



PERFORMANCE AGREEMENT

BETWEEN

**NATIONAL PLANT PROTECTION CENTRE (NPPC),
SEMTOKHA**

AND

**DEPARTMENT OF AGRICULTURE (DoA),
MINISTRY OF AGRICULTURE AND FORESTS (MoAF)**

(July 1, 2019 – June 30, 2020)

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Preamble

The Performance Agreement is entered into between the National Plant Protection Centre (NPPC) and Department of Agriculture (DoA), MoAF.

The objectives of this Performance Agreement are:

- a) To establish clarity and consensus about annual priorities for the Department of Agriculture consistent with the 12th Five Year Plan of the Ministry, and Government's other priorities;
- b) To provide an objective and fair basis for evaluating the overall performance of the National Plant Protection Centre at the end of the financial year

The Performance Agreement represents an important accountability mechanism for inculcating a performance based culture at all levels of government.

THEREFORE, the parties hereto agree as follows:

Section 1: Vision, Mission and Objectives

Vision

A self-reliant, resilient and sustainable agriculture food system.

Mission

Achieve food and nutrition security, agricultural transformation through innovative and sustainable technologies, diversified and competitive economic/production options, inclusive and sustainable policies and programs.

Objectives

- 1) To increase crop production for enhancing food self-sufficiency, income and nutrition security
- 2) To generate and promote climate-resilient agriculture technologies
- 3) To promote organic farming for sustainable agriculture, safe food, and environment conservation
- 4) To develop functional farm infrastructures and facilities (irrigation channel, farm roads, post-harvest facilities, etc.)
- 5) To promote agriculture enterprise development
- 6) To enhance effective and efficient delivery of agricultural services

Section 2: Objectives, Success Indicators & Target

Objective	Weight	Action	Success Indicator	Unit	Weight	Excellent [100%]	Very Good [90%]	Good [80%]	Fair [70%]	Poor [60%]
To generate and promote climate-resilient agriculture technologies	59	Agriculture Research Conducted	Weed survey in transplanted paddy field conducted	Number	7	5	4	3	2	1
			Demonstration/Evaluation of Ethoxysulfuron conducted	Timeline	6	Mar	Apr	May	1st wk Jun	2nd wk Jun
			Conducted validation study of effectiveness of super grain bags against maize storage pests	Number	6	6	5	4	3	2
			Conducted a study on evaluation of neem oil against diamondback moth	Number	7	2	1	-	-	-
			Effect of Potassium phosphite (Phosphonate) for management of Phytophthora capsici determined	Timeline	6	Aug	Sep	Oct	Nov	Dec
			Studies and Bio-assay on Trichoderma against Phytophthora conducted	Number	7	4	3	2	1	-
			Surveillance on pest and diseases conducted	Number	6	4	3	2	1	-
		Study on impact assessment of electric fence in Bhutan conducted	Timeline	7	1st Wk May	2nd Wk May	3rd Wk May	4th Wk May	1st Wk June	
		Agriculture Technologies Adopted	Conducted community awareness on fruit fly management	Number	7	5	4	3	2	1
To promote Organic Farming for sustainable Agriculture, safe food, and environment conservation	5	Monitor and Report Flagship Program	Progress as per signed Organic Flagship Performance Agreement	Percent	5	100	90	80	70	60
To enhance effective and efficient delivery of agricultural services	36	Provide Timely Information and Inputs	Butachlor Supplied to ASR	MT	7	450	405	360	315	270
			HLB testing of citrus samples Conducted	Number	6	300	270	240	210	180
			Plant Protection Products supplied	MT	7	4	3.5	3	2.5	2
			Procured server and surveillance system maintained	Timeline	3	1st wk May	3rd wk May	4th wk May	1st wk June	4th wk June
			Disease forecasting system established	Timeline	5	4th wk May	1st wk Jun	2nd wk Jun	3rd wk Jun	4th wk Jun
			Annual Report produced	Timeline	2	4th wk Jun	1st wk Jul	2nd wk Jul	3rd wk Jul	4th wk Jul
			Electric fencing data managed	Timeline	2	4th wk May	1st wk Jun	2nd wk Jun	3rd wk Jun	4th wk Jun
		Framework, guidelines, standards, manuals and Technical Reports Published	Timeline	2	1st wk Jun	2nd wk Jun	3rd wk Jun	4th wk Jun	-	
		Budget Utilization Ensured	Budget utilized efficiently as per the BUP	Percent	2	>95	90	80	70	60

Section 3: Trend Values of Success Indicators

Objective	Action	Success Indicator	Unit	Actual Values [FY 2018-19]	Target Values [FY 2019-20]	Projected Values [FY 2020-21]	Projected Values [FY 2021-22]	Projected Values [FY 2022-23]
To generate and promote climate-resilient agriculture technologies	Agriculture Research Conducted	Weed survey in transplanted paddy field conducted	Number	1	1	1	1	1
		Demonstration/Evaluation of Ethoxysulfuron conducted	Number	1	1	1	1	1
		Conducted validation study of effectiveness of super grain bags against maize storage pests	Number	0	6	0	0	0
		Conducted a study on evaluation of neem oil against diamondback moth	Number	0	2	0	0	0
		Effect of Potassium phosphite (Phosphonate) for management of Phytophthora capsici determined	Number	NA	1	1	0	0
		Studies and Bio-assay on Trichoderma against Phytophthora conducted	Number	4	8	12	12	12
		HLB testing of citrus samples Conducted	Number	381	681	981	1281	1581
		Surveillance on pest and diseases conducted	Number	3	4	4	4	4
		Study on impact assessment of electric fence in Bhutan conducted	Number	1	1	1	1	1
	Agriculture Technologies Adopted	Conducted community awareness on fruit fly management	Number	0	5	2	2	1
To promote Organic Farming for sustainable Agriculture, safe food, and environment conservation	Monitor and Report Flagship Program	Progress as per signed Organic Flagship Performance Agreement	Percent	NA	100	100	100	100
To enhance effective and efficient delivery of agricultural services	Provide Timely Information and Inputs	Butachlor Supplied to ASR	MT	492	892	1292	1692	2092
		Plant Protection Products supplied	MT	6	12	18	24	32
		Procured server and surveillance system maintained	Number	2	3	3	3	3
		Disease forecasting system established	Number	0	1	1	1	1
		Annual Report produced	Number	1	1	1	1	1
		Electric fencing data managed	Number	510	1214	1214	1214	1214
		Framework, guidelines, standards, manuals and Technical Reports Published	Number	1	2	3	4	5
	Budget Utilization Ensured	Budget utilized efficiently as per the BUP	Percent	NA	>95	>95	>95	>95

Section 4: Definition of Success Indicators

Success Indicator	Description	Data Collection Methodology	Data Collection Frequency	Data Source
Weed survey in transplanted rice	The SI measures the number of sites where weed survey will be conducted viz Lhuentse, Mongar, Trashigang, Trashiyangtse, and Sjongkhar. The survey will be conducted in August 2019.	Progress report	Annually	Annual Report
Demonstration/Evaluation of Ethoxysulfuron conducted	The SI measures the timeline by which the demonstration/evaluation of ethoxysulfuron against shochum in the green house as a on-farm research conducted.	Progress report	Annually	Annual Report
Validation study of effectiveness of super grain bags against maize storage pests	The SI measures the number of households where validation study of effectiveness of super grain bags against maize storage pests will be conducted. It will be conducted in Chukha Dzongkhag.	Trial report	Monthly	Trial report
Study on evaluation of neem oil against diamondback moth	The SI measures the number of studies conducted to evaluate the efficacy of neem oil against diamondback moth. It will be conducted in Yusipang and Bjemina, Thimphu Dzongkhag.	Trial report	Annually	Trial report
Effect of Potassium phosphite (Phosphonate) for management of Phytophthora capsici determined	The SI measures the timeline by which the activity will be initiated. Trial experiment will be conducted for evaluation of efficacy of Potassium phosphite (Phosphonate) fungicides including other fungicides against Phytophthora in greenhouse condition and field condition.	Trial report	Annually	Annual Report
Studies and Bio-assay on Trichoderma against Phytophthora conducted	The SI measures number of studies (experiment/trials) conducted in laboratory, greenhouse condition and field. Trial experiment will be conducted for evaluation of efficacy of <i>Trichoderma</i> on <i>Phytophthora capsici</i> isolates in greenhouse and field conditions. Studies on Morphological and molecular characterization of <i>Trichoderma</i> and <i>Phytophthora capsici</i> will also be conducted.	Trial report	Annually	Annual Report
Conducted community awareness on fruit fly management	The SI measures the number of sites where awareness campaign on citrus fruit fly management will be conducted. It will be conducted in GEF LCDF project sites- Lhuentse and Mongar	Training report	Annually	Training report
HLB testing of citrus samples Conducted	The SI measures number of samples tested for HLB using PCR. Leaf/bark/root sample will be collected from National citrus repository, Tsirang for PCR analysis of HLB detection.	Laboratory Report	Annually	Annual Report
Monitor and Report Flagship Program	The indicator measures the status of progress of one organic success indicator which is responsibility of NPHC outlined in the flagship APA	Monthly Progress Report	Monthly	Annual Report

Success Indicator	Description	Data Collection Methodology	Data Collection Frequency	Data Source
Butachlor Supplied to ASR	The SI measures the volume of butachlor supplied to Agriculture sales representative (ASR) in this fiscal year.	lab test report	Annually	Annual Report
Plant Protection Products supplied	The SI measures the volume of Plant protection (PP) products to the farmers. Indent for the demand of the PP product will be collected from Dzongkhags and ARDCs and accordingly supplied to them.	Administrative record	Annually	Annual Report
Procured server and surveillance system maintained	The SI measures the timeline by which the ePest surveillance system is developed and maintained. The server will be procured and maintained to enhance efficient surveillance system mainly to improve communication from and to the field thereby expediting the PP services and data storage system for future reference.	Administrative record	Annually	Annual Report
Surveillance on pest and diseases conducted	The SI unit measures the number of different surveillance activities conducted. Not conducting any trial experiment would lead to scoring proxy point. In the fiscal year, four different survey on pest and diseases will be conducted. 1. Rice leaf folder, and 2. Ear cutting caterpillar surveillance will be conducted in southern Dzongkhags, 3. Rice blast disease surveillance will be conducted in western Dzongkhags and 4. Wheat rust disease surveillance will be conducted major wheat growing dzongkhags.	Survey report	Annually	Annual Report
Electric fencing data managed	This SI will measure length of electric fencing established by the Dzongkhags during 2019-20 FY. NPPC maintains electric fencing data at the national level. Every year, it collects data from the Dzongkhags and updates it.	NPPC database	Annually	NPPC database
Disease forecasting system established	The SI measure the timeline by which the activity will be initiated. A disease forecasting system will be instituted through exploring different models and programs. In the fiscal year a model of late blight forecasting in potato will be initiated	Field report and Administrative record	Annually	Annual Report
Framework, guidelines, standards, manuals and Technical Reports Published	Report on Impact assesment of electric fencing	Study report	Annually	Annual Report
Budget utilized effeciently as per the BUP	The SI measure the percentage of budget utilized in the FY	Administrative record	Annually	System Generated Report

Section 5: Requirements from Other Agencies

Organisation Name	Relevant Success Indicator	Requirement from the Organisation	Justification for the Requirement	Requirement detail	Impact (If Not Met)
ARDCs, Dzongkhag agriculture sector, Gewog agriculture sector	Weed survey in transplanted rice	Man power and logistics during the survey	To inventorise existing and new weeds in transplanted rice. This information shall be used to development of rice management strategies.	Man power and logistics during the survey	Will affect the progress of the survey
ARDSC-Tsirang	HLB testing of citrus samples Conducted	Help in identification and maintenance of citrus sample plant in the repository	Since the sample from citrus plants will be tested for several times, it is important to mark and tag the identified plants. There will be almost 3 months interval between two sample collection. Therefore, the tag of the identified plants need to be maintained by ARDSC-Tsirang	maintenance of tag on identified plant samples	non-maintenance of tag would lead to re-collection of samples for several times and target won't be achieved.
Dzongkhag Administration - Sarpang, Thimphu and Paro ARDC- Samtenling	Strengthen the National Plant Pest Database (NPPD)	Dzongkhag Agriculture Sector to identify sites for data collection survey. ARDC Samtenling to collaborate and assist NPPC in implementing the activity	NPPD will serve as mother source of agriculture pests and disease information in the country.	Sharing NPPD with relevant stakeholders and organisations to make relevant decisions in agriculture pests management	Non-availability of NPPD to relevant stakeholders
ARDCs, Dzongkhag agriculture sector, Gewog agriculture sector	Study on impact assesment of electric fence in Bhutan conducted	Man power and logistics during the survey	To get information of the sites and to make the community informed to carry smooth survey	Man power and logistics during the survey	Will affect the progress of the survey
ARDC Bajo and Wengkar and Chukha Dzongkhag Administration	Conducted validation study of effectiveness of super grain bags against maize storage pests	ARDCs assistance in trial set up and data collection- Dzongkhags assistance in site selection	Project sites of FAO Maize TCP project	Promoting safe, effective and low cost technology	Can't promote the technology
ARDC Yusipang and Thimphu Dzongkhag Administration	Conducted a study on evauation of neem oil against diamondback moth	ARDCs assistance in trial set up and data collection- Dzongkhags assistance in site selection	ARDCs and Dzongkhags support is necessary to make the program a success	Promoting safe technology	Can't promote the technology
ARDC Wengkar and Mongar and Lhuentse DzongkhagsAdministration	Conducted community awarness on fruit fly management	ARDCs assistance in presentation- Dzongkhags assistance in site selection	ARDCs and Dzongkhags support is necessary to make the program a success	Promoting safe technology	Can't conduct awarness program
ARDCs, Dzongkhag agriculture sector, Gewog agriculture sector	Serveillance on pest and diseaases conducted	Approval for budget release and man power and logistics during the survey	We need budget to hire vehicle, man power and logistics during the survey	Man power and logistics during the survey	will affect the progress of the survey
ARDCs, Dzongkhag agriculture sector, Gewog agriculture sector	Demostration/Evaluation of Ethoxysulfuron conducted	Man power and logistics during the survey	Ethoxysulfuron is the new herbicide promoted for weed control in transplanted rice. Support from the agencies and organizations will be very important to disseminate the technology	Man power and logistics during the survey	Will affect the progress of the survey
20 Dzongkhags	Electric fencing data managed	Submission of updated data	Data collection on ef is important to monitor and keep track of ef established across the country	Field data on ef	EF data can't not updated

Whereas,

I, Program Director, National Plant Protection Centre (NPPC), commit to the Director, Department of Agriculture (DoA), MoAF to deliver the results described in this Annual Performance Agreement.

We, Department of Agriculture, MoAF commit to the Program Director, National Plant Protection Centre to provide necessary support for the delivery of the results described in this Annual Performance Agreement.

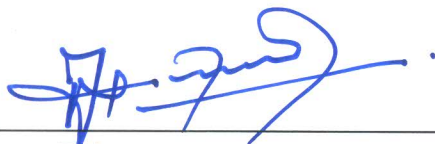
SIGNED:



Kinlay Tshering (Ms.)
DIRECTOR, DoA

28th August, 2019

Date



Namgay Thinley
CHIEF, APD

28/8/19

Date



YESHEY DEMA
PROGRAM DIRECTOR
NATIONAL PLANT PROTECTION CENTRE

28/08/19

Date