS DESIGNED TO AGRICULTURE AND FOOD INDUSTRY
- INMA -

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E-mail: icsit@inma.ro, http:\\www. inma.ro