MONITORING QUESTIONNAIRE 2020							
Assessing performance in project implementation Monitoring Questionnaire							
Section A: Project Overview							
1. Letter of Agreement number: W3B-PR-05-PERU							
2. Implementing institution (name): Universidad Nacional Agraria La Molina (UNALM)-Instituto de Biotecnología (IBT)							
3. Type of the implementing institution: Governmental organization National non-governmental organization (NGO)							
National research institute International non-governmental organization International research institute Gene bank							
X University Other							
4. Target country/les: PERO, ECOADOR Indicate the importance of the targeted countries for genetic diversity:							
Unknown Low Medium X High							
 5. If applicable, indicate which of the below biotic and abiotic stresses the project is addressing? X Drought X Heat X Pests/diseases (LATE BLIGHT) Floods X Other (COLD, FROST) 							
6. Target crop/s: POTATO Solanum							
7. Indicate the importance of target crops for:							
Income generation Unknown Low Medium X High							
Food security Unknown Low Medium X High							
Resilience Unknown Low Medium X High							
Adaptation Unknown Low Medium X High							
8. Indicate the districts/villages covered by the project activities and their extension in (km ²):							
Illpa/Puno; Jauja, Huancayo, Sicaya/Junín; ECUADOR: Tulcán; Ambato; Yacupampa, Sta. Isabel/Chimborazo; Cangahua, Cumbaya, Cutuglahua, Mejía/Pichincha. Extension covered: 2400 km²							
9. Rank the level of vulnerability of the targeted areas / regions involved with respect to:							
1. Food insecurity							
2. Poverty Low Medium X High							
3. Climate shocks Low Medium X High							
10. Indicate who are the partners involved in the implementation of this project and specify:							

Name of the partnering institution	Type of the institution ¹	Areas of collaboration
INSTITUTE OF BIOTECHNOLOGY (IBT)- NATIONAL AGRARIAN UNIVERSITY LA MOLINA (UNALM), PERU	UNIVERSITY	COORDINATION. RESISTANCE TRIALS/ASSAYS, RESISTANCE/TOLERANCE EVALUATIONS, BREEDING ACTIVITIES, APPLICATION OF THE DEVELOPED ALLELE-SPECIFIC PRIMERS FOR GENOTYPE SELECTION, MOLECULAR TECHNOLOGY IMPLEMENTATION, TRANSFER AND DISSEMINATION ACTIVITIES
NATIONAL INSTITUTE FOR AGRARIAN RESEARCH (INIAP), ECUADOR	NATIONAL RESEARCH INSTITUTE	RESISTANCE TRIALS/ASSAYS, RESISTANCE/TOLERANCE EVALUATIONS, BREEDING ACTIVITIES, APPLICATION OF THE DEVELOPED ALLELE- SPECIFIC PRIMERS FOR GENOTYPE SELECTION, MOLECULAR TECHNOLOGY IMPLEMENTATION, TRANSFER AND DISSEMINATION ACTIVITIES
UNIVERSITY OF SAN FRANCISCO QUITO (USFQ), ECUADOR	UNIVERSITY	RESISTANCE TRIALS/ASSAYS, RESISTANCE/TOLERANCE EVALUATIONS, BREEDING ACTIVITIES, APPLICATION OF THE DEVELOPED ALLELE- SPECIFIC PRIMERS FOR GENOTYPE SELECTION, MOLECULAR TECHNOLOGY IMPLEMENTATION, TRANSFER AND DISSEMINATION ACTIVITIES
NEIKER, SPAIN	PUBLIC RESEARCH INSTITUTE	TECHNOLOGY PROVIDER. MOLECULAR TECHNOLOGY DEVELOPMENT AND TECHNOLOGY TRANSFER
NATIONAL INSTITUTE FOR AGRARIAN INNOVATION-INIA, HUANCAYO, PUNO / PERU	NATIONAL RESEARCH INSTITUTE	COLLABORATION WITH SELECTED ACCESIONS AND FIELD TRIALS AT HUANCAYO AND PUNO

11. Indicate the number and socio economic status of the direct² beneficiaries of this project by filling in the table below:

Number of direct beneficiaries reached	Status of direct beneficiaries ³	Share of women (%)	How did they benefit?
36	RESEARCH PARTICIPANTS IN THE PROJECT	25	Knowledge, conventional and molecular methodologies, and bioinformatic software has strengthened the capacities of the of the partners in this project partners in this project
35	RESEARCHERS NOT PRTICIPATING IN THE PROJECT	30	Knowledge, conventional and molecular methodologies, and bioinformatic software that strengthened the capacities of the partners in this project transferred to other scientists associated with the project or similar ones
5000	STUDENTS AND PROFESSIONALS	45	Results, knowledge, conventional and molecular methodologies, and bioinformatic software that strengthened the capacities of

¹ For example: Governmental organization, national research institute, international research institute, university, national non-governmental organization (NGO), international non-governmental organization, gene bank etc.

² Direct beneficiaries can be defined as those who are participating directly in the project, and thus benefit from its activities (e.g. access to seeds, training, orientation sessions, workshops, field activities etc.).

³ Beneficiaries' status may include: farmers, plant breeders, national gene banks managers and their staff, community/grassroots organizations members, government officials (Ministry of Agriculture, Ministry of Environment) etc.

1000		FARMERS			40	the p Availa	partners in this project t productive ch ability of native and con	ransferred to target groups in the ain. Student Thesis. Inmercial varieties as well as future		
						new ii for income	new improved varieties adapted to extreme climatic conditions for sustainable agriculture. Their use will lead to additional income of farmers, thus contributing to sustainable development, food security and increased quality of life.			
12. Indicate	which	of the followi	ng criteri	a have be	en used in s	electing	g project beneficia	ries:		
X Poverty	level		к	nowledge	in farming t	he targe	eted varieties	X Geographic distribution		
🗌 X Vulneral	bility	to climate	P	otential m	ultiplier effe	ct		Other(specify)		
change			G	ender bala	ance					
X Vulneral	bility	to food								
Insecurity		timated numb	or of the	honoficio	ioc that will	indiroo	the honofit from th	is project by filling in the table		
13. Indicate tr	ne es		er of the	penencial	nes that will	indirec	thy benefit from th	is project by ming in the table		
Number of		Status of benefic	iaries	Share of	women (%)		How will	they benefit?		
indirect								,		
beneficiaries	;									
40	P	OTATO GERMPLAS	M BANK	2	25%	UNIVERSITY, NATIONAL RESEARCH INSTITUTES				
2000		SCIENTISTS	DEKS	5	50%	UNIVERSITY, NATIONAL RESEARCH INSTITUTES, PUBLIC RESEARCH				
3000					INSTITUTE, PRIV		TUTE, PRIVATE ENTERPRIS	ES, THROUGH THE PROJECT WEB SITE.		
4000		FARMERS		2	10%	IN	IDIVIDUALS, FARMERS CO	MMUNITIES AND ORGANIZATIONS		
14. Did your o	organi	ization underta	ke any s	urveys/vu	Inerability a	ssessm	ents of the needs a	nd challenges faced by the		
target popula	tion?	Yes		X No	-					
15. If yes to Q	(14, p	olease provide	details b [,]	y filling th	e table belo	w:	-			
Total	C	ategories of	Share	of Pr	oblems ident	ified	Coping strategies	s Possible solutions		
number of	sur (far	veyed people	women	(%)						
surveyed	(iai)	etc)								
16. If yes to	Q 17,	please explain	how the	e results of	f the vulnera	ability a	nd needs assessme	ents have been incorporated		
in project de	esign	and implement	ation?							

Section B: Targeted PGRFA and field activities

17. Has the project used/addressed local varieties? If yes, which ones? Yes, most of them in Peru (201 local native varieties from 215 accessions), many in Ecuador (27 from 111 accessions). 18. Did the project use any pre-breeding material? If yes, can you please indicate how you accessed and used it? Pre-breeding material was prepared for the project in Ecuador. From 24099 progenies generated 708 were agronomically selected under field conditions and 75 were used for validation of molecular primers to select for Late Blght resistance generated at NEIKER. 19. Did your project contribute to safeguarding or managing any crop wild relatives? If so, of which species? The project contributed to safeguarding genes derived from Solanum demissum. 20. Has your project addressed or reintroduced any underutilized crop? If yes, of which crops? The project addressed Peruvian underutilized potato native cultivars many of them highly probable non available in known Germplasm Banks. 21. Is the executing institution of the project undertaking any activity for crop improvement? X YES NO 22. If yes to Q 21, please specify below: **22.1. Traits/characteristics addressed:** Tolerance to cold, frost, drought, heat and resistance to Late Blight. 22.2.Number of new/improved varieties developed : One potential new variety in Peru and one in Ecuador, both resistant to Late Blight. However they still need adaptation and stability assays. Promoting to increase use of four commercial varieties in Ecuador resistant to Late Blight and 10 native commercial varieties in Peru tolerant to frost. These traits were validated and further supported for studies conducted in the project as varieties useful for adaptation to the abiotic and/or biotic effects of climate change. 23. Have the new varieties been distributed to farmers YES X NO yet 24. If yes to Q 23, specify how many varieties and of which crop 25. Is the project re-introducing lost varieties? If yes, of which crops? No, but promoting 10 underutilized native potato varieties in Peru and one in Ecuador. 26. If yes to Q 25, indicate the source for the reintroduction of lost varieties (e.g. community seed banks, national genebank, regional or international genebank etc). University genebanks. 27. Is the project establishing community seed banks? No 28. If yes to Q27, how many community seed banks have been established and which varieties are stored within? 29. Indicate any collection mission related to PGRFA conducted by your organization, providing details on: 29.1. Name of Crop/s collected: 29.2. Number of collected accessions 29.3 Indicate whether the collected accession have been stored in

Community/farmers	🗌 X Local	National genebank	International	International research					

genebank	genebank				genebank	center	r
30. If evaluation and ch	aracterization activities	occurred, plea	se detail t	the imp	ortance of tl	ne following (criteria in
evaluating and characte	rizing crop germplasm	(from 1=not in	nportant t	o 4=ver	ry important)	
		Na	me of cro	ps/mat	erial charact	erized/evalu	ated
Traits				Pota	ato accessio	าร	
30.1. Morphological		4					
30.2. Agronomic		4					
30.3. Socio-economic		4					
30.4. Total accessions ch	aracterized/evaluated	326					
Total number of identifi	ed accessions	30					
exhibiting novel/preferr	ed traits						
30.5. What was the type	of evaluated material		_				
crop wild relatives	X traditional cultivar/landrace		X geneb	oank ma	terial		
30.6. What was the original	in of the evaluated mate	erial					
material obtained th	rough project collection	missions	🗌 natio	onal gen	ie bank		
X farmers/field gene	banks		inter 🗌	nationa	I gene bank		
X local gene bank			priva	ate secto	or/commerc	al agencies	
31. Has the data obtaine	ed from the evaluation p	process been ir	corporate	ed into a	an informati	on system?	
32.If yes to Q31, please	detail the type of inform	in the Clobal	Informati	on Suct	tom and Dia	ital Object I	dontifiors
(DOIs) will be assigned	ney will be registered		mormati	011 3 9 51			uentiners
(DOIS) will be assigned							
33. What was the role of	f farmers in the charact	erization/evalu	ation and	l selecti	on activity?		
selection of pilot sites	setting selection	and evaluation	priorities		jmplen	enting the ad	ctivity
X choice of	definition of pre	ferable traits					·····,
germplasm							

34.If genotyping and/or ph genotyping and phenotyp	nenotyping act ing crop germ	ivities occurred blasm (from 1=	, pleas not im	e detail the ir portant to 4=	nportance of t very importan	he following (t)	criteria in	
		Name of crops/material evaluated						
Traits		Potato accessions						
34.1. Morphological		4						
34.2. Agronomic		4						
34.3. Gastronomic		4						
34.4. Socio-economic		4						
34.5. Total accessions phenotyped/genotyped		326						
34.6. Total number of gene novel traits identified	otypes with	30						
34.7. What was the type o	f genotyped/p	henotyped mat	erial					
crop wild relatives	X traditional X traditional	2	X genebank material					
34.8 What was the origin of	of the genotype	ed/phenotyped	mate	rial?				
material obtained throu	igh project colle	ection missions		national	gene bank			

X farmers/field geneba	inks	internationa	al gene bank						
X local gene bank									
35. Has the data obtained from the phenotyping and/or genotyping been incorporated into an information system?									
X Yes No									
36. What was the role of farmers in the phenotyping and/or genotyping activity?									
selection of pilot sites	setting selection and evaluat	ion priorities	X implementing the activity						
X choice of germplasm	definition of preferable trait	S							
37. Indicate which of the fol	lowing activities have been carri	ed out to promote a	nd facilitate the use of crop varieties:						
seed days	X agricultural shows	diversity fairs	X demonstrations						
X field studies	study tours	X field trials							
38. If any breeding activity h	as been implemented during thi	s project, please ent	ter below the following information:						
38.1. Name of crop/s: POTA	го								
38.2.Trait (s)/characteristic(s) addressed:								
38.3.Estimated importance	of the improvement in terms of f	food security and nu	trition: 🗌 Low 🗌 Medium 🗌 X						
High									
38.4.Estimated importance	of the improvement in terms of a	adaptation and resili	ience: 🔄 Low 🔄 Medium 🔄 X						
High									
38.5. Breeding involved farm	iers in :								
setting breeding priorities		X select from se	gregating populations						
	/5)		and/or determine parents						
38.6.Specify the main outpu	t of the breeding activity								
39. If any genetic enhancem	ent (including base-broadening)	occurred during the	implementation of this project, please						
29 1 Type of activity:									
genetic enhancement by i	introgression for specific traits								
population improvement	through incorporation or base br	oadening							
39.2.Rationale of the activity:									
poor gain in breeding pro	, grammes								
	-								

specific trait not available in current breeding materials							
evidence of narrow genetic base							
39.3.Assessment of genetic diversity was made through:							
39.4.Starting materials:							
wild varieties							
39.5.Specify the main output of the enhancement/base-broadening activity: Promotion of 30 selected accessions							
adapted or resilient because of tolerance to abiotic stresses and /or resistance to Late Blight, especially 16 accesions.							
40. Did this project enhance community conservation systems? YES X NO							
41. If yes to Q48, please detail further							
42. Did this project enhance any linkages between local, national, regional and international genebanks?							
Yes, linkages with local genebanks.							
43. If yes to Q 42, specify how?							
Section C: Information and technologies related to PGRFA							
44. Did this project contribute to the development of new technologies related to PGREA? XYES NO							
45. If yes to 0.44, provide more details on the number and type, of new technologies developed. Allele and allele							
combination models through GLM /Multiple Regression (Proc Stenwise) Breeding values. Mean performances. Model							
correlations. Progeny Performance Prediction matrixes. Most efficient markers. Top crosses for 7 traits developed. Marke							
assisted selection.							
46. If yes to Q45, have these technologies been transferred? 🗌 X YES 📃 NO							
47. If yes to Q 46, please provide more details on where and how technologies have been transferred NEIKER (Spain)							
transferred these technologies through three ITT Courses to the other partners in the Project: IBT-UNALM (Peru), INIAP							
and USFQ (Ecuador), as well as to other invited institutions.							
48. Has the executing institution of this project put the PGRFA material and related information resulted from the							
project in public domain? Yes, Project Web Site and they will be registered in the Global Information System and Digital							
Object Identifiers (DOIs) will be assigned.							
49. Did the project establish any learning and knowledge sharing platforms? If yes, please detail further how many and							
what type of platforms							
50. Has the project developed any strategy/plan for the diversification of local agricultural and food systems?							
51. If yes to Q50, please provide more details							
52. Has the project undertaken any study on climate change and adaptation strategies? YES X NO							
53. Has your project contributed to creating and enabling environment, and put in place any national legislation and incentives for the conservation of and use of PGRFA? YES X NO							
54. If yes to Q53, please specify how							

55. Specify if seeds of the target crops have been distributed /made available to local communities specifying : NO YET										
Crop variety	op variety Quantity (kg)		ber of iciaries	Status (e.g. farmers, breeders)	Purpose (plantation, multiplication, selection, improvement, conservation etc.)	Channel of distribution (formal/informal seed system)				
		male	female							
1.										
2.										
3.										
4.										
5.										
6.										
7.										

Section D: Training and capacity building related to PGRFA

56. Indicate what subjects have been addressed through capacity building and training during the implementation of the project and provide details by filling in the table below:

Subject of the training	Country/ region	Frequency	Durati on Days	Female	Male	Status (e.g. farmers, breeders)	Methodology (workshops, field days, demonstrations)
1. Software Management for the Analysis of Molecular Information on Potato. First Technology Transference Course.	Ecuador, Quito. July 2017	01	04	04	11	Scientists	Workshop, Interactive excercises
2. Software Management for the Analysis of Molecular Information on Potato (Updated). Second Technology Transference Course.	Peru, Cusco. June 2018	01	05	07	16	Scientists	Workshop, Interactive excercises
3. Software Management for the Analysis of Molecular Information on Potato (Updated 2). July 02-05, 2019. Third Technology Transference Course.	Ecuador, Cumbaya. July 2019	01	04	05	09	Scientists	Workshop, Interactive excercises
4. First Workshop of Plant	Ecuador,	01	01	19	41	Students,	Workshop

Physiology using Potato as Plant Model. September 15, 2018	Quito					Scientists	(A Workshop on the effect of climate change on the physiology of the potato)
5. Field Day at Bolivar University Farm. August 18, 2018	Ecuador, Bolivar	01	01	100	140	Farmers, technicians, productive chain	Project demonstration. Late Blight, Drought.
6. Field Day at GuangaloCommunity. September 26, 2 018	Ecuador, Tungurahu a	01	01	60	100	Farmers, technicians, productive chain	Project demonstration Late Blight, Drought.
7. Fairs at USFQ Polytechnic College. 2019.	Quito, Ecuador	02	01	200	300	Students	Project Presentation.
8. Technical Stage at NEIKER. May 06-14, 2019. Antonio Leon (USFQ), Xavier Cuesta (INIAP).	Vitoria, Spain	01	08	00	02	Scientists	Training and Discussion Project molecular results.
9. VIII Ecuadorian Potato Congress. June 27-28, 2019.	Ambato, Ecuador	01	02	100	250	Scientists, Decision Makers, Technicians, Professionals, Students, Farmers, all the potato chain.	Three Project Conferences (IBT-UNALM, NEIKER, USFQ), two Oral Presentations (IBT-UNALM, INIAP), three Posters by USFQ, one Poster by INIAP One Technical Stand by USFQ.
10. VIII Ecuadorian Potato Congress Field Day.Technical University of Ambato, CampusQuerochaca. June 29, 2019	Tungurah ua, Ecuador	01	01	40	60	Farmers, Scientists and all potato chain.	Project Demonstration Plots by INIAP on Late Blight Resistance.
11. IV Project Coordination Meeting. July 01, 2019	Cumbaya, Ecuador	01	01	00	09	Scientists	Meeting
12. Visit to Machachi, USFQ Experimental chamber facilities and Fields. July 06, 2019.	Pichincha, Ecuador	01	01	01	07	Project Scientists	Field Day. Demonstration Plots by USFQ on tolerance to cold, drought and heat

							physiological
							parameters.
13. Field day at University	Bolivar,	01	01	150	250	Farmers and	Selected
of Bolivar farm. September	Ecuador					local	varieties were
11, 2019.						authorities	delivered to
							farmers
							representatives
							of 14
							organizations.
							Stands to
							expose the
							project
							objectives and
							outputs
							obtained, also
							all the plant
							physiology
							equipment was
							shown to the
							farmers so they
							get to know
							this new
							Lechnology Lo
							ullueistallu plant's
							functions
							runctions.
14 IV Final Coordination	lima/	01	01	00	10	Drojact	Monting
Meeting at UNALM	Liiid/	01	01	00	10	Filipett	weeting
September 30, 2019	Peru					scientisits	
September 50, 2019.							
15 Final Project Workshop	lima/	01	01	00	07	Project	Workshop
to discuss Molecular	Doru	0-				Sciontists	workshop
results UNAI M	Peru					SCIEITUSIS	
September 30, 2019							
16 Presentation Final	lima/	01	01	09	16	Scientists	Meeting
Project Results UNALM	Doru					Authoritios	weeting
October 1 2019 25	reiu					Studente	
narticipants						Students	
participants.							
17. IV Congreso Peruano	Lima/	01	03	50	150	Scientists.	Three Project
de Mejoramiento genético	Doru					Decision	Plenary Talks
de plantas y biotecnología	i ciu					Makers.	
Agrícola La Molina del 2						Technicians.	(NLINLIN, IDT, USEO)
al 4 de Octubre (IV Peruvian						Professionals.	USFUJ,
Congress of Plant Genetic						Students, all	I wo Oral
Improvement and Agricultural						the potato	presentations

Biotechnology, La Molina October 2-4, 2020).						chain.	(INIAP), Posters 4		
							USFQ, 3 INIAP, 3 IBT.		
Total		01	37	745	1378				
57. Did your project develop any awareness raising materials and information products about the Treaty? YES X NO									
58. Indicate the type of products developed, media used and audience targeted by your organization in implementing									
the visibility plan to date. Please,	make sure	that those	commun	ication produ	icts are sh	ared with the Tre	eaty Secretariat,		
as per Communication and Visibi	lity Manua	l provisions.	•						
58.1. Products developed:	roforoncos	/linkc)		Pooklata					
Audio-visual products (enter references/links)				BOOKIETS Reports (optor references)					
Eact sheets (enter references	(links)			X Websites					
Newsletters (enter reference	s/links)			Magazines (e	A websites Magazines (enter references)				
				Accessories (t-shirts, caps, bags, etc.) /gadgets					
58.2. Media used									
X Press	Radio			X Diversity fa	irs	X Educati	onal events		
XTelevision X Internet					K Conferences				
58.3. Audiences targeted	_		_						
X Policy makers	X Plant B	reeders	X Ger	ie bank		X General public			
X Scientists X Farmers managers			Generation Other						
X Students									
S3. Indicate the major benefits g		creased resi	lience		or of tech		er tills project.		
evaluation and number of core		communitie	inerice is to	X Introduction of improved varieties					
collections of germplasm	collections of germplasm			X Improved knowledge					
X Increased availability of X Increased food			Improved access to markets for PGRFA products						
resistant to climate change seeds security of local			Development of information systems on PGRFA						
X Increased availability of high communities			X Increased awareness on PGRFA						
yielding/quality seeds X Increased capacities			Other (please specify)						
Exchange of germplasm	for sust	ainable agri	cultural						
Backup safety duplication of practices									
germplasm		change of te	ecnnical						
		change of							
information									
Establishment of									
	networks for PGRFA								
Increased stakeholder									
participation									
	Dev	elopment of	new						
CO 4 la diasta di su di su di su	seed m	arkets	I	60 6 1 1	1 - 1 - 0/ 1				
60.1 Indicate the number of households that access increased			eased	60.6. Indicate the % increase in crop diversity at					
aiversity of crops									

60.2. Indicate the number of households that report improved food security and nutrition Too early	60.7 . Indicate the number of adaptation strategies for food security that have been developed and tested - None				
60.3.Indicate the number of households practicing conservation agriculture N/A	60.8. Indicate the number of climate smart varieties developed and introduced in farmers' fields Promoting to increase use of four commercial varieties in Ecuador resistant to Late Blight and 10 native commercial varieties in Peru tolerant to frost.				
60.4. Indicate the number of households with increased access to marketsToo early	60.9. Indicate the number of policy dialogues involving smallholder farmers established None				
60.5. Indicate the % increase in yields and marketed products Too early					
Section E: Project efficiency					
61. To what extent the outputs planned for the reporting period (with respect to the original workplan) have been achieved to date? If possible, indicate percentage of achievement (e.g. 70 % achieved)					
90% Highly satisfactory - % Moderately satisfactory - % Satisfactory - % Moderately unsatisfactory - %					
62. List the main risks faced during the implementation of the project (e.g. political turbulence, economic crisis, climate shocks etc.) None.					
63. Has the project strengthened ties with the private sector, with private breeders and/or government extension services and seed banks? If yes, provide details. No.					
64. Has the project established any relevant linkages with other projects, plans and/or programmes related to biodiversity, food security, and poverty alleviation in the country/region? YES X NO					
65. If Yes to Q64 please specify the projects and or programmes and the institutions responsible for their implementation:					
66. Did the project receive co-financing from other funding sources? If yes, indicate: No.					
Source:					
Amount USD					
or is there any additional co-financing envisaged after the end of the project implementation?					
68. If Yes to Q67, indicate the approximate amount secured in co-funding					