

TRiticum in AEGIS: Identification and Documentation (TRAID)

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INTRODUCTION

In July 2014, the majority of the countries represented in the Wheat Working Group (WWG) had signed the AEGIS Memorandum of Understanding (MoU). However, only seven of these signatory countries had defined AEGIS candidate accessions marked in the European Wheat Database: Austria (146 acc.), Czech Republic (450), Estonia (15), France (1716), Germany (1147), Switzerland (4793), The Netherlands (639); and only one of them (The Netherlands) had flagged 639 accessions in EURISCO.

The aims of the TRAID project were (i) to increase the participation of WWG members in the AEGIS initiative to create a European Collection on *Triticum*, and (ii) to increase the quantity and quality of data in EURISCO. Considering the objectives of ECPGR for Phase IX, the TRAID project is both related to outcomes 1 and 2. Regarding Outcome 1 (Accessions in AEGIS are characterized and evaluated), activities developed in TRAID were the identification of eligible accessions to be proposed for registration as AEGIS accessions (1.2.1) and the establishment of proper documentation of AEGIS accessions (1.1.2). Regarding Outcome 2 (Quality and quantity of data in EURISCO have been increased), TRAID activities were related to point 2.1 (All NFPs update national inventories), and point 2.2 (C&E data in EURISCO included with high quality and wide coverage).

APPROACH USED IN THE TRAID PROJECT

From the 12 selected participants in this project, half of them had not yet defined AEGIS candidate accessions at the beginning of the TRAID project; so, their main activity consisted in the identification of eligible AEGIS candidate accessions within the list of EWDB accessions distributed during the last meeting of the WWG (Third Meeting, 15-17 May 2012, Piešťany, Slovakia). They referred to the [Revised simplified procedure for the selection and flagging of accessions for the European Collection](#) to finalize their list and updated their passport data according to the [FAO/Bioversity Multi-Crop Passport Descriptors V.2 \[MCPD V.2\]](#). Final lists had to be sent to François Balfourier, Chair of WWG, then to Ludmila Papouškova, the EWDB manager, in order to be checked and thereafter marked in the EWDB.

Concerning the second part of the participants who had already sent their list, a special effort was planned to check carefully accession lists and related passport data, then to update characterization and evaluation (C&E) data for these accessions, according to the [EWDB descriptor list](#). Indeed, as indicated in the report of the last WG meeting, the quality of the data concerning some of these accessions was very low, "which created a number of questions related to the uniqueness and true origin of the accessions".

A common meeting, involving the 12 ECPGR-funded partners and 5 self-funded ones, was organized in Tallinn (Estonia), in collaboration with the Estonian Crop Research Institute (ECRI), Jõgeva. During this meeting (16-17 September 2015), the status of AEGIS candidate accessions selected per country members and the update of both passport and C&E data were presented by each partner during the first day (see [meeting agenda](#)). The future management of these accessions in accordance with the principles of AEGIS was also discussed during the second day. Then, each participant in the TRAID project was asked to provide his/her National Coordinator with the list of recommended accessions for consideration and formal inclusion in the European Collection.

Finally, the EURISCO National Inventory Focal Point, under instructions from the National Coordinator, had to officially include the accessions into the European Collection by flagging them in the EURISCO database.

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RESULTS

1) Identification of eligible accessions to be proposed as AEGIS accessions

The following rules were retained to define candidate accessions: the accessions should (i) meet the selection requirements approved by the Steering Committee, (ii) be included in EURISCO and (iii) offer no obstacles to be made accessible to recipients expeditiously according to the terms and conditions of the Standard Material Transfer Agreement (SMTA) of the International Treaty. In the present TRAID project, considering it was the first step in the constitution of the AEGIS wheat collection, we gave priority to *Triticum aestivum* species and accessions originating from TRAID members' countries. After discussion, no restriction was decided concerning the choice of accessions made by each member and in particular on the biological status of the accession (SAMPSTAT), as long as the criteria met the above selection requirements. Table 1 (page 8) indicates the number of candidate accessions identified per member during the TRAID project, while Table 2 (page 9) gives the status of these accessions (SAMPSTAT descriptor); a total of 5659 accessions were retained, with a large majority from *T. aestivum*. Chosen accessions were not only landraces or traditional cultivars, but also breeders' lines or advanced cultivars, according to each member choice, as indicated in Table 2. The criteria used by country members for selecting the accessions are reported in Table 3 (pages 10-11).

2) Establishment of proper documentation of AEGIS accessions

a) Passport data

Table 4 (page 12) summarizes the documentation status of the selected candidate accessions for passport data per country at the end of the project. A majority of mandatory descriptors, and in particular ORIGCTY and SAMPSTAT, are well documented. Few data concerning collection site (LATITUDE, LONGITUDE, ..) can be explained by the fact that few accessions are true landraces or collected on a known locality which can be related to such data. Optional descriptors such as GR-CLAS, PLOIDY, REG_YEAR will be useful for future collection description. The full set of accessions is now globally well documented for passport data, according to the MCPD v2 list (see Excel file for [Passport data](#), available online [here](#)).

b) Characterization and evaluation data

As indicated in Table 5 (page 13), the whole set of accessions is not so well documented for characterization and evaluation data, which can be explained by the fact that some members of the TRAID project started defining their candidate accessions only at the beginning of the project. Nevertheless, among the mandatory descriptors, some traits as "plant height" and "kernel weight" are well documented, while descriptors related to grain and spike morphology still need some effort of characterization. Results concerning optional descriptors are variable but significant for some traits, depending on disease infestation during the characterization year (see Excel file for [C&E data](#), available online [here](#)).

DISCUSSION AND RECOMMENDATIONS

The meeting discussed the representativity of the full AEGIS wheat collection and studied carefully the possible gaps within passport and C&E data. The appendix 2 of the AEGIS MoU concerning rules of management of the accession in accordance with the principle of AEGIS was recalled. In particular, the sovereign right of each country member to decide which accessions are to be included in the AEGIS collection was confirmed. However, the WWG asked each member to suppress accessions lacking available mandatory descriptor such as SAMPSTAT descriptor and possible redundant sister

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lines within breeding lines, as suggested in the selection requirements approved by the SC, to avoid possible redundant material. In the same way, each member was invited to check that proposed accessions were free of any third party in terms of rights, to complete as far as possible mandatory descriptors, and to check some mistakes in the scales for some of these descriptors. Finally, the WWG suggested that the Spelt collection of different geographical origin proposed by B. Schierscher should not be included at present time in the AEGIS collection, considering that (i) it was not possible to check the uniqueness of these accessions before the end of the project and (ii) other members had not prepared and thought about spelt accession lists in their own countries. The inclusion of this spelt collection is only postponed for a future activity of WWG.

All members were invited to send final reviewed lists of accessions, together with passport data and C&E data to F. Balfourier, Chair of the WWG, for final computation before sending them to L. Papouskova, the EWDB manager, in order to be marked and updated in the EWDB. The results given in tables of the present report correspond to this final compilation performed after the meeting. It was decided that each member would send proposals concerning the main criteria used to define their AEGIS candidate accessions (see Table 3). Finally each partner has undertaken (i) to provide his/her National Coordinator with the list of recommended accessions for consideration and formal inclusion in the European Collection, (ii) then to check that the EURISCO National Inventory Focal Point, under instruction from the National Coordinator, has officially included the accessions into the European Collection by flagging them in EURISCO. The current status of the AEGIS wheat collection at the time of reporting is given in Table 6 (page 14) for each member country. By 15 February 2016, a total of 3435 new accessions were effectively flagged as AEGIS accessions in EURISCO, while 2224 were pending.

The second day of the meeting was dedicated to discussing the management of this AEGIS wheat collection and the future agenda of the TRAID project until the end of 2015. Considering safety duplication, it was reminded that safety-duplicates of AEGIS accessions should be sent to another Associate Member genebank, possibly in a different country and/or to the Svalbard Global Seed Vault. Members from Sweden (representing the Nordic Countries), Switzerland and Czech Republic indicated that they were able to receive duplicates in black box in their institutes and that they would send to all TRAID members their agreement conditions of safety duplication. Members who have not started to develop duplicates were invited to do so.

In order to collect information within the WWG concerning their conditions of conservation and their quality management system, members agreed to fill the [Template for operational genebank manual](#) by the end of the year.

Finally, new activities of the Wheat Working Group were proposed and considered in order to prepare the future calls for proposals under the ECPGR Grant Scheme. Two possible future activities were retained: (i) to increase the *Triticum aestivum* AEGIS collection by adding new accessions and new data from other European countries (possibly Germany, Hungary, Portugal, Spain and United Kingdom) and (ii) to develop new AEGIS collections for other species associated with the WWG (see table below):

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Possible extension of the AEGIS collection to other species:

Country	Spelt	Rye	Triticale	Tetraploid wheat	Diploid wheat
Bulgaria		x		x	x
Czech Republic	x	x	x	x	x
Estonia		x			
France	x	x	x	x	x
Germany	x				
Italy				x	x
Latvia		x			
Nordic Countries		x		x	x
Poland		x	x	x	x
Romania		x	x		x
Slovakia		x	x	x	x
Switzerland	x	x	x		

At the end of the second day, the group members visited the baking lab of the Agricultural Research Center and the *in vitro* collection of the Estonian Crop Research Institute in Saku.

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Table 1. Number of AEGIS candidate accessions defined per members

Country	INSTCODE(*)	No. of accessions			Total
		<i>T. aestivum</i> (6x)	<i>Triticum</i> species (4x)	<i>Triticum</i> species (2x)	
Bulgaria	BGR001	134	127		261
Croatia	HRV053	76	2		78
Czech Republic	CZE122	395	53	2	450
Estonia	EST001	15			15
France	FRA040	1716			1716
Italy	ITA384	181	2		183
Latvia	LVA009	9			9
Nordic Countries	SWE054	246	1	1	248
Poland	POL003	152			152
Romania	ROM007	131			131
Slovakia	SVK001	242	4	1	247
Switzerland	CHE001	2169			2169
Total		5466	189	4	5659

(*) Decoded institute names

BGR001	Institute for Plant Genetic Resources K. Malkov', Sadovo
HRV053	Institute for Seed and Seedlings, Osijek
CZE122	Crop Research Institute, Prague
EST001	Jõgeva Plant Breeding Institute
FRA040	UMR Genetic Diversity and Ecophysiology of Cereals, INRA Clermont-Ferrand
ITA384	CRA-Unità di Ricerca per la Selezione dei Cereali e la Valorizzazione delle Varietà Vegetali, S. Angelo Lodigiano
LVA009	Latvian State Forest Research Institute 'Silava'
SWE054	Nordic Genetic Resource Center, Alnarp
POL003	Plant Breeding and Acclimatization Institute, Radzikow
ROM007	Suceava Genebank
SVK001	Plant Production Research Center Piešťany
CHE001	Agroscope Changins

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Table 2. Sample status of AEGIS candidate accessions per WWG members

Country	No. of accessions				Total
	Traditional cultivars / landraces	Breeders' lines	Advanced/ improved cultivars	Unknown	
Bulgaria	123	47	91		261
Croatia			78		78
Czech Republic	52	199	199		450
Estonia		1	14		15
France	384	1029	303		1716
Italy	183				183
Latvia			9		9
Nordic Countries	38		210		248
Poland	17		135		152
Romania	112		19		131
Slovakia	11	165	71		247
Switzerland	365	1749	55		2169
Total	1285	3190	1184	0	5659

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Table 3. Criteria used per country member for selecting AEGIS accessions

Country	Criteria used
Bulgaria	<p>The identification of accessions was done according to the Selection requirements. In order to avoid unnecessary duplication of AEGIS accessions we selected only accessions of Bulgarian origin, maintained in the base collection of the National Genebank of Bulgaria. The focus was on the set of advanced cultivars, breeding lines and landraces that have reliable passport information and available C&E data.</p> <p>The landraces included in AEGIS belong to the species <i>Triticum durum</i>. They were collected by expeditions in the 1950s. The relatively high level of genetic variation of these landraces is one of their advantages over improved varieties. In the future it is necessary that these landraces be investigated by molecular markers to identify genes for drought and cold resistance.</p> <p>The selected breeding lines and advanced cultivars played an important role in Bulgaria. Some of them were used as donors from our plant breeders. The first created varieties as №165, № 14, № 159, №16, ErythrospERMUM 19-16, Yubileyna 2, Yubileyna 3, Sadovo 1 are recorded as historical material for Bulgaria. Sadovo1 variety was the standard for yield in Bulgaria for more than 20 years and one of the basic cultivars for the country. Pobeda is the standard for quality and the most winter hardy Bulgarian wheat variety and Enola is the standard for yield. Momchil, Prelom and Sadovo 552 are varieties with excellent milling and baking quality, while Bononia, Mustang and Yunak are highly productive varieties with very good balance between yield and grain quality. Sadovska belia is a very high yielding variety with stable yield. Zdravko has very high spike potential and a wide ecological plasticity. Prelom variety is suitable for organic agriculture.</p> <p>Some examples of other unique Bulgarian candidate AEGIS accessions:</p> <p>Excellent adaptation to different growing conditions – Aglika, Galateya, Enola, Iveta, Slaveya, Diamant, Sadovo 1, Murgavetz, Zdravko, Sadovo 772, Diamant, Boryana etc.</p> <p>Short vegetation period – Galateya, Enola, Kristal etc.</p> <p>Complex resistance to diseases – Aglika, Galateya, Enola, Iveta, Kristal, Milena, Slaveya, etc.</p> <p>Resistance to lodging- Sadovo 1, Pobeda, Momchil, Bononia, Sadovska belia, Zdravko, Sadovo 772, Diamant, Yunak etc.</p> <p>High yield and quality of grain – Aglika, Galateya, Enola, Iveta, Karat, Milena, Slaveya, Pobeda, Boryana etc.</p> <p>High frost and cold resistance – Aglika, Galateya, Enola, Iveta, Kristal, Milena, Svilena, Slaveya, Diamant etc.</p> <p>High drought tolerance – Aglika, Galateya, Enola, Iveta, Kristal, Milena, Slaveya, Sadovo 1, Momchil, Murgavetz, Zdravko, Prelom, Boryana, Yunak etc.</p> <p>High productive tillers – Aglika, Enola, Karat, Bononia etc.</p>
Czech Republic	<p>The first criterion used for the selection of AEGIS accessions was origin and uniqueness of wheat accessions. Chosen accessions had to fulfill selection requirements stated in the procedure for the selection and flagging of accessions. Each accession has comprehensive passport information and at least basic C&E data. The major part of selected accessions is also required for protein content and Zeleny sedimentation, important descriptors for bakery production.</p> <p>All accessions are stored at -18°C and are available for users under SMTA. Their safety duplication is located in Slovakia and some of them are stored in Svalbard as well.</p>
Estonia	<p>Accessions of Estonian origin, free availability, passport data, sufficient material, safety duplication.</p>

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Country	Criteria used
France	Accessions chosen are those from the French national collection: all accessions are of French origin, genetically unique and of importance for breeding, research, education and for historical reason in France; In particular, these accessions allow to trace back the history of French breadwheat selection, from old landraces used in the XIXth century to breeding lines and more recent cultivars of the end of the XXth century. All accessions are free from any third party obligations and are declared as French contribution to the ITPGRFA.
Italy	CREA-SCV decided to define as AEGIS candidate accessions the Italian landraces and the old cultivars released in the first decades of the XXth century by Nazareno Strampelli (1866-1942), rightly considered the pioneer of wheat breeding in Italy.
Latvia	We have no landraces or wild wheat forms in Latvia. Therefore the main criteria for choosing AEGIS accessions are accessions of Latvian origin.
Poland	The choice of accessions was based on the book "Historia hodowli i nasiennictwa na ziemiach polskich" (History of breeding and seed production in Poland during the XXth century) where the author gathered information about Polish cultivars bred in the XXth century. Chosen accessions represent the history of national breeding. Among 153 accessions the oldest cultivar was introduced in 1918 and the most recent in 1982.
Romania	Germplasm in the public domain Plant genetic resources of Romanian origin; Accessions stored as base collection, at -20°C; As regards status of sample, priority was given to obsolete cultivars and landraces, both categories being considered of actual or potential importance for historical and cultural reasons. As conservationist I do not exclude from the European Collection any plant genetic resources category, and in case of breeding lines, only material with well -known and useful traits should be included.
Switzerland	The Swiss AEGIS candidates are all of Swiss origin and managed in the national Genebank in Changins and genetically unique to the best available knowledge. We have chosen landraces, important for historical and cultural reasons, but also for breeding and research. There are also breeding lines and advanced cultivars with useful traits for breeding and research (chosen by our wheat breeders). All these accessions are freely available under SMTA and safety duplicates are stored in Svalbard.

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Table 4. Number of selected candidate accessions per WWG members and documentation status of related passport data

(for full data see Excel file for [Passport data](#), available online [here](#))

Note:

- country codes: ISO alpha-3
- mandatory descriptors are in green and optional ones are in orange
- x = important descriptor; xx = highly important descriptor

	HRV	LVA	BGR	CZE	ROM	ITA	FRA	POL	EST	SWE	CHE	SVK	Total	%		MANDATORY descriptor			
																all acc.	landraces	species	cultivar
No. of accessions	78	9	261	450	131	183	1716	152	15	248	2169	247	5659	100.0					
INSTCODE	78	9	261	450	131	183	1716	152	15	248	2169	247	5659	100.0	INSTCODE	xx			
ACCENUMB	78	9	261	450	131	183	1716	152	15	248	2169	247	5659	100.0	ACCENUMB	xx	x		
COLLNUMB	0	0	261	0	127	0	0	34	0	3	0	247	672	11.9	COLLNUMB		x		xx
COLLCODE	0	0	261	0	131	0	0	0	0	0	0	8	400	7.1	COLLCODE				xx
GENUS	78	9	261	450	131	183	1716	152	15	248	2169	247	5659	100.0	GENUS	xx			
SPECIES	78	9	261	450	131	183	1716	152	15	248	2169	247	5659	100.0	SPECIES	xx			
SPAUTHOR	78	9	261	450	131	183	1716	142	15	248	2167	247	5647	99.8	SPAUTHOR	x			
SUBTAXA	0	0	261	428	131	0	0	152	0	248	2169	61	3450	61.0	SUBTAXA				
SUBTAUTHOR	0	0	225	352	131	0	0	72	0	248	0	25	1053	18.6	SUBTAUTHOR				
CROPNAME	78	9	261	450	131	183	1716	152	15	248	2169	247	5659	100.0	CROPNAME				
ACCENAME	78	9	261	450	131	183	1716	152	15	248	2169	247	5659	100.0	ACCENAME				
ACQDATE	63	9	261	450	131	183	1341	137	15	248	2069	221	5128	90.6	ACQDATE				
ORIGCTY	78	9	261	450	131	183	1716	152	15	248	2169	247	5659	100.0	ORIGCTY	xx			
COLLSITE	0	0	123	0	112	0	0	2	0	3	279	1	520	9.2	COLLSITE		x		xx
LATITUDE	0	9	123	0	112	0	0	2	0	3	0	0	249	4.4	LATITUDE		x		xx
LONGITUDE	0	9	123	0	112	0	0	2	0	3	0	0	249	4.4	LONGITUDE		x		xx
ELEVATION	0	0	123	0	112	0	2	2	0	2	0	0	241	4.3	ELEVATION		x		xx
COLLDATE	0	0	123	0	130	0	0	0	15	3	0	0	271	4.8	COLLDATE		x		xx
BREDCODE	56	9	261	326	131	0	1279	65	11	23	0	234	2395	42.3	BREDCODE				x
SAMPSTAT	78	9	261	450	131	183	1716	152	15	248	2169	247	5659	100.0	SAMPSTAT	xx			
ANCEST	43	9	137	312	131	131	1509	125	14	180	1631	142	4364	77.1	ANCEST				x
COLLSRC	55	9	261	0	131	183	0	0	15	3	0	247	904	16.0	COLLSRC		x		xx
DONORCODE	48	9	7	427	131	79	1664	95	6	68	2161	247	4942	87.3	DONORCODE	x			
DONORNUMB	0	0	7	131	80	74	1453	0	6	221	265	2	2239	39.6	DONORNUMB	x			
OTHERNUMB	64	0	261	132	126	0	1712	0	0	33	0	4	2332	41.2	OTHERNUMB	x			
DUPLSITE	8	9	117	450	0	0	1716	0	15	246	2169	247	4977	87.9	DUPLSITE	x			
STORAGE	78	9	261	450	131	183	1716	152	15	248	2169	233	5645	99.8	STORAGE				
MLSSTAT	52	0	261	450	131	183	1716	152	15	248	2169	246	5623	99.4	MLSSTAT				
REMARKS	0	0	39	0	0	88	207	152	0	0	1	33	520	9.2	REMARKS				
GR_CLASS	0	9	261	450	131	97	1573	152	15	0	2168	247	5103	90.2	GR_CLASS				
PLOIDY	78	9	261	450	131	183	1716	152	15	0	0	247	3242	57.3	PLOIDY				
REG_YEAR	0	8	261	156	0	100	505	152	15	0	56	45	1298	22.9	REG_YEAR				x
SYNONYM	0	0	6	0	13	12	539	0	3	0	1	0	574	10.1	SYNONYM				
EXP_CODE	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	EXP_CODE				
SITE_DES	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	SITE_DES				
HERBAR	0	9	261	400	131	183	1716	0	15	0	2169	206	5090	89.9	HERBAR				
PRINC_ATTR	0	0	261	0	0	0	0	0	0	0	0	0	261	4.6	PRINC_ATTR				
ENTRY_DATE	0	9	261	450	0	0	0	0	0	0	2169	176	3065	54.2	ENTRY_DATE				
MAN_CENTER	0	9	261	450	0	0	1716	0	0	0	2169	247	4852	85.7	MAN_CENTER				
AVAILAB	0	9	261	450	0	183	1716	152	15	248	2169	247	5450	96.3	AVAILAB				
AEGISSTAT	0	0	0	450	0	183	1716	0	15	248	2169	247	5028	88.8	AEGISSTAT				

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Table 5. Number of selected candidate accessions per WWG members and documentation status of related characterization and evaluation data

(for full data see Excel file for [C&E data](#), available online [here](#))

Note:

- country codes: ISO alpha-3

- mandatory descriptors are in green and optional ones are in orange

	HRV	LVA	BGR	CZE	ROM	ITA	POL	FRA	EST	SWE	CHE	SVK	Total	%	
No. of accessions	78	9	261	450	131	183	152	1716	15	248	2169	247	5659		
ACCENUMB	78	9	261	450	131	183	152	1716	15	246	2169	247	5657	100.0	ACCENUMB
ACCENAME	78	9	261	450	131	183	152	1716	15	162	2169	247	5573	98.5	ACCENAME
II/I AWNEDNESS	0	8	261	257	37	183	0	1710	15	0	0	60	2531	44.7	II/I AWNEDNESS
II/2 GRAIN COLOUR	0	8	261	258	37	183	1	1679	15	0	0	118	2560	45.2	II/2 GRAIN COLOUR
II/3 GLUME COLOUR	0	8	261	257	37	183	0	1708	15	0	0	155	2624	46.4	II/3 GLUME COLOUR
II/4 GLUME HAIRINESS	0	8	261	257	36	183	0	1706	15	0	0	58	2524	44.6	II/4 GLUME HAIRINESS
II/5 SPIKE DENSITY	0	8	261	299	36	183	0	1710	15	4	0	7	2523	44.6	II/5 SPIKE DENSITY
II/6 PLANT HEIGHT	0	8	261	334	37	183	139	1697	15	152	1818	87	4731	83.6	II/6 PLANT HEIGHT
II/7 1000-KERNEL WEIGHT	0	8	261	331	131	127	131	1708	15	151	1721	146	4730	83.6	II/7 1000-KERNEL WEIGHT
II/8 PROTEIN CONTENT	0	8	26	284	109	94	7	0	15	0	1963	13	2519	44.5	II/8 PROTEIN CONTENT
II/9 PRINCIPAL UTILIZATION	0	8	135	0	0	183	0	0	15	0	0	6	347	6.1	II/9 PRINCIPAL UTILIZATION
II/10 YIELD LEVEL	0	8	138	0	0	0	0	0	15	79	1661	14	1915	33.8	II/10 YIELD LEVEL
II/11 LODGING INTENSITY	0	8	118	0	0	0	133	664	15	0	938	147	2023	35.7	II/11 LODGING INTENSITY
II/12 S TO STEM RUST	0	0	37	117	47	0	68	0	15	0	731	7	1022	18.1	II/12 S TO STEM RUST
II/13 S TO STRIPE RUST	0	0	13	119	36	0	118	1468	15	31	1542	140	3482	61.5	II/13 S TO STRIPE RUST
II/14 S TO LEAF RUST	0	8	42	0	0	0	141	1481	15	22	1525	147	3381	59.7	II/14 S TO LEAF RUST
II/15 S TO POWDERY MILDEW	0	8	43	289	66	0	144	916	15	89	1760	147	3477	61.4	II/15 S TO POWDERY MILDEW
II/16 S TO LEAF BLOTCH	0	0	4	0	0	0	4	485	15	0	1834	147	2489	44.0	II/16 S TO LEAF BLOTCH
II/17 S TO GLUME BLOTCH	0	1	2	0	47	0	0	0	15	14	1661	0	1740	30.7	II/17 S TO GLUME BLOTCH
II/18 S TO HEAD BLIGHT	0	0	5	0	0	0	69	0	15	0	60	147	296	5.2	II/18 S TO HEAD BLIGHT
II/19 S TO EYESPOT	0	8	0	0	38	0	1	0	15	8	60	0	130	2.3	II/19 S TO EYESPOT
II/20 S TO TAKE-ALL	0	8	1	0	0	0	0	0	15	0	0	0	24	0.4	II/20 S TO TAKE-ALL
II/21 S TO TAN SPOT	0	0	0	0	0	0	0	0	15	0	0	0	15	0.3	II/21 S TO TAN SPOT
II/22 Zeleny Test	0	0	3	268	0	94	0	0	0	0	1959	12	2336	41.3	II/22 Zeleny Test

TRiticum in AEGIS: Identification and Documentation
(TRAID)
Activity Report

Table 6. Current status of the AEGIS collection in the Wheat Working Group, after completion of the TRAID activity (updated 15 February 2016)

Country	Passport and C&E data updated in EWDB	NC approves list of candidates accessions	NFP updates EURISCO database	No. of new accessions flagged as AEGIS in EURISCO (15 February 2016)
Bulgaria	☑	☑	☑	261
Croatia	☑	?	?	
Czech Republic	☑	☑	☑	450
Estonia	☑	☑	☑	15
France	☑	☑	Pending (MoU has to be signed first)	
Italy	☑	☑	Pending	
Latvia	☑	☑	☑	9
Nordic Countries	☑	☑	☑	248
Poland	☑	☑	☑	152
Romania	☑	☑	☑	131
Slovakia	☑	☑	?	
Switzerland	☑	☑	☑	2169 <i>(T. aestivum only)</i>
Total				3435