

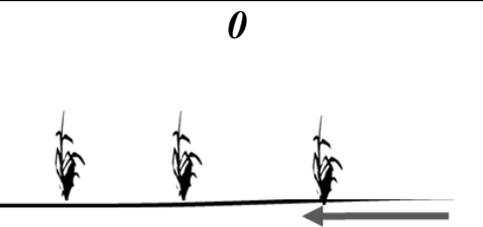
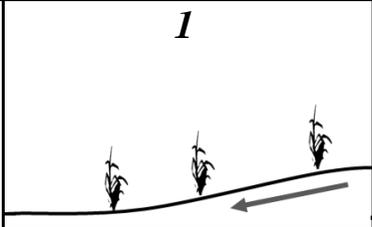
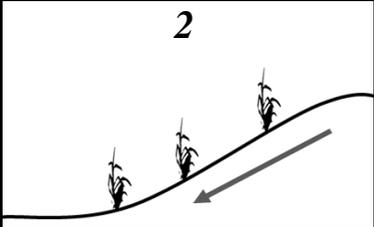
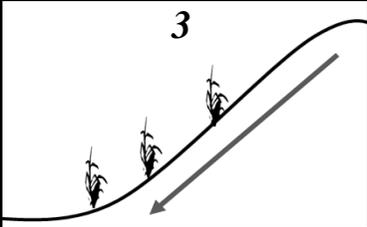
PART A:																																					
A1. HHID:	A2. Date ____/____/ 2016	A3. Enumerator Name:																																			
Checked by:																																					
A4. Name of household head:		A5. Name of Respondent:																																			
We are here today to follow up on the high and low fertility plots you showed us in March. We will be doing yield measurements of each field.		Ask question A6 PRIOR to going to the field to manage time if rented have someone find manager while you proceed to other plot																																			
DO NOT INCLUDE BORDER CROPS IN THIS SURVEY! WE ARE NOT CONSIDERING THE BORDER FOR ANYTHING IN THIS SURVEY! STAY AWAY FROM BORDER!		A6. Are either of the plots rented? _____ 1 = HIGH 2 = LOW 3 = NO <p style="text-align: center;">Answer A7 below.</p> Make sure all of your samples are accounted for and LABELED correctly BEFORE leaving EPA.																																			
<h3 style="margin: 0;">CROP CODES</h3> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;"> <u>MAIZE</u> 1 = Local Maize 2 = Newly Acquired Maize Hybrid 3 = Saved Maize Hybrid 4 = OPV/Composite Maize <u>LEGUMES</u> 5 = Pigeon Pea / nadolo 6 = Groundnut / mtedza 7 = Soya Bean / soya 8 = Common Bean / Nyemba 9 = Cowpea / Khobwe 10 = Velvet Bean / Kalongonda 11 = Bambara nut / Nzama 88 = Other Legume (specify) </td> <td style="width: 50%; vertical-align: top;"> <u>OTHER CROPS</u> 12 = Sorghum / Mapira 13 = Cassava / Chiningwa 14 = Sweet Potato / Mbatata za kholowa 15 = Millet 16 = Pumpkin 17 = Sugarcane 18 = Tobacco 19 = Cotton / thonje 80 = FALLOW 99 = Other Crop (specify) </td> </tr> </table>		<u>MAIZE</u> 1 = Local Maize 2 = Newly Acquired Maize Hybrid 3 = Saved Maize Hybrid 4 = OPV/Composite Maize <u>LEGUMES</u> 5 = Pigeon Pea / nadolo 6 = Groundnut / mtedza 7 = Soya Bean / soya 8 = Common Bean / Nyemba 9 = Cowpea / Khobwe 10 = Velvet Bean / Kalongonda 11 = Bambara nut / Nzama 88 = Other Legume (specify)	<u>OTHER CROPS</u> 12 = Sorghum / Mapira 13 = Cassava / Chiningwa 14 = Sweet Potato / Mbatata za kholowa 15 = Millet 16 = Pumpkin 17 = Sugarcane 18 = Tobacco 19 = Cotton / thonje 80 = FALLOW 99 = Other Crop (specify)	A7. Did you collect the following samples for this HHID? 1 = YES 2 = NO IF YES, FILL OUT BELOW <i>(to be done when leaving each field)</i> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 5px;"> <thead> <tr> <th style="width: 5%;"></th> <th style="width: 85%;"></th> <th style="width: 10%; text-align: center;">1 = YES</th> <th style="width: 10%; text-align: center;">2 = NO</th> </tr> </thead> <tbody> <tr> <td rowspan="4" style="text-align: center; vertical-align: middle; font-size: 2em; font-weight: bold;">HIGH</td> <td>a) MAIZE STOVER</td> <td></td> <td></td> </tr> <tr> <td>b) LEGUME (1) STOVER</td> <td></td> <td></td> </tr> <tr> <td>c) LEGUME (2) STOVER</td> <td></td> <td></td> </tr> <tr> <td>d) RIDGE WEEDS</td> <td></td> <td></td> </tr> <tr> <td rowspan="5" style="text-align: center; vertical-align: middle; font-size: 2em; font-weight: bold;">LOW</td> <td>f) MAIZE STOVER</td> <td></td> <td></td> </tr> <tr> <td>g) LEGUME (1) STOVER</td> <td></td> <td></td> </tr> <tr> <td>h) LEGUME (2) STOVER</td> <td></td> <td></td> </tr> <tr> <td>i) RIDGE WEEDS</td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> </tr> </tbody> </table>			1 = YES	2 = NO	HIGH	a) MAIZE STOVER			b) LEGUME (1) STOVER			c) LEGUME (2) STOVER			d) RIDGE WEEDS			LOW	f) MAIZE STOVER			g) LEGUME (1) STOVER			h) LEGUME (2) STOVER			i) RIDGE WEEDS					
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HIGH FERTILITY PLOT

ENUMERATORS:

- 1) The following questions and measurements pertain only to the part of the plot which was FERTILIZED.
If none of it was, these questions pertain to the entire plot.
- 2) If the plot is FALLOW only answer B1, B2, B3, B4, B6 and PART H. WEEDS for the plot

PART B.

HIGH FERTILITY PLOT	B1. NAME OF PLOT: _____	B2. GPS OF PLOT	S	°	'	"
	MICRO-TOPOGRAPHY					
	B3. SLOPE OF PLOT (<i>write corresponding slope</i>) _____		E	°	'	"
				B4. Are these the same coordinates as your list? _____		1 = YES 2 = NO
<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>0</p>  </div> <div style="text-align: center;"> <p>1</p>  </div> <div style="text-align: center;"> <p>2</p>  </div> <div style="text-align: center;"> <p>3</p>  </div> </div>						

HIGH FERTILITY

PART C.

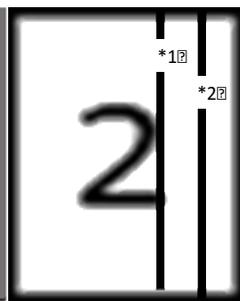
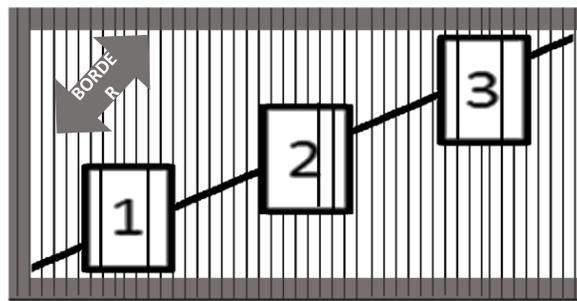
HIGH FERTILITY PLOT

C1. Fill out which crops are present in the field below. This will allow you to identify MAIN crops and organize.
(Use crop codes from part A) DO NOT forget to list all additional crops that will not be sampled and **FALLOW**.

FOCUS ON THE **MAIN CROPS** WHICH ARE PRESENT IN THE **FERTILIZED** AREA OF THE FIELD OR THE **ENTIRE PLOT** IF UNFERTILIZED. IF THERE ARE MORE THAN 5 CROPS (INCLUDING MAIZE 4 CROPS IF NO MAIZE), **IGNORE** THE 6TH AND 7TH CROPS WHICH ARE PRESENT IN SMALL AMOUNTS.



a) IS PLOT FALLOW?	b) MAIZE CROP	c) MAIZE ready to harvest?	d) LEGUME (1)	e) LEGUME (1) ready to harvest?	f) LEGUME (2)	g) LEGUME (2) ready to harvest?	h) OTHER (1)	i) OTHER (2)
circle one 1 yes 2 no		circle one 1 yes 2 no		circle one 1 yes 2 no		circle one 1 yes 2 no		



2 METER SECTION OF A RIDGE
 *X (MAIZE)
 *X (LEGUME & OTHERS)

SAMPLING INSTRUCTIONS & CROPS IN FIELD

STEP 1)	STEP 2)	STEP 3)	STEP 4)
Avoid edge effect by choosing a location at least two (2) ridges (RIDGE SPACING) in from the field border. ALL locations must be at least 2 ridges apart. In LARGE fields this will be easy BUT be cautious in smaller fields.	Choose three (3) random locations along a diagonal transect across field for measurements.	For each crop in the field fill out the corresponding information. Maize = Maize HIGH Legume(s) = Legume (1 & 2*) HIGH OTHER(S) = OTHER (1 & 2*) HIGH (* if applicable. IF more than two of either pick the MAIN two)	If FALLOW , skip to WEEDS HIGH section. Do steps 1 & 2 taking weed measurements.



SPACING BETWEEN RIDGES MEASUREMENTS

RIDGE SPACING HIGH

Measure from **CENTER** of one ridge **CENTER** of the adjacent



C2. DISTANCE BETWEEN 2 RIDGES AT EACH LOCATION WITHIN THE FIELD
 (example: 1.2 meter OR 0.75 meter)

FIELD LOCATION		
1 a)	2 b)	3 c)
_____ meter	_____ meter	_____ meter

PART D.

D2. Is MAIZE grown in this field? (circle one) 1 = YES 2 = NO

: If **YES**, fill out section D taking and recording all measurements for MAIZE.
 : If there is an **intercrop with maize**, do applicable measurements for the intercrop in following sections.
 : If **NO**, MAIZE is **NOT** grown in this field, skip section D and fill out subsequent applicable section(s).

**IF PLOT IS DIVIDED INTO SOLE CROPPING OF DIFFERENT CROPS:
 ** FOCUS ONLY ON THE FERTILIZED CROP**

**IF ALL SOLE CROPS ARE FERTILIZED OR ALL UNFERTILIZED:
 ** CHOOSE 3 SECTIONS WITHIN EACH INDIVIDUAL SOLE CROP FOR MEASUREMENTS**

★ = CANNOT DO IF **NOT** READY TO HARVEST
MAIZE ONLY

SAMPLE INSTRUCTIONS

TOTAL MAIZE STOVER OF 1 **RANDOMLY** CHOSEN IN-FIELD LOCATION
 (WHOLE MAIZE PLANTS WITHOUT COBS)



HOMOGENIZE by:

- 1) collecting all stover in chosen location,
- 2) chopping into ~ **10 cm** size pieces, DO NOT MIX WITH SOIL OR OTHER RESIDUE
- 3) mixing together,
- 4) collecting a 4 liter subsample,
- 5) **WEIGHING** the subsample (**D11**),
- 6) placing subsample in sample bag provided
- 7) labeling **outside** of bag with below information (MAIZE, HHID, DATE, HIGH)
- 8) labeling and placing provided label **inside** the bag (**use pencil**)

D3. CROP CODE: _____

D4. Is this crop intercropped or sole crop? (circle one):

1 = INTERCROPPED
 2 = SOLE CROPPED

TAKE MEASUREMENTS IN ORDER OF QUESTIONS ONLY

IN - FIELD LOCATION

D5. TOTAL NUMBER OF PLANTS STANDING IN 2 METER X 2 METER SECTION BEFORE HARVEST
 [4 METERS TOTAL]
 (includes all plants in each station)
 (IF HARVESTED, look for stubble or ask farmer to demonstrate where planted)

1
 a) TOTAL Plants
 2m X 2m section
 [4 meters]

2
 b) TOTAL Plants
 2m X 2m section
 [4 meters]

3
 c) TOTAL Plants
 2m X 2m section
 [4 meters]

D6. TOTAL NUMBER OF COBS HARVESTED IN 2 METER X 2 METER SECTION
 (if not ready to harvest, count the number of total cobs present in sample area)

a) number harvested

b) weight (KG) ★

c) number harvested

d) weight (KG) ★

e) number harvested

f) weight (KG) ★

D7. TIED STOVER RATING & WEIGHT
 1=completely DRY
 2=more DRY than GREEN
 3=more GREEN than DRY
 4=all GREEN

a) rating (1-4)

b) weight (KG) ★

c) rating (1-4)

d) weight (KG) ★

e) rating (1-4)

f) weight (KG) ★

D11. WEIGHT OF 4 LITER ★
 SUBSAMPLE (KG): _____

TAKE OFF PUT IN SAMPLE

MAIZE STOVER

HHID:

HIGH

Date ____/____/2016

YOU WILL ONLY SHUCK 3 OF THE TOTAL NUMBER OF HARVESTED COBS IN **LOCATION 2** FOR GRAIN MOISTURE MEASUREMENTS (D8).

MAIZE
HIGH
MAIZE
HIGH
MAIZE

PART E.

★ = CANNOT DO IF NOT READY TO HARVEST

LEGUME CROP 1		1 = INTERCROPPED 2 = SOLE CROPPED		SAMPLE INSTRUCTIONS			
E1. CROP CODE: _____	E2. Is this crop intercropped or sole crop? (circle one):						
TAKE MEASUREMENTS IN ORDER OF QUESTIONS ONLY		FIELD LOCATION					
		1	2	3			
HIGH LEGUME (1)	E3. TOTAL NUMBER OF PLANTS STANDING IN 2 METER (X 1) SECTION BEFORE HARVEST [2 METERS TOTAL] (includes all plants in each station) (IF HARVESTED, look for stubble or ask farmer to demonstrate where planted)	a) TOTAL Plants 2m section [2 meters]		b) TOTAL Plants 2m section [2 meters]		c) TOTAL Plants 2m section [2 meters]	
E4. TOTAL NUMBER OF PODS HARVESTED IN 2 METER (X 1) SECTION (if not ready to harvest, count the number of total PODS present in sample area)	a) number harvested	b) weight (KG) ★	c) number harvested	d) weight (KG) ★	e) number harvested	f) weight (KG) ★	IF PLOT IS DIVIDED INTO SOLE CROPPING OF DIFFERENT CROPS: ** FOCUS ONLY ON THE FERTILIZED CROP <hr/> IF ALL SOLE CROPS ARE FERTILIZED OR ALL UNFERTILIZED: ** CHOOSE 3 SECTIONS WITHIN EACH INDIVIDUAL SOLE CROP FOR MEASUREMENTS <hr/> TOTAL LEGUME PLANTS OF 1 RANDOMLY CHOSEN IN-FIELD LOCATION (WHOLE LEGUME PLANTS WITHOUT PODS) <hr/> HOMOGENIZE by: 1) collecting all stover in chosen location, 2) chopping into ~ 10 cm size pieces, DO NOT MIX WITH SOIL OR OTHER RESIDUE 3) mixing together, 4) collecting a 4 liter subsample, 5) WEIGHING the subsample (E7), 6) placing subsample in sample bag provided 7) labeling <i>outside</i> of bag with below information (CROP NAME, HHID, DATE, HIGH) 8) labeling and placing provided label <i>inside</i> the bag (use pencil)
	E5. TIED STOVER RATING & WEIGHTS 1=completely DRY 2=more DRY than GREEN 3=more GREEN then DRY 4=all GREEN	a) rating (1-4)	b) weight (KG) ★	c) rating (1-4)	d) weight (KG) ★	e) rating (1-4)	
E6. 9 PODS SHELLED GRAIN MOISTURE			a) ★-meter reading				
YOU WILL ONLY SHELL 9 OF THE TOTAL NUMBER OF HARVESTED PODS IN LOCATION 2 FOR GRAIN MOISTURE MEASUREMENTS (E6)							
OTHER CROP 1 (NOT MAIZE OR LEGUME)							
TAKE MEASUREMENTS IN ORDER OF QUESTIONS ONLY		FIELD LOCATION					
		1	2	3			
HIGH OTHER (1)	E10. TOTAL NUMBER OF PLANTS STANDING IN 2 METER (X 1) SECTION BEFORE HARVEST [2 METERS TOTAL] (includes all plants in each station) (IF HARVESTED, look for stubble or ask farmer to demonstrate where planted)	a) TOTAL Plants 2m section [2 meters]		b) TOTAL Plants 2m section [2 meters]		c) TOTAL Plants 2m section [2 meters]	
TAKE OFF PUT IN SAMPLE							
E8. CROP CODE: _____		E9. Is this crop intercropped or sole crop? (circle one):			1 = INTERCROPPED 2 = SOLE CROPPED		
TAKE OFF PUT IN SAMPLE							
LEGUME STOVER							
LEGUME (1) NAME (WRITTEN IN): _____							
				HIGH			
Date ____/____/2016							
TAKE OFF PUT IN SAMPLE							

PART G.



= CANNOT DO IF NOT READY TO HARVEST

LEGUME CROP 2

SAMPLE INSTRUCTIONS

HIGH LEGUME (2)	G1. CROP CODE: _____	G2. Is this crop intercropped or sole crop? (circle one): 1 = INTERCROPPED 2 = SOLE CROPPED				IF PLOT IS DIVIDED INTO SOLE CROPPING OF DIFFERENT CROPS: ** FOCUS ONLY ON THE FERTILIZED CROP <hr/> IF ALL SOLE CROPS ARE FERTILIZED OR ALL UNFERTILIZED: ** CHOOSE 3 SECTIONS WITHIN EACH INDIVIDUAL SOLE CROP FOR MEASUREMENTS <hr/> TOTAL LEGUME PLANTS OF 1 RANDOMLY CHOSEN IN-FIELD LOCATION (WHOLE LEGUME PLANTS WITHOUT PODS) <hr/> HOMOGENIZE by: 1) collecting all stover in chosen location, 2) chopping into ~ 10 cm size pieces, DO NOT MIX WITH SOIL OR OTHER RESIDUE 3) mixing together, 4) collecting a 4 liter subsample, 5) WEIGHING the subsample (G7), 6) placing subsample in sample bag provided 7) labeling <i>outside</i> of bag with below information (CROP NAME, HHID, DATE, high 8) labeling and placing provided label <i>inside</i> the bag (use pencil) <hr/> G7. WEIGHT OF 4 LITER SUBSAMPLE (KG): _____
	TAKE MEASUREMENTS IN ORDER OF QUESTIONS ONLY	FIELD LOCATION				
		1	2	3		
	G3. TOTAL NUMBER OF PLANTS STANDING IN 2 METER (X 1) SECTION BEFORE HARVEST [2 METERS TOTAL] (includes all plants in each station) (IF HARVESTED, look for stubble or ask farmer to demonstrate where planted)	a) TOTAL Plants 2m section [2 meters]	b) TOTAL Plants 2m section [2 meters]	c) TOTAL Plants 2m section [2 meters]		
	G4. TOTAL NUMBER OF PODS HARVESTED IN 2 METER (X 1) SECTION (if not ready to harvest, count the number of total PODS present in sample area)	a) number harvested	b) weight (KG) ★	c) number harvested	d) weight (KG) ★	
	G5. TIED STOVER RATING & WEIGHTS DRY 2=more DRY than GREEN 3=more GREEN then DRY 4=all GREEN	a) rating (1-4)	b) weight (KG) ★	c) rating (1-4)	d) weight (KG) ★	
G6. 9 PODS SHELLED GRAIN MOISTURE ★	a) ★meter reading					
YOU WILL ONLY SHELL 9 OF THE TOTAL NUMBER OF HARVESTED PODS IN LOCATION 2 FOR GRAIN MOISTURE MEASUREMENTS (G6)						

OTHER CROP 2 (NOT MAIZE OR LEGUME)

HIGH OTHER (2)	G8. CROP CODE: _____	G9. Is this crop intercropped or sole crop? (circle one): 1 = INTERCROPPED 2 = SOLE CROPPED				TAKE OFF PUT IN SAMPLE <hr/> LEGUME STOVER <hr/> LEGUME (2) NAME (WRITTEN IN): _____ <hr/> HHID: _____ <hr/> <div style="border: 1px solid black; padding: 5px; text-align:center;">HIGH</div> <hr/> Date ____/____/2016 <hr/> TAKE OFF PUT IN SAMPLE
	TAKE MEASUREMENTS IN ORDER OF QUESTIONS ONLY	FIELD LOCATION				
		1	2	3		
	G10. TOTAL NUMBER OF PLANTS STANDING IN 2 METER (X 1) SECTION BEFORE HARVEST [2 METERS TOTAL] (includes all plants in each station) (IF HARVESTED, look for stubble or ask farmer to demonstrate where planted)	a) TOTAL Plants 2m section [2 meters]	b) TOTAL Plants 2m section [2 meters]	c) TOTAL Plants 2m section [2 meters]		

PART H.

		RIDGE WEEDS 1 QUADRAT SECTIONS IN-FIELD MEASUREMENTS			SAMPLE INSTRUCTIONS	
HIGH RIDGE	RIDGE WEEDS ONLY	FIELD LOCATION			TOTAL RIDGE WEED BIOMASS IN QUADRAT OF 1 RANDOMLY CHOSEN IN-FIELD LOCATION HOMOGENIZE by: 1) collecting all above ground weed biomass in chosen location, 2) chopping into ~ 10 cm size pieces, DO NOT MIX WITH SOIL OR OTHER RESIDUE 3) mixing together, 4) collecting a 4 liter subsample, 5) WEIGHING the subsample (H4), 6) placing subsample in sample bag provided 7) labeling <i>outside</i> of bag with below information (RIDGE, HHID, DATE, HIGH) 8) labeling and placing provided label <i>inside</i> the bag (<i>use pencil</i>)	
		1	2	3		
	H1. WITCH WEED RATING (RIDGE) YES=1 NO=2	a) rating	b) rating	c) rating		
	H2. WEED RATING <i>includes witch weed</i> (RIDGE) 0, 1, 2, 3 0 = 0 1 = soil > weeds 2 = soil = weeds 3 = soil < weeds	a) rating	b) rating	c) rating		
H3. WEED BIOMASS <i>all above ground biomass including WITCH WEED</i>	a) weight (KG)	b) weight (KG)	c) weight (KG)	H4. WEIGHT OF 4 LITER SUBSAMPLE (KG): _____		
		FURROW WEEDS 1 QUADRAT SECTIONS IN-FIELD MEASUREMENTS			TAKE OFF PUT IN SAMPLE	
HIGH FURROW	FURROW WEEDS ONLY	FIELD LOCATION			RIDGE WEEDS HHID: _____ HIGH Date ____/____/ 2016 <hr/> ANY COMMENTS:	
		1	2	3		
	H5. WITCH WEED RATING (FURROW) YES=1 NO=2	a) rating	b) rating	c) rating		
	H6. WEED RATING <i>includes witch weed</i> (FURROW) 0, 1, 2, 3 0 = 0 1 = soil > weeds 2 = soil = weeds 3 = soil < weeds	a) rating	b) rating	c) rating		
H7. WEED BIOMASS <i>all above ground biomass including WITCH WEED</i>	a) weight (KG)	b) weight (KG)	c) weight (KG)			

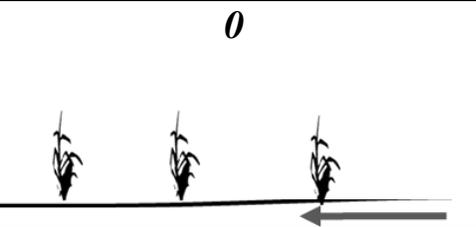
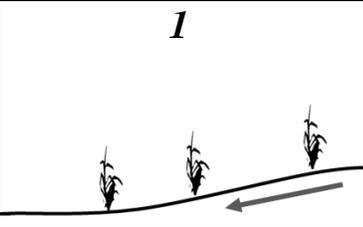
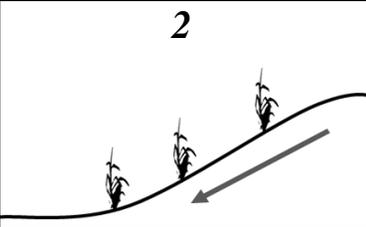
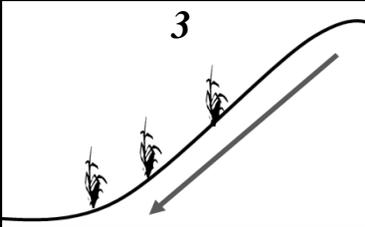
LOW FERTILITY PLOT

ENUMERATORS:

- 1) The following questions and measurements pertain only to the part of the plot which was **FERTILIZED**.
If none of it was, these questions pertain to the entire plot.
- 2) If the plot is **FALLOW** only answer I1, I2, I3, I4, I6 and **PART P. WEEDS** for the plot

PART I.

LOW FERTILITY

LOW FERTILITY PLOT	I1. NAME OF PLOT: _____	I2. GPS OF PLOT	S	°	'	"
MICRO-TOPOGRAPHY			E	°	'	"
I3. SLOPE OF PLOT (<i>write corresponding slope</i>) _____		I4. Are these the same coordinates as your list? _____			1 = YES 2 = NO	
<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>0</p>  </div> <div style="text-align: center;"> <p>1</p>  </div> <div style="text-align: center;"> <p>2</p>  </div> <div style="text-align: center;"> <p>3</p>  </div> </div>						

PART J.

LOW FERTILITY PLOT

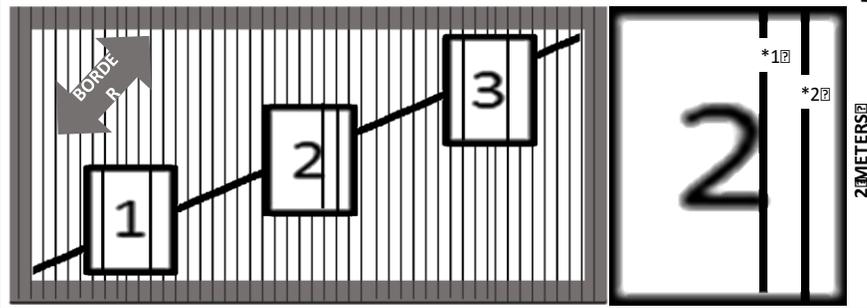
J1. Fill out which crops are present in the field below. This will allow you to identify MAIN crops and organize.
 (Use crop codes from part A) DO NOT forget to list all additional crops that will not be sampled and **FALLOW**.

FOCUS ON THE MAIN CROPS WHICH ARE PRESENT IN THE FERTILIZED AREA OF THE FIELD OR THE ENTIRE PLOT IF UNFERTILIZED. IF THERE ARE MORE THAN 5 CROPS (INCLUDING MAIZE 4 CROPS IF NO MAIZE), IGNORE THE 6TH AND 7TH CROPS WHICH ARE PRESENT IN SMALL AMOUNTS.



a) IS PLOT FALLOW?	b) MAIZE CROP	c) MAIZE ready to harvest?	d) LEGUME (1)	e) LEGUME (1) ready to harvest?	f) LEGUME (2)	g) LEGUME (2) ready to harvest?	h) OTHER (1)	i) OTHER (2)
circle one 1 yes 2 no		circle one 1 yes 2 no		circle one 1 yes 2 no		circle one 1 yes 2 no		

SAMPLING INSTRUCTIONS & CROPS IN FIELD



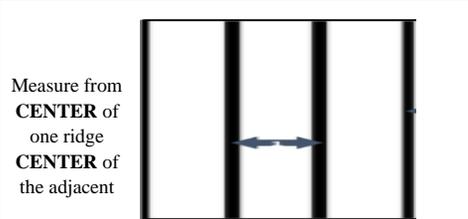
2 METER SECTION OF A RIDGE
 *X (MAIZE)
 *X (LEGUME & OTHERS)

<p>STEP 1) Avoid edge effect by choosing a location at least two (2) ridges (RIDGE SPACING) in from the field border. ALL locations must be at least 2 ridges apart. In LARGE fields this will be easy BUT be cautious in smaller fields.</p>	<p>STEP 2) Choose three (3) random locations along a diagonal transect across field for measurements.</p>	<p>STEP 3) For each crop in the field fill out the corresponding information. Maize = Maize LOW Legume(s) = Legume (1 & 2*) LOW OTHER(S) = OTHER (1&2*) LOW (* if applicable. IF more than two of either pick the MAIN two)</p>	<p>STEP 4) If FALLOW, skip to WEEDS LOW section. Do steps 1 & 2 taking weed measurements.</p>
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SPACING BETWEEN RIDGES MEASUREMENTS



RIDGE SPACING LOW



Measure from **CENTER** of one ridge **CENTER** of the adjacent

<p>J2. DISTANCE BETWEEN 2 RIDGES AT EACH LOCATION WITHIN THE FIELD (example: 1.2 meter OR 0.75 meter)</p>	FIELD LOCATION		
	<p>1 a)</p> <p>_____ meter</p>	<p>2 b)</p> <p>_____ meter</p>	<p>3 c)</p> <p>_____ meter</p>

PART M.

★ = CANNOT DO IF NOT READY TO HARVEST

LEGUME CROP 1		1 = INTERCROPPED 2 = SOLE CROPPED		SAMPLE INSTRUCTIONS				
M1. CROP CODE: _____	M2. Is this crop intercropped or sole crop? (circle one):			IF PLOT IS DIVIDED INTO SOLE CROPPING OF DIFFERENT CROPS: ** FOCUS ONLY ON THE FERTILIZED CROP <hr/> IF ALL SOLE CROPS ARE FERTILIZED OR ALL UNFERTILIZED: ** CHOOSE 3 SECTIONS WITHIN EACH INDIVIDUAL SOLE CROP FOR MEASUREMENTS <hr/> TOTAL LEGUME PLANTS OF 1 RANDOMLY CHOSEN IN-FIELD LOCATION (WHOLE LEGUME PLANTS WITHOUT PODS) <hr/> HOMOGENIZE by: 1) collecting all stover in chosen location, 2) chopping into ~ 10 cm size pieces, DO NOT MIX WITH SOIL OR OTHER RESIDUE 3) mixing together, 4) collecting a 4 liter subsample, 5) WEIGHING the subsample (M7), 6) placing subsample in sample bag provided 7) labeling <i>outside</i> of bag with below information (CROP NAME, HHID, DATE, LOW) 8) labeling and placing provided label <i>inside</i> the bag (use pencil) <hr/> M7. WEIGHT OF 4 LITER SUBSAMPLE (KG): _____				
TAKE MEASUREMENTS IN ORDER OF QUESTIONS ONLY		LEGUME (1) ONLY						
		FIELD LOCATION						
		1	2			3		
M3. TOTAL NUMBER OF PLANTS STANDING IN 2 METER (X 1) SECTION BEFORE HARVEST [2 METERS TOTAL] (includes all plants in each station) (IF HARVESTED, look for stubble or ask farmer to demonstrate where planted)	a) TOTAL Plants 2m section [2 meters]		b) TOTAL Plants 2m section [2 meters]			c) TOTAL Plants 2M section [2 meters]		
	a) number harvested		b) weight (KG) ★			c) number harvested		d) weight (KG) ★
M4. TOTAL NUMBER OF PODS HARVESTED IN 2 METER (X 1) SECTION (if not ready to harvest, count the number of total PODS present in sample area)	a) rating (1-4)		b) weight (KG) ★	c) rating (1-4)		d) weight (KG) ★		
	e) rating (1-4)		f) weight (KG) ★					
M5. TIED STOVER RATING & WEIGHTS 1=completely DRY 2=more DRY than GREEN 3=more GREEN then DRY 4=all GREEN	a) rating (1-4)		b) weight (KG) ★	c) rating (1-4)		d) weight (KG) ★		
	e) rating (1-4)		f) weight (KG) ★					
M6. 9 PODS SHELLED GRAIN MOISTURE ★	★		a) ★ neter reading		★			
	YOU WILL ONLY SHELL 9 OF THE TOTAL NUMBER OF HARVESTED PODS IN LOCATION 2 FOR GRAIN MOISTURE MEASUREMENTS (M6)							
OTHER CROP 1 (NOT MAIZE OR LEGUME)								
		FIELD LOCATION			TAKE OFF PUT IN SAMPLE			
TAKE MEASUREMENTS IN ORDER OF QUESTIONS ONLY					LEGUME STOVER			
					LEGUME (1) NAME (WRITTEN IN):			
					HHID: _____			
					LOW			
					Date ____/____/2016			
					TAKE OFF PUT IN SAMPLE			

LOW LEGUME (1)

LOW OTHER (1)

PART N.



= CANNOT DO IF NOT READY TO HARVEST

LEGUME CROP 2

SAMPLE INSTRUCTIONS

LOW LEGUME (2)	N1. CROP CODE: _____	N2. Is this crop intercropped or sole crop? (circle one):				1 = INTERCROPPED 2 = SOLE CROPPED
	LEGUME (2) ONLY					
	TAKE MEASUREMENTS IN ORDER OF QUESTIONS ONLY	FIELD LOCATION				
		1	2	3		
	N3. TOTAL NUMBER OF PLANTS STANDING IN 2 METER (X 1) SECTION BEFORE HARVEST [2 METERS TOTAL] (includes all plants in each station) (IF HARVESTED, look for stubble or ask farmer to demonstrate where planted)	a) TOTAL Plants 2m section [2 meters]	b) TOTAL Plants 2m section [2 meters]	c) TOTAL Plants 2 section [2 meters]		
	N4. TOTAL NUMBER OF PODS HARVESTED IN 2 METER (X 1) SECTION (if not ready to harvest, count the number of total PODS present in sample area)	a) number harvested	b) weight (KG) ★	c) number harvested	d) weight (KG) ★	e) number harvested
N5. TIED STOVER RATING & WEIGHTS 1=completely DRY 2=more DRY than GREEN 3=more GREEN than DRY 4=all GREEN	a) rating (1-4)	b) weight (KG) ★	c) rating (1-4)	d) weight (KG) ★	e) rating (1-4)	f) weight (KG) ★
N6. 9 PODS SHELLED GRAIN MOISTURE ★	★		a) ★meter reading		★	
YOU WILL ONLY SHELL 9 OF THE TOTAL NUMBER OF HARVESTED PODS IN LOCATION 2 FOR GRAIN MOISTURE MEASUREMENTS (N6)						
OTHER CROP 2 (NOT MAIZE OR LEGUME)						
LOW OTHER (2)	N8. CROP CODE: _____	N9. Is this crop intercropped or sole crop? (circle one):				1 = INTERCROPPED 2 = SOLE CROPPED
	OTHER CROP 2 (NOT MAIZE OR LEGUME)					
	TAKE MEASUREMENTS IN ORDER OF QUESTIONS ONLY	FIELD LOCATION				
		1	2	3		
N10. TOTAL NUMBER OF PLANTS STANDING IN 2 METER (X 1) SECTION BEFORE HARVEST [2 METERS TOTAL] (includes all plants in each station) (IF HARVESTED, look for stubble or ask farmer to demonstrate where planted)	a) TOTAL Plants 2m section [2 meters]	b) TOTAL Plants 2m section [2 meters]	c) TOTAL Plants 2m section [2 meters]			

IF PLOT IS DIVIDED INTO SOLE CROPPING OF DIFFERENT CROPS:
** FOCUS ONLY ON THE FERTILIZED CROP

IF ALL SOLE CROPS ARE FERTILIZED OR ALL UNFERTILIZED:
** CHOOSE 3 SECTIONS WITHIN EACH INDIVIDUAL SOLE CROP FOR MEASUREMENTS

TOTAL LEGUME PLANTS OF 1 RANDOMLY CHOSEN IN-FIELD LOCATION
(WHOLE LEGUME PLANTS WITHOUT PODS)

HOMOGENIZE by:

- 1) collecting all stover in chosen location,
- 2) chopping into ~ 10 cm size pieces, DO NOT MIX WITH SOIL OR OTHER RESIDUE
- 3) mixing together,
- 4) collecting a 4 liter subsample,
- 5) **WEIGHING** the subsample (N7),
- 6) placing subsample in sample bag provided
- 7) labeling *outside* of bag with below information (CROP NAME, HHID, DATE, LOW)
- 8) labeling and placing provided label *inside* the bag (use pencil)

N7. WEIGHT OF 4 LITER SUBSAMPLE (KG): _____

TAKE OFF PUT IN SAMPLE

LEGUME STOVER

LEGUME (2) NAME
(WRITTEN IN): _____

HHID: _____

LOW

Date ____/____/2016

TAKE OFF PUT IN SAMPLE

PART P.

RIDGE WEEDS 1 QUADRAT SECTIONS IN-FIELD MEASUREMENTS

SAMPLE INSTRUCTIONS

LOW RIDGE

RIDGE WEEDS ONLY	FIELD LOCATION		
	1	2	3
P1. WITCH WEED RATING (RIDGE) YES=1 NO=2	a) rating	b) rating	c) rating
P2. WEED RATING includes witch weed (RIDGE) 0, 1, 2, 3 0 = 0 1 = soil > weeds 2 = soil = weeds 3 = soil < weeds	a) rating	b) rating	c) rating
P3. WEED BIOMASS <i>all above ground biomass including WITCH WEED</i>	a) weight (KG)	b) weight (KG)	c) weight (KG)

TOTAL RIDGE WEED BIOMASS IN QUADRAT OF 1 RANDOMLY CHOSEN IN-FIELD LOCATION

HOMOGENIZE by:

- collecting all above ground weed biomass in chosen location,
- chopping into ~ 10 cm size pieces, DO NOT MIX WITH SOIL OR OTHER RESIDUE
- mixing together,
- collecting a 4 liter subsample,
- WEIGHING** the subsample (**P4**),
- placing subsample in sample bag provided
- labeling *outside* of bag with below information (RIDGE, HHID, DATE, LOW)
- labeling and placing provided label *inside* the bag (*use pencil*)

P4. WEIGHT OF 4 LITER SUBSAMPLE (KG): _____

FURROW WEEDS 1 QUADRAT SECTIONS IN-FIELD MEASUREMENTS

LOW FURROW

FURROW WEEDS ONLY	FIELD LOCATION		
	1	2	3
P5. WITCH WEED RATING (FURROW) YES=1 NO=2	a) rating	b) rating	c) rating
P6. WEED RATING includes witch weed (FURROW) 0, 1, 2, 3 0 = 0 1 = soil > weeds 2 = soil = weeds 3 = soil < weeds	a) rating	b) rating	c) rating
P7. WEED BIOMASS <i>all above ground biomass including WITCH WEED</i>	a) weight (KG)	b) weight (KG)	c) weight (KG)

TAKE OFF PUT IN SAMPLE	
RIDGE WEEDS	
HHID: _____	LOW
Date ____/____/2016	
ANY COMMENTS:	

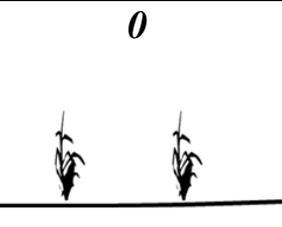
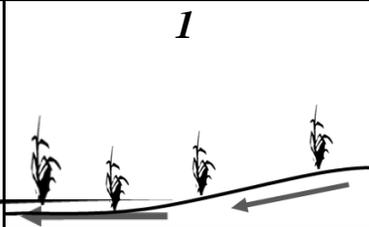
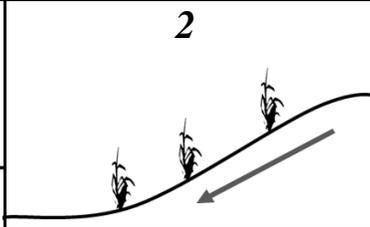
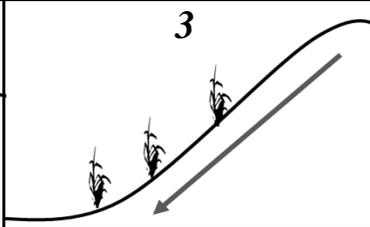
NEW MAIZE PLOT

ENUMERATORS:

1) The following questions and measurements pertain only to the part of the plot which was **FERTILIZED**.

If none of it was, these questions pertain to the entire plot.

2) If the plot is **FALLOW** only answer Q1, Q2, Q3, Q4, Q6 and PART V. **WEEDS** for the plot
PART Q.

NEW MAIZE PLOT	Q1. NAME OF PLOT: _____		Q2. GPS OF PLOT	S	°	'	"	
	MICRO-TOPOGRAPHY			E	°	'	"	
	Q3. SLOPE OF PLOT (write corresponding slope) _____			Q4. Are these the same coordinates as your list?				1 = YES 2 = NO
0		1		2		3		
								

PART R.

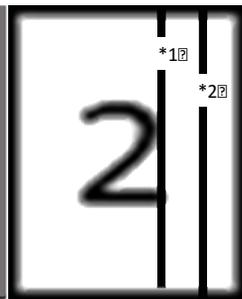
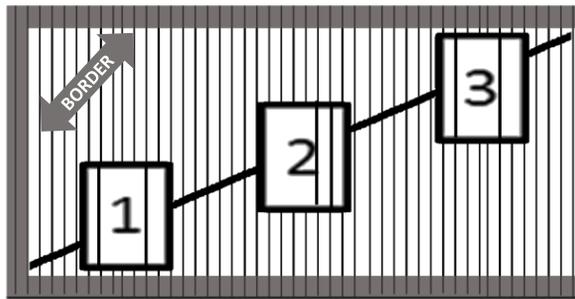
NEW MAIZE PLOT

R1. Fill out which crops are present in the field below. This will allow you to identify MAIN crops and organize.
(Use crop codes from part A) DO NOT forget to list all additional crops that will not be sampled and **FALLOW**.

FOCUS ON THE **MAIN CROPS** WHICH ARE PRESENT IN THE **FERTILIZED** AREA OF THE FIELD OR THE **ENTIRE PLOT** IF UNFERTILIZED. IF THERE ARE MORE THAN 5 CROPS (INCLUDING MAIZE), **IGNORE** THE 6TH AND 7TH CROPS WHICH ARE PRESENT IN SMALL AMOUNTS.

	b) MAIZE CROP	c) MAIZE ready to harvest?	d) LEGUME (1)	e) LEGUME (1) ready to harvest?	f) LEGUME (2)	g) LEGUME (2) ready to harvest?	h) OTHER (1)	i) OTHER (2)
		circle one 1 yes 2 no		circle one 1 yes 2 no		circle one 1 yes 2 no		

SAMPLING INSTRUCTIONS
& CROPS IN FIELD



2 METER SECTION OF A RIDGE
 *X MAIZE
 *X LEGUME & OTHERS

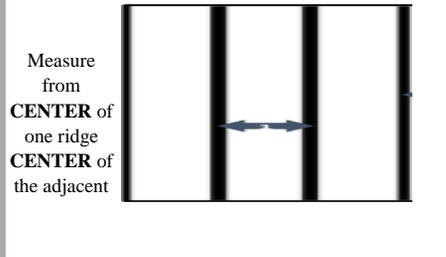
STEP 1)
 Avoid edge effect by choosing a location at least two (2) ridges (RIDGE SPACING) in from the field border. ALL locations must be at least 2 ridges apart. In LARGE fields this will be easy BUT be cautious in smaller fields.

STEP 2)
 Choose three (3) random locations along a diagonal transect across field for measurements.

STEP 3)
 For each crop in the field fill out the corresponding information.
 Maize = Maize NEW
 Legume(s) = Legume (1 & 2*) NEW
 OTHER(S) = OTHER (1 & 2*) NEW
 (* if applicable. IF more than two of either pick the MAIN two)

SPACING BETWEEN RIDGES MEASUREMENTS

RIDGE SPACING
NEW MAIZE



R2.
 DISTANCE BETWEEN 2 RIDGES AT EACH LOCATION WITHIN THE FIELD
 (example: 1.2 meter OR 0.75 meter)

FIELD LOCATION		
1 a)	2 b)	3 c)
_____ meter	_____ meter	_____ meter

PART S.

: If there is an **intercrop with maize**, do applicable measurements for the intercrop in following sections.

IF PLOT IS DIVIDED INTO SOLE CROPPING OF DIFFERENT CROPS:
**** FOCUS ONLY ON THE FERTILIZED CROP**

IF ALL SOLE CROPS ARE FERTILIZED OR ALL UNFERTILIZED:
**** CHOOSE 3 SECTIONS WITHIN EACH INDIVIDUAL SOLE CROP FOR MEASUREMENTS**

★ = CANNOT DO IF NOT READY TO HARVEST

MAIZE ONLY

SAMPLE INSTRUCTIONS

S3. CROP CODE: _____ S4. Is this crop intercropped or sole crop? (circle one):
 1 = INTERCROPPED
 2 = SOLE CROPPED

TOTAL MAIZE STOVER OF 1 **RANDOMLY** CHOSEN IN-FIELD LOCATION (WHOLE MAIZE PLANTS WITHOUT COBS)



HOMOGENIZE by:

- 1) collecting all stover in chosen location,
- 2) chopping into ~ 10 cm size pieces, DO NOT MIX WITH SOIL OR OTHER RESIDUE
- 3) mixing together,
- 4) collecting a 4 liter subsample,
- 5) **WEIGHING** the subsample (S11),
- 6) placing subsample in sample bag provided
- 7) labeling **outside** of bag with below information (MAIZE, HHID, DATE, NEW)
- 8) labeling and placing provided label **inside** the bag (use pencil)

TAKE MEASUREMENTS IN ORDER OF QUESTIONS ONLY

IN - FIELD LOCATION

S5. **TOTAL NUMBER OF PLANTS STANDING IN 2 METER X 2 METER SECTION BEFORE HARVEST**
 [4 METERS TOTAL]
 (includes all plants in each station)
 (IF HARVESTED, look for stubble or ask farmer to demonstrate where planted)

1		2		3	
a) TOTAL Plants 2m X 2m section [4 meters]		b) TOTAL Plants 2m X 2m section [4 meters]		c) TOTAL Plants 2m X 2m section [4 meters]	

S6. **TOTAL NUMBER OF COBS HARVESTED IN 2 METER X 2 METER SECTION**
 (if not ready to harvest, count the number of total cobs present in sample area)

a) number harvested	b) weight (KG) ★	c) number harvested	d) weight (KG) ★	e) number harvested	f) weight (KG) ★

S7. **TIED STOVER RATING & WEIGHT**
 1=completely DRY
 2=more DRY than GREEN
 3=more GREEN than DRY
 4=all GREEN

a) rating (1-4)	b) weight (KG) ★	c) rating (1-4)	d) weight (KG) ★	e) rating (1-4)	f) weight (KG) ★

S11. **WEIGHT OF 4 LITER ★ SUBSAMPLE (KG):** _____

TAKE OFF PUT IN SAMPLE

MAIZE STOVER

HHID:

NEW

Date ____/____/2016

YOU WILL ONLY SHUCK 3 OF THE TOTAL NUMBER OF HARVESTED COBS IN **LOCATION 2** FOR GRAIN MOISTURE MEASUREMENTS

NEW MAIZE NEW MAIZE NEW MAIZE

PART T.

★ = CANNOT DO IF NOT READY TO HARVEST

LEGUME CROP 1

SAMPLE INSTRUCTIONS

NEW MAIZE PLOT LEGUME (1)	T1. CROP CODE: _____	T2. Is this crop intercropped or sole crop? (circle one):				1 = INTERCROPPED 2 = SOLE CROPPED	
	LEGUME (1) ONLY						
	TAKE MEASUREMENTS IN ORDER OF QUESTIONS ONLY	FIELD LOCATION					
		1		2		3	
	T3. TOTAL NUMBER OF PLANTS STANDING IN 2 METER (X 1) SECTION BEFORE HARVEST [2 METERS TOTAL] (includes all plants in each station) (IF HARVESTED, look for stubble or ask farmer to demonstrate where planted)	a) TOTAL Plants 2m section [2 meters]		b) TOTAL Plants 2m section [2 meters]		c) TOTAL Plants 2m section [2 meters]	
	T4. TOTAL NUMBER OF PODS HARVESTED IN 2 METER (X 1) SECTION (if not ready to harvest, count the number of total PODS present in sample area)	a) number harvested	b) weight (KG) ★	c) number harvested	d) weight (KG) ★	e) number harvested	f) weight (KG) ★
T5. TIED STOVER & WEIGHTS RATING DRY 2=more DRY than GREEN 3=more GREEN than DRY 4=all GREEN	a) rating (1-4)	b) weight (KG) ★	c) rating (1-4)	d) weight (KG) ★	e) rating (1-4)	f) weight (KG) ★	
T6. 9 PODS SHELLED GRAIN MOISTURE ★			a) ★meter reading				
YOU WILL ONLY SHELL 9 OF THE TOTAL NUMBER OF HARVESTED PODS IN LOCATION 2 FOR GRAIN MOISTURE MEASUREMENTS (T6)							

IF PLOT IS DIVIDED INTO SOLE CROPPING OF DIFFERENT CROPS:
** FOCUS ONLY ON THE FERTILIZED CROP

IF ALL SOLE CROPS ARE FERTILIZED OR ALL UNFERTILIZED:
** CHOOSE 3 SECTIONS WITHIN EACH INDIVIDUAL SOLE CROP FOR MEASUREMENTS

TOTAL LEGUME PLANTS OF 1 RANDOMLY CHOSEN IN-FIELD LOCATION (WHOLE LEGUME PLANTS WITHOUT PODS)



- HOMOGENIZE by:**
- 1) collecting all stover in chosen location,
 - 2) chopping into ~ 10 cm size pieces, DO NOT MIX WITH SOIL OR OTHER RESIDUE
 - 3) mixing together,
 - 4) collecting a 4 liter subsample,
 - 5) **WEIGHING** the subsample (T7),
 - 6) placing subsample in sample bag provided
 - 7) labeling *outside* of bag with below information (CROP NAME, HHID, DATE, NEW)
 - 8) labeling and placing provided label *inside* the bag (use pencil)

T7. WEIGHT OF 4 LITER ★ SUBSAMPLE (KG): _____

TAKE OFF PUT IN SAMPLE

OTHER CROP 1 (NOT MAIZE OR LEGUME)

NEW MAIZE OTHER (1)	T8. CROP CODE: _____	T9. Is this crop intercropped or sole crop? (circle one):				1 = INTERCROPPED 2 = SOLE CROPPED	
	OTHER CROP 1 (NOT MAIZE OR LEGUME)						
	TAKE MEASUREMENTS IN ORDER OF QUESTIONS ONLY	FIELD LOCATION					
		1		2		3	
T10. TOTAL NUMBER OF PLANTS STANDING IN 2 METER (X 1) SECTION BEFORE HARVEST [2 METERS TOTAL] (includes all plants in each station) (IF HARVESTED, look for stubble or ask farmer to demonstrate where planted)	a) TOTAL Plants 2m section [2 meters]		b) TOTAL Plants 2m section [2 meters]		c) TOTAL Plants 2m section [2 meters]		

LEGUME STOVER

LEGUME (1) NAME (WRITTEN IN):

HHID: _____

NEW

Date ____/____/2016

TAKE OFF PUT IN SAMPLE

PART U.



= CANNOT DO IF NOT READY TO HARVEST

LEGUME CROP 2

SAMPLE INSTRUCTIONS

NEW MAIZE PLOT LEGUME (2)	U1. CROP CODE: _____		U2. Is this crop intercropped or sole crop? (circle one):				1 = INTERCROPPED 2 = SOLE CROPPED	IF PLOT IS DIVIDED INTO SOLE CROPPING OF DIFFERENT CROPS: ** FOCUS ONLY ON THE FERTILIZED CROP <hr/> IF ALL SOLE CROPS ARE FERTILIZED OR ALL UNFERTILIZED: ** CHOOSE 3 SECTIONS WITHIN EACH INDIVIDUAL SOLE CROP FOR MEASUREMENTS <hr/> TOTAL LEGUME PLANTS OF 1 RANDOMLY CHOSEN IN-FIELD LOCATION (WHOLE LEGUME PLANTS WITHOUT PODS) HOMOGENIZE by: 1) collecting all stover in chosen location, 2) chopping into ~ 10 cm size pieces, DO NOT MIX WITH SOIL OR OTHER RESIDUE 3) mixing together, 4) collecting a 4 liter subsample, 5) WEIGHING the subsample (U7), 6) placing subsample in sample bag provided 7) labeling <i>outside</i> of bag with below information (CROP NAME, HHID, DATE, NEW) 8) labeling and placing provided label <i>inside</i> the bag (use pencil) <hr/> U7. WEIGHT OF 4 LITER SUBSAMPLE (KG): _____
	LEGUME (2) ONLY							
	TAKE MEASUREMENTS IN ORDER OF QUESTIONS ONLY		FIELD LOCATION					
			1	2		3		
	U3. TOTAL NUMBER OF PLANTS STANDING IN 2 METER (X 1) SECTION BEFORE HARVEST [2 METERS TOTAL] (includes all plants in each station) (IF HARVESTED, look for stubble or ask farmer to demonstrate where planted)		a) TOTAL Plants 2m section [2 meters]	b) TOTAL Plants 2m section [2 meters]	c) TOTAL Plants 2m section [2 meters]			
	U4. TOTAL NUMBER OF PODS HARVESTED IN 2 METER (X 1) SECTION (if not ready to harvest, count the number of total PODS present in sample area)		a) number harvested	b) weight (KG)	c) number harvested	d) weight (KG)	e) number harvested	
U5. TIED STOVER RATING & WEIGHTS 1=completely DRY 2=more DRY than GREEN 3=more GREEN then DRY 4=all GREEN		a) rating (1-4)	b) weight (KG)	c) rating (1-4)	d) weight (KG)	e) rating (1-4)	f) weight (KG)	
U6. 9 PODS SHELLED GRA MOISTURE					a) meter reading			
YOU WILL ONLY SHELL 9 OF THE TOTAL NUMBER OF HARVESTED PODS IN LOCATION 2 FOR GRAIN MOISTURE MEASUREMENTS (U6)								
OTHER CROP 2 (NOT MAIZE OR LEGUME)								

NEW MAIZE OTHER (2)	U8. CROP CODE: _____		U9. Is this crop intercropped or sole crop? (circle one):				1 = INTERCROPPED 2 = SOLE CROPPED	TAKE OFF PUT IN SAMPLE <hr/> LEGUME STOVER <hr/> LEGUME (2) NAME (WRITTEN IN): <hr/> HHID: _____ <hr/> Date ____/____/2016 <hr/> TAKE OFF PUT IN SAMPLE
	FIELD LOCATION							
	TAKE MEASUREMENTS IN ORDER OF QUESTIONS ONLY		FIELD LOCATION					
			1	2		3		
	U10. TOTAL NUMBER OF PLANTS STANDING IN 2 METER (X 1) SECTION BEFORE HARVEST [2 METERS TOTAL] (includes all plants in each station) (IF HARVESTED, look for stubble or ask farmer to demonstrate where planted)		a) TOTAL Plants 2m section [2 meters]	b) TOTAL Plants 2m section [2 meters]	c) TOTAL Plants 2m section [2 meters]			

PART V.

		RIDGE WEEDS 1 QUADRAT SECTIONS IN-FIELD MEASUREMENTS			SAMPLE INSTRUCTIONS	
NEW MAIZE RIDGE	RIDGE WEEDS ONLY	FIELD LOCATION			TOTAL RIDGE WEED BIOMASS IN QUADRAT OF 1 RANDOMLY CHOSEN IN-FIELD LOCATION HOMOGENIZE by: 1) collecting all above ground weed biomass in chosen location, 2) chopping into ~ 10 cm size pieces, DO NOT MIX WITH SOIL OR OTHER RESIDUE 3) mixing together, 4) collecting a 4 liter subsample, 5) WEIGHING the subsample (V4), 6) placing subsample in sample bag provided 7) labeling <i>outside</i> of bag with below information (RIDGE, HHID, DATE, NEW) 8) labeling and placing provided label <i>inside</i> the bag (<i>use pencil</i>)	
	V1. WITCH WEED RATING (RIDGE) YES=1 NO=2	1	2	3		
	V2. WEED RATING <i>includes witch weed (RIDGE)</i> 0, 1, 2, 3 0 = 0 1 = soil > weeds 2 = soil = weeds 3 = soil < weeds	a) rating	b) rating	c) rating		
	V3. WEED BIOMASS <i>all above ground biomass including WITCH WEED</i>	a) weight (KG)	b) weight (KG)	c) weight (KG)		
		FURROW WEEDS 1 QUADRAT SECTIONS IN-FIELD MEASUREMENTS			V4. WEIGHT OF 4 LITER SUBSAMPLE (KG):	
NEW MAIZE FURROW	FURROW WEEDS ONLY	FIELD LOCATION			TAKE OFF PUT IN SAMPLE	
	V5. WITCH WEED RATING (FURROW) YES=1 NO=2	1	2	3	RIDGE WEEDS HHID:	
	V6. WEED RATING <i>includes witch weed (FURROW)</i> 0, 1, 2, 3 0 = 0 1 = soil > weeds 2 = soil = weeds 3 = soil < weeds	a) rating	b) rating	c) rating		
	V7. WEED BIOMASS <i>all above ground biomass including WITCH WEED</i>	a) weight (KG)	b) weight (KG)	c) weight (KG)	Date ____/____/2016 ANY COMMENTS:	