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སོན་མ་ཞིབ་འཚོལ་དང་ཤོང་འཕེལ་ལྷེ་བ། སྲོལ་མང། དབང་འདུས་སོན་མང།



ROYAL GOVERNMENT OF BHUTAN

Department of Agriculture, Ministry of Agriculture & Forests

Agriculture Research & Development Center, Bajo, Wangdue Phoddrang

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# WORKPLAN FOR THE FISCAL YEAR 2016-2017

Agriculture Research and Development Centre,  
Bajo, Wangdue phodrang  
Department of Agriculture  
Ministry of Agriculture and Forests

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# 1 FIELD CROPS SECTOR

## 1.1 RICE

### 1.1.1 Initial Evaluation Trial

Objectives: To assess selected varieties from the observation nursery for desirable agronomic traits such as yield, insect pest and disease resistance

**Design** : RCBD  
**Plot Size** : 5m x 2m  
**Spacing** : 20 cm x 20 cm  
**Treatments** : 18  
**Fertilizer** : 80: 40: 40 NPK kg/ha  
**Herbicide** : Butachlor 1.5 kg a.i./ha  
**Location** : ARDC, Bajo (on-station)

#### *Treatments*

Sl.No	Treatment	Remarks
1	IR 06 M 144	Observation Nursery 2015
2	IR 06 M 150	Observation Nursery 2015
3	IR 9 L 120	Observation Nursery 2015
4	IR 11 A 208	Observation Nursery 2015
5	IR 10 F 336	Observation Nursery 2015
6	IR 09 A 228	Observation Nursery 2015
7	IR 09 A 220	Observation Nursery 2015
8	IR 10N 269	Observation Nursery 2015
9	IR 05 A 235	Observation Nursery 2015
10	PK 3445-3-2	Observation Nursery 2015
11	CB 08 514	Observation Nursery 2015
12	IR 06N 170	Observation Nursery 2015
13	IR 10 A 134	Observation Nursery 2015
14	IR 09 N 522	Observation Nursery 2015
15	IR 08 N 210	Observation Nursery 2015
16	CT 16658-5-2-3SR-2-1-MMP	Observation Nursery 2015

17	Sahabhagi	Observation Nursery 2015
18	B K 2 ( STANDARD CHECK )	Observation Nursery 2015

**Data Collection:**

1. Sowing/Planting date
2. DTF (50 percent flowering )
3. Height
4. Maturity
5. Pest and Disease observation
6. Grain Yield / Plot

Responsibility: Lhab Gyem, Cheku Dorji, Ngawang Chogyel

**1.1.2 Advance Evaluation Trial for advanced lines (large scale)**

Objective: To select the best lines and produce seeds for pre-evaluation on farm trials in the subsequent seasons

**Design** : RCBD  
**Plot Size** : 5m x 4m  
**Spacing** : 20 cm x 20 cm  
**Treatments** : 6  
**Fertilizer** : 80: 40: 40 NPK kg/ha  
**Herbicide** : Butachlor 1.5 kg a.i./ha  
**Locaton** : ARDC, Bajo (on-station)

**Treatments**

Sl.No	Treatment	Remarks
1	TME 80518	AET 2015
2	Zhonghun 1	AET 2015
3	sarju 52	AET 2015
4	ceres 1	AET 2015
5	ceres 2	AET 2015
6	BK 2	Standard check

**Data Collection:**

- Sowing/Planting date
- 50 percent flowering
- Height
- Maturity
- Pest and Disease observation

- Grain Yield / Plot
- Milling recovery

**Responsibility:** *Lhab Gyem, Ngawang Chogyel, Cheku Dorji,*

### 1.1.3 Introduction Nursery

Objectives: Protocol to be followed as per the IIRON requirements

**Responsibility:** *Lhab Gyem, Ngawang Chogyel, Cheku Dorji, , Passang Tshering*

### 1.1.4 Demonstration of released varieties

Objectives: There are number of visitors visiting the institute and it is important to demonstrate the improved and released varieties for further adoption.

**Design** : Single large plot

**Plot Size** : 5m x 3m

**Spacing** : 20 cm x 20 cm

**Fertilizer** : 80: 40: 40 NPK kg/ha

**Herbicide** : Butachlor 1.5 kg a.i./ha

**Location** : ARCD, Bajo (on-sation)

Sr No	Variety
1	Bajo Kaap 1
2	Bajo Kaap 2
3	Bajo Maap 1
4	Bajo Maap 2
5	IR 64
6	IR 20913
7	IR 28

Responsibility: Lhab Gyem and Cheku Dorji

### 1.1.5 Cross Breeding of Rice Varieties

Objectives: To improve the local germplasm and combine desirable traits of the popular varieties and improved varieties.

Cross combinations of Varieties:

- BK1 X Ngabja
- BK2 X Tan Tshering
- BK2 X Bonday
- BK1 X chotey
- BK1 X Attey

Responsibility: Tshering Wangchen

### 1.1.6 Characterization of Germplasm

- Tan Tshering
- Shenga Maap
- Bajo Maap 1
- Bajo Maap 2
- Bajo Kaap 1
- Bajo Kaap 2
- IR 20913
- IR 64

Responsibilities: Ngawang Chogyel, Cheku Dorji, Lhab Gyem, Tshering Wangchen, Passang, Tshering Dorji

### 1.1.7 Seed Production of released and Promising varieties

Sr No	Variety
1	Bajo Kaap 1
2	Bajo Kaap 2
3	Bajo Maap 1
4	Bajo Maap 2
5	IR 64
6	IR 20913
7	BRRRI Dhan 28
8	No 11
9	Khangma Maap
10	IR 28

Responsibilities: Cheku Dorji, Lhab Gyem, Passang Tshering

### 1.1.8 Demonstration and characterization of Upland rice

- Zangthi
- Sahabhagi
- Khangma Maap
- Throsar
- Zhangkar Maap
- Zarshan Maap

Responsibility: Ngawang Chogyel, Cheku Dorji, Passang Tshering, Legjay

### 1.1.9 Promotion of IR-28

SI NO	Name of the farmer	Field location/village	Gewog	Dzongkhag
1	Mr. passang	Yaebisa	chubbhu	Punakha
2	Ap Daw	Bhaley	chubbhu	Punakha
3	Ap Dophu	Tempakha	chubbhu	punakha
4	Ap karma	samdingkha	Toewang	punakha
5	Am kinley Dem	chuna	Toewang	punakha
6	Ap karma Nidup	sobsokha	Baap	Punakha
7	Am kinley zam	Gumakha	Baap	punakha
8	Ap Daw	Gangkha	Baap	Punakha
9	Ap Sonam Dorji	Chanchey, Gasey-tshoghom	Gaseylo	Wangduephodrang
10	Ap Sangay Rinchen	Mashikha,Gasey-tshoghom	Gaseylo	Wangduephodrang
11	Am lakem	Mashikha,Gasey-tshoghom	Gaseylo	Wangduephodrang
12	Am Drenchu	Darina, Rinchengang	Thedtsho	Wangduephodrang
13	Am Chado	Dabesa,Rinchengang	Thedtsho	Wangduephodrang
14	Am ugyen	Chuzikha,Rinchengang	Thedtsho	wangduephodrang
15	Am Pema Dema	Phazi, Umakhamey	Daga	Wangduephodrang
16	Am Ugyen Dema	Sagang	Daga	Wangduephodrang
17	Am Choney Lhamo	Khangma	Daga	Wangduephodrang

Responsibilities: Ngawang Chogyel, Lhab Gyem, Cheku Dorji, Passang Tshering, Legjay, Tshering Wangchen, Thinlay Gyem



### 1.1.10 Characterization of Germplasm of Rice varieties

Location: RNR\_RDSC Tsirang

- a. Khangma Maap
- b. Wengkhar Rey Kaap 2
- c. Choti
- d. Attey

Responsibilities: Ngawang Chogyel, Doley, Sangay Tshewang

### 1.1.11 Seed Production of released and promising varieties

Sr No	Variety
1	Khangma Maap
2	Wengkhar Rey Kaap 2

Responsibilities: Doley

### 1.1.12 On farm demonstration of IR-28

Trial location: Tsirang (Tsirang Toe, Sunkosh)

Dagana (Pangserpo/Thangna)

Protocol: To be updated and circulated along with the seeds

Responsibilities: Ngawang Chogyel, Sangay Tshewang, Doley

### 1.1.13 Pre-production evaluation trial for advanced lines

Objective: pre-production evaluation of selected advance line in farmers' field

Location : mid-altitude geogs of Tsirang and Dagana (900-1400 mt)

**Design** : single plot  
**Spacing** : 20 cm x 20 cm  
**Treatments** : 5  
**Fertilizer** : 80: 40: 40 NPK kg/ha  
**Herbicide** : Butachlor 1.5 kg a.i./ha

**Varieties/treatment: Use 2 or more of the following varieties per site**

Sl.No	Treatment	Remarks
1	TME 80518	AET 2015
2	Zhonghun 1	AET 2015
3	sarju 52	AET 2015
4	ceres 1	AET 2015
5	ceres 2	AET 2015
6	BK 2	Standard check

**Data Collection:**

- Sowing/Planting date
- DTF (50 percent flowering )
- Height
- Maturity
- Pest and Disease observation
- Grain Yield / Plot

*Responsibility: Ngawang Chogyel, Doley, Cheku*

**1.1.14 Promotion of upland rice varieties**

Trial location: Tsirang (Sergithang)

Varieties: Khangma Maap and Sahabhagi, Sukha dhan

Responsibilities: Sangay Tshewang , Doley

**1.1.15 Facilitate/participate in installation and promotion of electric fencing**

**Objective:** To control vertebral pest for enhance crop production and reduce human wild life conflict

**Location:** West Central Region

**Responsibility:** Thinley Gyem

Case study on rodent pest in rice

Location: Wangdue Phodrang, Tsirang, Dagana

Responsibility: Thinley Gyem, Lhab Gyem, Legjay, Passang Tshering, Ngawang Chogyel

**1.1.16 Economics of Spring rice production at Rinchengang**

**Objective:** To study the profitability of Spring rice at Rinchengang

To see feasibility of upscaling Spring rice in Wangdue Punakha valley

**1.2 MAIZE****1.2.1 On-Station Seed Production (ARRDC, Bajo)**

**Objective:** Seed maintenance of improved and released high yielding maize varieties

Varieties

- Yangtsipa
- Khangma Ashom 1
- Khangma Ashom 2
- Chaskarpa Ashom
- Pop corn
- Sweet corn

**Responsibility:** Cheku Dorji, Legjay, Lhab Gyem, Passang Tshering

### **1.2.2 On-Station Seed Production at ARDSC Tsirang**

Objective: Seed maintenance of improved and released high yielding maize varieties

Varieties: Chaskarpa Ashom  
Ganesh 2  
Yangtsipa

Responsibility: Sangay Tshewang, Doley

### **1.2.3 On-Farm promotional program of released varieties**

Location: Haa, Bumthang, chukha, Samtse, Sarpang, Zhemgang

Responsibility: Sangay Tshewang, Legjay

## **1.3 OILSEEDS**

### **1.3.1 On station seed production (Rapeseed and Mustard)**

Varieties: PT 30, BSA, M27

Location: On station

Design: small plots

Data Collection

- Sowing date
- 50% flowering date
- 75% maturity date
- Pest disease and insect occurrence
- Plot yield

Responsibility: Passang Tshering, Tshering Wangchen, Legjay

### **1.3.2 Survey and collection of local land races of oilseeds and maintenance**

Responsibility: Passang Tshering, Tshering Wangchen, Legjay

### **1.3.3 Observation trail on (Rapeseed and Mustard)**

Varieties: Lumley 1, BARI Shari-14, BARI Shari-15

Location: On station ARDSC, Tsirang

Design: small plots

Data Collection

- Sowing date
- 50% flowering date
- 75% maturity date
- Pest disease and insect occurrence
- Plot yield

Responsibility: Passang Tshering, Doley

## 1.4 GRAIN LEGUMES

### 1.4.1 Seed production and maintenance of Mung bean and Urd Bean

Responsibility: Passang Tshering, Legjay

### 1.4.2 Seed production and maintenance of soybean

Responsibility: Passang Tshering, Legjay

## 1.5 QUINOA

### 1.5.1 On-station trials

- Introduction and evaluation of FAO varieties (9 var.)
- Evaluation of quinoa varieties from 2015 trial (2 var.)

Responsibility: Cheku Dorji

### 1.5.2 On-farm trial Large scale evaluation of quinoa

- a. Gasa (3 var.)
- b. Danghu (3 var.)
- c. Sephu (3 Var.)
- d. Rukubji(3 var. )
- e. Phobjikha (3 var.)
- f. Other (1var.)
- g. Tsirang (1var.)
- h. Punakha (1var.)
- i. Dagana(1var.)

## 1.6 WHEAT AND BARLEY

### 1.6.1 Production Evaluation of Bio-fortified Wheat

<b>Type</b>	Researcher designed and farmer managed trial
<b>Lead</b>	ARDC Bajo
<b>Collaborator</b>	Dzongkhag Agriculture Sectors of Punakha, Wangdue, Sarpang and Samtse Dzongkhags
<b>Objective</b>	To select the best performing line under farmers' management and local agro-ecological conditions.
<b>Justification</b>	Iron and zinc are the essential micronutrients playing critical roles in various physiological processes. Despite their importance, these nutrients are currently found deficient particularly in developing countries. As wheat is one of the main staple crops consumed worldwide, there is a great opportunity to alleviate the

	<p>deficiencies through enrichment.</p> <p>The International Maize and Wheat Improvement Center (CIMMYT) has been working on this program, and have been distributing such potential germplasms to evaluate in respective countries. As consumption of wheat-based products is significant in Bhutan, this bio-fortification program was initiated since 2015 season. The initial report from the station showed promising results with some bio-fortified lines showing yield and agronomic traits comparable or superior to existing commercial cultivar (s).</p> <p>In 2016–2017 season, it is proposed that the two best performers are further evaluated in farmers’ fields under the local crop husbandry practices to ascertain their true performance.</p>
<b>Design</b>	Large plots without replication.
<b>Data collection</b>	As per data collection sheet/format.

### 1.6.2 Initial evaluation of rain-fed red facultative wheat

<b>Type</b>	Researcher designed and farmer managed trial
<b>Lead</b>	ARDC Bajo
<b>Collaborator</b>	Dzongkhag Agriculture Sectors of Bumthang and Haa Dzongkhags
<b>Objective</b>	To select the best performing line (s) under farmers’ management and local agro-ecological conditions.
<b>Justification</b>	<p>Rain-fed facultative wheat is a significant contributor to the national production. However, a major challenge is the monsoon at harvest which predisposes the crop to sprouting.</p> <p>There are convincing reports from CIMMYT that red colored varieties are tolerant to pre-sprouting because of certain genetic structure. Because of this, such varieties are promoted in high rainfall areas globally. Despite the challenge, such an attempt to evaluate the red colored varieties has not been made to date for our local conditions. Therefore, it is proposed that the red colored nurseries from CIMMYT are evaluated at Bumthang and Haa in this season to assess their adaptability and other agronomic traits.</p>
<b>Design</b>	As per the CIMMYT international protocol
<b>Data collection</b>	As per data collection sheet/format.

### 1.6.3 2.1 Initial evaluation of Nepal and India advanced and/or released lines

<b>Type</b>	Researcher designed and managed trial
<b>Location</b>	Bajo
<b>Objective</b>	To evaluate the yield and agronomic performances of elite Nepal and India lines under local agro-ecological conditions.
<b>Justification</b>	<p>The varietal evaluation program should be a continuous process whereby elite lines are vigorously tested for adaptability and yield potential in the representative test sites. Through such systematic assessments, potential new varieties are identified, and researchers are fully confident of the variety while recommending to the growers.</p> <p>Varietal diversity is also important in broadening the genetic base and securing against pest or disease outbreak. In wheat, it is ideal to replace the variety after 4-5 years of being in the field as variety would have outclassed by then. As the current available wheat varieties have been in the field since 2013, there is a need to identify and replace these varieties.</p>
<b>Design</b>	RCBD with 4 replications
<b>Data collection</b>	As per data collection sheet/format.

### 1.6.4 Wheat Rust Monitoring through Near Iso-genic lines (NILs)

<b>Type</b>	Researcher designed and managed trial
<b>Location</b>	Bajo and Tsirang
<b>Objective</b>	To monitor the prevalent rust pathotypes through NILs.
<b>Justification</b>	It is important to understand the prevailing rust races in the locality or region. Such information is critical in varietal decision making as the varieties with genetic background susceptible to prevalent race can be avoided or discouraged for cultivation.
<b>Design</b>	Single row of 1 m length per entry
<b>Data collection</b>	Rust diseases incidence and severity.

### 1.6.5 Initial evaluation of Fusarium Head Blight (FHB) Resistance lines in Wheat

<b>Type</b>	Researcher designed and managed trial
<b>Location</b>	Tsirang
<b>Objective</b>	To evaluate the yield and agronomic performances of elite FHB lines under local agro-ecological conditions.
<b>Justification</b>	<p>There is an opportunity to increase the national wheat production by bringing more areas under cultivation. One of the potential areas is the utilization of fallow lands after maize harvest as wheat can fit to this cropping system.</p> <p>However, one of challenges is the FHB disease in wheat under maize-wheat system. Though this problem has not been encountered to date, its future occurrence can't be ruled out. Therefore, there is a need to start evaluating FHB nursery from CIMMYT to test the suitability of the potential lines, and disease situation.</p>
<b>Design</b>	As per CIMMYT protocol
<b>Data collection</b>	As per data collection sheet/format.

### 1.6.6 Initial evaluation of Australian barley lines

<b>Type</b>	Researcher designed and managed trial
<b>Location</b>	Tsirang
<b>Objective</b>	To evaluate the yield and agronomic performances of Australian barleys under local agro-ecological conditions.
<b>Justification</b>	<p>Barley, though currently cultivated in a small area, plays an important role in food security of the Bhutanese farmers. However, all the varieties cultivated are local types which are often low yielding and susceptible to pests and diseases. The preliminary observations in Tsirang recorded high susceptibility of local barleys to leaf rust indicating the genetic vulnerability.</p> <p>Australia with its strong breeding program has a good number of improved barley varieties. These are supposed to be resistant to rusts and other foliar diseases apart from high yield potential. Therefore, these germplasms were sourced from Australia for assessment in 2016 season.</p>
<b>Design</b>	Single observation plot
<b>Data collection</b>	As per data collection sheet/format.

### 1.6.7 Barley Yield Response under different nutrient management

<b>Type</b>	Researcher designed and managed trial
<b>Location</b>	Tsirang
<b>Objective</b>	To evaluate the yield response to different nutrient management practices and identify the most optimum practice.
<b>Justification</b>	Barley is currently grown in dry land under residual soil fertility and moisture. The external application of nutrients, either organic or inorganic, is very limited. Thus, actual yields are often lower than the potential yields. Though opportunities to intervene improved fertility management practices are limited under such system, research data even from the station is lacking. Ideally, data should be generated and made available should farmers who can afford and have the scope to adopt such recommendations. Therefore, it is proposed that the yield response under varying treatments of both organic and inorganic fertilization is assessed.
<b>Design</b>	RCBD with 3 reps
<b>Treatments</b>	As per the protocol
<b>Data collection</b>	As per data collection sheet/format.

### 1.6.8 Rust Monitoring through Near Iso-genic lines (NILs) in Barley

<b>Type</b>	Researcher designed and managed trial
<b>Location</b>	Tsirang
<b>Objective</b>	To monitor the prevalent rust pathotypes through NILs.
<b>Justification</b>	It is important to understand the prevailing rust races in the locality or region. Such information is critical in varietal decision making as the varieties with genetic background susceptible to prevalent race can be avoided or discouraged for cultivation.
<b>Design</b>	Single row of 1 m length per entry
<b>Data collection</b>	Rust diseases incidence and severity.

### 1.6.9 Demonstration of released and local rice varieties at ADTC, Chimipang

Varieties:

- IR 64



- Bajo maap 1
- Bajo Maap 2
- Bajo Kaap 1
- Bajo Kaap 2
- Bonday
- Chumja Maap

Responsibility: Dophu Namgyel, Tshering Dorji, Lhab Gyem

#### **1.6.10 Production of paddy (20 acres) at ADTC, Chimipang**

Variety:

- IR 64
- Bajo maap 1
- Bajo Maap 2
- Bajo Kaap 1
- Bajo Kaap 2
- Bonday
- Ngabja
- Tan Tshering

Responsibility: Dophu Namgyel, Tshering Dorji, Lhab Gyem

#### **1.6.11 Maintenance of Druna Gu at ADTC, Chimipang**

- Foxtail millet
- Finger millet
- Maize
- Bitter buckwheat
- Soybean
- Amarth
- perilla
- Rapeseed and mustard
- Wheat

Responsibility: Dophu Namgyel, Tshering Dorji, Cheku Dorji, Ngawang Chogyel

#### **1.6.12 Characterization of rice varieties**

Variety:

- Bonday
- Shenga Maap

Responsibility: Dophu Namgyel, Tshering Dorji, Ngawang Chhogyel

### **1.7 Promotion/production/maintenance of druna-gu**

## **2 HORTICULTURE SECTOR**

### **2.1 FRUITS AND NUTS**

#### **2.1.1 Pecan variety evaluation trial (ongoing from 2009-2010)**

**Objective:** To identify promising pecan varieties.

**Treatment:** 4 Treatments (Desirable, Wichita, Kiowa and Western Shelly).

**Trial design:** CRD with 2 replications.

**Data:** Plant phenology (date of leafing, flowering, fruiting, leaf fall,), yield, shell thickness, kernel percentage, and pest and disease incidence.

**Type of trial:** On-station.

**Duration:** 10 years.

**Expected output:** Suitable pecan varieties identified and released.

**Researchers responsible:** Gyeltshen Tshering and Jigme.

### **2.2 VEGETABLES**

#### **2.2.1 Evaluation of late blight resistant tomato line from AVRDC (On-going)**

**Objective:** To evaluate the performance of five late blight resistant tomato lines from AVRDC for good horticultural trait and resistance to late blight in Bajo condition.

**Treatment:** 6 Treatments (LBR-6, LBR-9, LBR-11, LBR-16, LBR-17 and Ratan (Check)).

**Trial design:** RCBD with three replications.

**Data:** Yield, fruit size, fruit quality and rating of late blight.

**Type of trial:** On-station.

**Duration:** 4 years.

**Expected output:** Identification of suitable tomato varieties resistant to late blight.

**Researchers responsible:** Arjun Kr. Ghaley and Jigme.

#### **2.2.2 Evaluation of high beta carotene tomato line from AVRDC (On-going)**

**Objective:** To evaluate the performance of two high beta carotene tomato lines from AVRDC for yield performance in Bajo condition.

**Treatment:** 3 Treatments (CLN2070A, CLN2366B and Roma (Check)).

### **3 Trial design: RCBD with three replications.**

**Data:** Yield, fruit size, fruit quality and incidence of pest and diseases.

**Type of trial:** On-station.

**Duration:** 4 years.

**Expected output:** Identification of suitable tomato variety with high carotene content for release.

**Researcher responsible:** Arjun Kr. Ghaley and Jigme.

### **3.1.1 Evaluation of bitter gourd lines from AVRDC (Commence from this FY)**

**Objective:** To test eight lines of bitter gourd for their yield performance and disease resistance/incidence against the local variety.

**Treatment:** 9 Treatments (AVBG1301, AVBG1304, AVBG1310, AVBG1313, AVBG1314, AVBG1323, AVBG1324, AVBG1327 and local variety (Check)).

**Trial design:** RCBD with three replications.

**Data:** Yield, fruit size, fruit shape, bitterness and incidence of pest and diseases.

**Type of trial:** On-station.

**Duration:** 4 years.

**Expected output:** Identification of suitable bitter gourd lines for release.

**Researcher responsible:** Arjun Kr. Ghaley and Jigme.

### **3.1.2 Evaluation of pumpkin lines from AVRDC (Commence from this FY)**

**Objective:** To test seven lines of pumpkin for their yield performance and disease resistance/incidence against the local variety.

**Treatment:** 8 Treatments (AVPU1391, AVPU1392, AVPU1392, AVPU1394, AVPU1395, AVPU1396, AVPU1397 and local (Check)).

**Trial design:** RCBD with three replications.

**Data:** Yield, fruit size, fruit shape and incidence of pest and diseases.

**Type of trial:** On-station.

**Duration:** 4 years.

**Expected output:** Identification of suitable pumpkin lines for release.

**Researcher responsible:** Arjun Kr. Ghaley and Jigme.





**Annual Work Plan (AWP) for 2016-2017 of ARDSC Tsirang non-budgeted activities, ARDC, Baio**

#	Activities	Sector	Responsibility	Jul-16				Aug-16				Sep-16				Oct-16				Nov-16				Dec-16				Jan-17				Feb-17				Mar-17				Apr-17				May-17				Jun-17				Where (Location)
				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4					
1	Baseline survey of IHP P-JICA project	Hort, Tsirang	Lungki																																													5 dzongkhags				
2	Feasibility study, layout and establishment of ORPs	Hort, Tsirang	All Horti staff																																									5 dzongkhags								
3	Layout of ORPs	Hort, Tsirang	All Horti staff																																									5 dzongkhags								
4	Establishment of ORPs	Hort, Tsirang	All Horti staff																																									5 dzongkhags								
5	Citrus crop cut and assess fruit quality	Hort, Tsirang	Kinley & Birkha																																																	
6	Citrus phenological data collection	Hort, Tsirang	Kinley & Birkha																																																	
7	Monitoring of ORPs and vegetable crops	Hort, Tsirang	All Horti staff																																									5 dzongkhags								
8	Attend to ad-hoc out call for pest and diseases including mus hroom monitoring and technical support	Hort, Tsirang	All Horti staff																																									6 dzongkhags								
9	Rejuvenation works in the farmers' fields	Hort, Tsirang	All Horti staff																																									7 dzongkhags								
10	Fruits & vegetable seeds, seedlings collection from various sources	Hort, Bajo	All Horti staff																																									From various sources								
11	Technical support to private nursery operators (grafting, seed sowing)	Hort, Bajo	All Horti staff																																									From various sources								
13	On-farm trial setup & Selection of farmers, layout and establishment in farmers fields	FC Tsirang	Dokey & S T																																																	

















**Annual Work Plan (AWP) for 2016-2017 of Research Communication Sector non-budgeted activities, ARDC, Bajo**

#	Activities	Sector	Responsibility	Jul-16				Aug-16				Sep-16				Oct-16				Nov-16				Dec-16				Jan-17				Feb-17				Mar-17				Apr-17				May-17				Jun-17				Where (Location)
				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4					
				1	Documentation and publication of extension materials	RCO, Bajo	RCO staff																																													
2	Attend regional meeting and workshops for information dissemination																																																			
3	Documentation of field activities carried out by sectors	RCO, Bajo	RCO staff																																																	
4	Update and documentation quarterly and annual reports & website uploading	RCO, Bajo	RCO staff																																																	
5	Coordinate and provide technical assistance in bi-annual agri sample survey	RCO, Bajo	RCO staff																																																	
6	Monitor and provide technical guidance to Extensions for crop cuts of important crops																																																			
7	Provide ToT to extension on crop cuts	RCO, Bajo	RCO staff																																																	
8	Provide technical support for group mobilization, conflict management and group formation	RCO, Bajo	RCO staff																																																	
9	Attend ad-hoc trainings, meetings, workshops, committee meetings, etc both in-country & ex-country	RCO, Bajo	RCO staff																																																	
10	Attend to ad-hoc activities as and when assigned by the PD and supervisors	RCO, Bajo	RCO staff																																																	
11	Submission of quarterly progress reports to sector head and sector head to PD	RCO, Bajo	RCO staff																																													PD				
12	Submission of annual report to sector head and to the PD	RCO, Bajo	RCO staff																																													PD				
<b>Total</b>																																																				

**Annual Work Plan (AWP) for 2016-2017 of Admin Sector Non-Budgeted activities, ARDC, Baio**

#	Activities	Sector	Responsibility	Jul-16				Aug-16				Sep-16				Oct-16				Nov-16				Dec-16				Jan-17				Feb-17				Mar-17				Apr-17				May-17				Jun-17				Where (Location)
				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4					
1	Disbursement of payments to training/meeting participants	Accounts	Accountants																																																	
2	Disbursement of monthly allowances to staff of ADTC	Accounts	Accountants																																																	
3	Rectification of MYRB/PEMS/RAMIS system errors at HQ	Accounts	Accountants																																																	
4	Follow up on deposit works at HQ	Accounts	Accountants																																																	
5	Follow up on audit memos	Accounts	Accountants																																																	
6	Follow up on supplementary incorporation of budget including re-appropriations	Accounts	Accountants																																																	
7	Tender committee monitoring, handing/taking of construction activities at ADTC & Tsirang	All sectors	Committee members																																																	
8	Update of staff CV at HQ	Admin	Adm and Adm Asst																																																	
9	IWP collection from centers and submission to DoA including signing of pay fixation of staff	Admin	Adm and Adm Asst																																																	
10	Follow up on promotion, appointment, resignation, etc document submissions to HQ	Admin	Adm and Adm Asst																																																	
11	Follow up on renewal of staff contract agreements at HQ	Admin	Adm and Adm Asst																																																	
12	Monitoring of vehicle and machinery maintenance works at workshops	Admin	MTO & Store Keeper																																																	
13	Collection of annual indents for library books procurement from centers	Admin	Asst Librarian																																																	
14	Library books stock verification at Tsirang	Admin	Asst Librarian																																																	
15	Check on functioning of computers and anti-virus updates at Tsirang and ADTC & ARDC	Admin	Tech Asso-I																																									5 dzongkhags								









