

AFRINT II

**Micro-Level
Households
Survey Instrument
Draft June 2007**

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M = see manual for explanation

Questions are addressed to the farm manager/farm decision maker who should preferably be the respondent.

Throughout use -9 for 'Don't know, Information missing' and -8 for 'Uncodable information' (for further explanation, see manual)

Core var.no	Variable label	F/A	Variable values	Skip-rules, information etc.
	1 Household Demographic and Socio-Economic Characteristics			
d001	Country (c001) —	F1.0	<i>Ethiopia=1, Ghana=2, Kenya=3, Malawi=4, Nigeria=5, Tanzania=6, Uganda=7, Zambia=8; Mozambique=9</i>	
d002 M	Region (c002) — —	F2.0	<i>2 digits. The first digit is the country code (see d001). Codes 11-19 reserved for Ethiopia, 21-29 for Ghana, 31-39 for Kenya, etc.</i>	
d003	Full name of village (c004) _____	A40	<i>3 digits. The first digit is the country code (see d001). Codes 101-199 reserved for Ethiopia, 201-299 for Ghana, 301-399 for Kenya, etc.</i>	
d004 M	New village number — — —	F3.0		
d005	<i>For Afrint I villages:</i> Old village number (c003) — — —	F3.0		

d006 M	New household number _____	F4.0	4 digits. The first digit is the country code (see d001). Codes 1001-1999 reserved for Ethiopia, 2001-2999 for Ghana, 3001-3999 for Kenya, etc.	All households should be granted a new number.
d007	For reinterviewed Afrint I households: Old household number (c107) _____	F4.0		
d008	<i>For interviewer:</i> Estimate the distance from the household to the village centre ____ km	F2.0		<i>The village centre has been defined in the village diagnostics.</i>
d009	For reinterviewed Afrint I households to answer: Is the head of household the same person as in 2002? ___	F1.0	yes=1, no =0	<i>If 'yes', compare with your household list so that the name of the household head is the same as in 2002</i>
d010	Name of head of household (c108) _____	A40		
d011 M	<i>For Afrint III:</i> Address particulars needed to relocate household: _____ _____	A80		<i>This data should be collected for future needs.</i>
d012 M	<i>For interviewer:</i> Sub-sample ___	F1.0	1= 'Afrint I sample, re-interviewed household', 2= 'Sample of descendants of Afrint I households', 3= 'Sample of immigrant households', 9= 'Attrition'	<i>If d012 eq 1 skip to d019 If d012 eq 2 skip to d014 If d012 eq 3 skip to d017</i>
d013	<i>For interviewer:</i> Reason for attrition ___	F1.0	1= 'Afrint I household ceased to exist with no surviving members', 2= 'Afrint I household, could not be traced'	

d014	If household is descendant of Afrint I household: How many descendant households are there from the original household? Number of descendant households: — —	F2.0		
d015	Number of descendant households who remain in the village: —	F1.0		<i>If '0', skip to d018</i>
d016	<i>Of the above households:</i> How many remain active in farming? —	F1.0		<i>Go to d018</i>
d017 M	If household immigrated to the village: Where did you come from? —	F1.0	<i>1= Within 'region', 2= From another 'region' (as defined in the manual v002), 3= Urban area</i>	
d018 M	Only for newly sampled households to answer: Reference year: year when farm household was formed, farm unit established etc. (c116) — — — — —	F4.0	<i>Interviewer is to select reference year, for example year of marriage of household head, when respondent became the farm manager etc.</i>	<i>Go to d020</i>
d019	For reinterviewed Afrint I households to answer: Is the farm manager the same person as in 2002? —	F1.0	<i>yes = 1, no = 0</i>	<i>If 'yes', compare with your household list so that the name of the farm manager is the same as in 2002</i>
d020 M	Name of farm manager (c109) _____	A40		<i>For interviewer: Be sure to get the de facto farm manager. Consider gender aspects!</i>
d021 M	Respondent? (c110) —	F1.0	<i>1=Farm manager, 2= spouse of farm manager, 3=grown up child, 4= relative, 5=parent of farm manager, 6= other</i>	

d022 M	Household type (c111) —	F1.0	1= Nuclear, 2= Extended, 3= Polygamous, 4= De jure female headed (widow, never married, divorced), 5= De facto female headed (husband absent), 6= Not yet married males	
d023	Sex of head of household (c112) —	F1.0	Male=1, female=2	
d024	Sex of farm manager (c113) —	F1.0	Male=1, female=2	
d025	Age of head of household (c114) — — years	F2.0		
d026	Age of farm manager (c115) — — years	F2.0		
d027	Ethnicity of head of household — — — —	F4.0	The first three digits should be the new village number (d004) while the last digit should be the ethnic group (1-6). Cf. the village diagnostics (v029-v034) where these codes are established.	
d028	Educational level of farm manager? (c117) — — years	F2.0	total years in school	
	2 Farm and Crop Management			<i>Ethiopia to add wheat and teff; Uganda to add banana etc.</i>

M	Which crops did you grow last season (consider all your plots)?	F1.0	<i>yes=1, no =0</i>	
d029	Maize (c118) —			
d030	Cassava (c119) —			
d031	Sorghum (c120) —			
d032	Rice (c121) —			
d033	Other food crops and vegetables (c122) —			
d034	Cash crops, non-food crops (c123) —			
	Which crops did you grow during the season before the most recent one (consider all your plots)?	F1.0	<i>yes=1, no =0</i>	
d035	Maize —			
d036	Cassava —			
d037	Sorghum —			
d038	Rice —			
d039	Other food crops and vegetables —			
d040	Cash crops, non-food crops —			

M	Only for newly sampled households to answer: Which crops did you grow at the time when this household was formed (reference year) (consider all your plots)?	F1.0	yes=1, no =0	
d041	Maize (c124) —			
d042	Cassava (c125) —			
d043	Sorghum (c126) —			
d044	Rice (c127) —			
d045	Other food crops and vegetables (c128) —			
d046	Cash crops, non-food crops (129) —			
M	Which crops did you grow in 2002 (consider all your plots)?	F1.0	yes=1, no =0	
d047	Maize —			
d048	Cassava —			
d049	Sorghum —			
d050	Rice —			
d051	Other food crops and vegetables —			
d052	Cash crops, non-food crops —			
	Abandoned crops:			<i>For interviewer: Compare crops grown last season with crops grown in 2002</i>

d053 M	<i>If maize grown in 2002 but not in last season:</i> What is the main reason you abandoned maize? —	F1.0	1 = 'Mainly economic reasons, profitability etc.' 2 = 'Mainly agronomic reasons, did not grow well etc.' 3 = 'Mainly labour reasons, shortage of labour etc.'	
d054 M	<i>If cassava grown in 2002 but not in last season:</i> What is the main reason you abandoned cassava? —	F1.0	1 = 'Mainly economic reasons, profitability etc.' 2 = 'Mainly agronomic reasons, did not grow well etc.' 3 = 'Mainly labour reasons, shortage of labour etc.'	
d055 M	<i>If sorghum grown in 2002 but not in last season:</i> What is the main reason you abandoned sorghum? —	F1.0	1 = 'Mainly economic reasons, profitability etc.' 2 = 'Mainly agronomic reasons, did not grow well etc.' 3 = 'Mainly labour reasons, shortage of labour etc.'	
d056 M	<i>If rice grown in 2002 but not in last season:</i> What is the main reason you abandoned rice? —	F1.0	1 = 'Mainly economic reasons, profitability etc.' 2 = 'Mainly agronomic reasons, did not grow well etc.' 3 = 'Mainly labour reasons, shortage of labour etc.'	
d057 M	<i>If other food crops and vegetables grown in 2002 but not in last season:</i> What is the main reason you abandoned other food crops and vegetables? —	F1.0	1 = 'Mainly economic reasons, profitability etc.' 2 = 'Mainly agronomic reasons, did not grow well etc.' 3 = 'Mainly labour reasons, shortage of labour etc.'''	
d058 M	<i>If cash crops, non-food crops grown in 2002 but not in last season:</i> What is the main reason you abandoned cash crops, non-food crops? —	F1.0	1 = 'Mainly economic reasons, profitability etc.' 2 = 'Mainly agronomic reasons, did not grow well etc.' 3 = 'Mainly labour reasons, shortage of labour etc.'	
	Adopted crops:			<i>For interviewer: Compare crops grown last season with crops grown in 2002</i>

d059 M	<i>If maize grown last season but not in 2002:</i> What is the main reason you started cultivating maize? —	F1.0	1 = 'Mainly economic reasons, profitability etc.' 2 = 'Mainly agronomic reasons, grows well, higher yields etc.' 3 = 'Mainly labour reasons, labour-saving etc.'	
d060 M	<i>If cassava grown last season but not in 2002:</i> What is the main reason you started cultivating cassava? —	F1.0	1 = 'Mainly economic reasons, profitability etc.' 2 = 'Mainly agronomic reasons, grows well, higher yields etc.' 3 = 'Mainly labour reasons, labour-saving etc.'	
d061 M	<i>If sorghum grown last season but not in 2002:</i> What is the main reason you started cultivating sorghum? —	F1.0	1 = 'Mainly economic reasons, profitability etc.' 2 = 'Mainly agronomic reasons, grows well, higher yields etc.' 3 = 'Mainly labour reasons, labour-saving etc.'	
d062 M	<i>If rice grown last season but not in 2002:</i> What is the main reason you started cultivating rice? —	F1.0	1 = 'Mainly economic reasons, profitability etc.' 2 = 'Mainly agronomic reasons, grows well, higher yields etc.' 3 = 'Mainly labour reasons, labour-saving etc.'	
d063 M	<i>If other food crops and vegetables grown last season but not in 2002:</i> What is the main reason you started cultivating other food crops and vegetables? —	F1.0	1 = 'Mainly economic reasons, profitability etc.' 2 = 'Mainly agronomic reasons, grows well, higher yields etc.' 3 = 'Mainly labour reasons, labour-saving etc.'	
d064 M	<i>If cash crops, non-food crops grown last season but not in 2002:</i> What is the main reason you started cultivating cash crops, non-food crops? —	F1.0	1 = 'Mainly economic reasons, profitability etc.' 2 = 'Mainly agronomic reasons, grows well, higher yields etc.' 3 = 'Mainly labour reasons, labour-saving etc.'	

	<p>FOR AFRINT I HOUSEHOLDS: Only those crops sections should be covered that correspond to the crops most recently grown (d029-d034). Fill in the following relevant information. Skip the sections for non-applicable crops. OBS! the “Rural – Urban and Rural – Rural Linkages” section. When completed, continue to section 4.</p> <p>FOR NEWLY SAMPLED HOUSEHOLDS: All staple crops sections should be covered even if the crops are not currently grown, since we need to collect retrospective data on the situation 1) when the household was formed, and 2) in 2002. However, this means there will be a lot of questions that are not applicable. Skip those where appropriate and answer the retrospective ones (see the control variables for further specification).</p>			<p>Also see control variables x001 (maize), x002 (cassava), x003 (sorghum) and x004 (rice), x005 (other food crops and vegetables) and x006 (cash crops).</p>
	<p>3 Crops</p>			
	<p>Maize</p>			

	<p><u>Control variable: x001</u></p> <p><i>For interviewer: Did this household grow maize last season or not, and is this a reinterviewed household or not?</i></p> <p>—</p>	F1.0	<p>1 = 'Grew maize, old household', 2 = 'Grew maize, new household', 3 = 'Did not grow maize, old household', 4 = 'Did not grow maize, new household'</p>	<p><i>If x001 eq 1, go to d065 (maize). Answer d065-d072, d074-d077, d079-d109, d124-d134, d139-d142.</i></p> <p><i>If x001 eq 2, go to d065 (maize). Answer all questions.</i></p> <p><i>If x001 eq 3, go to x002/d143 (cassava).</i></p> <p><i>If x001 eq 4, answer d110-d123, d135, d139, then go to x002/d143 (cassava).</i></p>
	<p>Maize, area</p>			
d065 M	<p>During the most recent season, did you grow maize in pure stand only or was your maize mixed with other crops? (c130)</p> <p>—</p>	F1.0	<p>1= pure stand only 2= intercropped</p>	
d066	<p>Was any portion of the land under maize irrigated? (c132)</p> <p>—</p>	F1.0	<p>yes=1, no=0</p>	<p><i>If 'no', skip to d068</i></p>
d067	<p>If irrigated, did you take more than one maize crop per year? (c133)</p> <p>—</p>	F1.0	<p>yes=1, no=0</p>	
d068	<p>In addition to maize, what was the land used for? (c134)</p> <p>—</p>	F1.0	<p>0= no specific use 1= for other crops 2= for grazing 3= other uses</p>	
d069	<p>If the land was used for other crops after harvest, which crops?</p> <p>—</p>	F1.0	<p>1= other food crops 2= vegetables 3= other</p>	

	<i>If maize is mixed with other crops (d065), ask respondent to estimate the size of the land under which maize would occur as pure stand.</i>			
M d070	<p>What was the area under maize (pure stand equivalent) leading up to your most recent harvest?</p> <p> ___, __ local unit</p> <p> local unit = _____</p> <p>Recalculation:</p> <p> ___, __ ha (c135)</p>	F5.2	<i>Express in local unit and then recalculate into hectares after the interview/survey</i>	
M d071	<p>What was the area under maize (pure stand equivalent) during the season before the most recent one?</p> <p> ___, __ local unit</p> <p>Recalculation:</p> <p> ___, __ ha (c136)</p>	F5.2	<i>Express in local unit and then recalculate into hectares after the interview/survey</i>	
M d072	<p>What was the area under maize (pure stand equivalent) two seasons before the most recent one?</p> <p> ___, __ local unit</p> <p>Recalculation:</p> <p> ___, __ ha (c137)</p>	F5.2	<i>Express in local unit and then recalculate into hectares after the interview/survey</i>	
d073	<p>Only for newly sampled households to answer:</p> <p>What was the size of the land under maize in the most recent season, compared to when the household was formed (reference year d018)? (c138)</p> <p> —</p>	F1.0	<p>0= did not grow maize at that time</p> <p>1= area decreased since then</p> <p>2= area unchanged</p> <p>3= area increased since then</p>	

d074	What was the average size of the land under maize in the most recent season as compared to 2002? —	F1.0	0= did not grow maize in 2002 1= area decreased since then 2= area unchanged 3= area increased since then	
	Maize, production (grain)			
M d075	What was the total production of maize (grain) after your most recent harvest? ___ bags (or other local unit) _____ kg (c139)	F6.0	Express in bags or other local unit, then recalculate into kg after the interview/survey.	Include the amount of green or premature maize harvested; grain equivalent; if double cropping due to irrigation include total production over the last year
M d076	What was the total production of maize during the harvest before the most recent one? ___ bags (or other local unit) _____ kg (c140)	F6.0	Express in bags or other local unit, then recalculate into kg after the interview/survey.	
M d077	What was the total production of maize two seasons ago? ___ bags (or other local unit) _____ kg (c141)	F6.0	Express in bags or other local unit, then recalculate into kg after the interview/survey.	
d078 M	Only for newly sampled households to answer: Do you get more or less maize from a given size of land (e.g. one acre) today, compared to at the time when your household was formed, i.e. have the yields increased or decreased? (c142) —	F1.0	0 = did not grow maize at that time 1= yields have decreased 2= yields unchanged 3= yields have increased	

d079 M	Do you get more or less maize from a given size of land (e.g. one acre) today, compared to in 2002, i.e. have the yields increased or decreased? —	F1.0	0= did not grow maize in 2002 1= yields have decreased 2= yields unchanged 3= yields have increased	
M d080 d081 d082 d083 d084	How much of the total output of maize (d075) following the most recent season was used for: 1.Home consumption (c143) _____ bags _____ kg 2.Payment for hired labour (c144) _____ bags _____ kg 3.Sale (c145) _____ bags _____ kg 4.Other uses (seed, animal feed, brewing, gifts, storage losses etc.) (c146) _____ bags _____ kg Total (c.f. d075) _____ bags _____ kg	F6.0	Express in local units (bags etc.), recalculate into kg after the survey	include the amount of green or premature maize harvested; grain equivalent
d085 M	How much of the work involved in the production of maize does the farm manager alone carry out? _____ %	F3.0		If 100%, then skip to d088

d093	During the most recent season, were pesticides applied on growing maize crop? (c150) —	F1.0	<i>yes=1, no=0</i>	
d094	During the most recent season, what was your main method of land preparation for maize? (c151) —	F1.0	<i>1= hoe cultivation 2= oxen ploughing 3= tractor ploughing 4= other</i>	

M	Maize fields: During the most recent season, did you use/apply...?	F1.0	<i>yes=1, no=0</i>	
d095	Crop rotation (c152) —			
d096	Intercropping —			
d097	Intercropping with nitrogen fixing crops (beans, legumes etc.) (c153) —			
d098	Fallowing (c154) —			
d099	Improved fallowing —			
d100	Animal manure (c155) —			
d101	Zero or minimum tillage (cf. c156) —			
d102	Breaking the hard pan (cf. c156) —			
d103	Green manure/compost/residue incorporation (c157)___			
d104	Soil and water conservation (level bunds, grass strips, terracing etc.) (c158) —			
d105	Improved planting practices —			
d106	Integrated (Soil) Nutrient Management (INM) —			
d107	Integrated Pest Management (IPM) —			
d108	Agroforestry —			
d109	Pesticides/herbicides —			
	<u>Only for newly sampled households to answer:</u> Maize, technology & inputs – when the household was formed (reference year)			

d110	When your household was formed, did you grow maize? (c159) —	F1.0	<i>yes=1, no=0</i>	<i>If 'no', skip to d124</i>
d111	At the time when this household was formed, what proportion of the land planted with maize was irrigated? (c160) —	F1.0	<i>0= none 1= 1/4 2= 1/2 3= 3/4 4= all or nearly all</i>	
d112 M	At the time when this household was formed, what was the main variety of maize planted? (161) —	F1.0	<i>1= traditional 2= improved variety (OPV, composites) 3= hybrid</i>	
d113	Do you use more or less chemical fertilizer on maize today as compared to when this household was formed? (c162) —	F1.0	<i>0 = No fertiliser applied at that time 1 = Amount decreased since then 2 = Amount unchanged 3 = Amount increased since then</i>	
d114	Were pesticides applied on growing maize crop at that time? (c163) —	F1.0	<i>yes=1, no=0</i>	
d115	At the time when your household was formed, what was your main method of land preparation for maize? (c164) —	F1.0	<i>1= hoe cultivation 2= oxen ploughing 3= tractor ploughing 4= other</i>	

	Maize fields: Did you at that time use/apply...?	F1.0	<i>yes=1, no=0</i>	
d116	Crop rotation (c165) —			
d117	Intercropping with nitrogen fixing crops (beans, legumes etc.) (c166) —			
d118	Fallowing (c167) —			
d119	Animal manure (c168) —			
d120	Conservation tillage (cf. c169) —			
d121	Breaking the hard pan (cf. c169) —			
d122	Green manure/compost/residue incorporation (c170)___			
d123	Soil and water conservation (level bunds, grass strips, terracing etc.) (c171) —			
	Maize marketing conditions			
	Maize marketing conditions, most recent harvest			
d124	Did you sell or do you intend to sell any maize following your most recent harvest? (c175) —	F1.0	<i>yes=1, no=0</i>	<i>If 'no', skip to d131</i>
M	What was the total amount of maize sold (or is planned to be sold) after the most recent harvest? (c.f. d082) — — — — bags	F6.0	<i>Express in local units (bags etc.), then recalculate into kg after the interview/ survey</i>	<i>The sales should not exceed reported production (d075).</i>
d125	— — — — — kg (c176)			<i>The amount should equal d082.</i>

M d126	What was (is) the lowest price for maize you received following the most recent harvest? _____local currency/100 kg _____, __ USD/100 kg (c177)	F5.2	indicate in local currency per 100 kg but recalculate into fixed USD after survey	
M d127	What was (is) the highest price you received following the most recent harvest? _____local currency/100 kg _____, __ USD/100 kg (c178)	F5.2	indicate in local currency per 100 kg but recalculate into fixed USD after survey	
M d128	Did the traders pay a lower price for some of your produce due to post-harvest quality deterioration? —	F1.0	0= no 1=yes, for some of my produce 2= yes, for most of my produce	
d129	What is your main market outlet/crop depot for maize? (c180) —	F1.0	1= At farm gate, 2= In the village market, 3= In market outside the village, 4= Through outgrower scheme, 5= State marketing board, 6= NGO or donor project, 7= Farmers' groups or organization, 8= Other	
d130	Do you grow maize on the basis of a pre-arranged contract with a private trader? (c181) —	F1.0	yes=1, no=0	
	Maize marketing, the harvest before the most recent one			
d131	Did you sell any maize after the harvest before the most recent one? (c182) —	F1.0	yes=1, no=0	If 'no', skip to d133

d132	What was the total amount of maize sold? <p style="text-align: center;">___ bags _____ kg (c183)</p>	F6.0	<i>Express in local units (bags etc.), then recalculate into kg after the interview/ survey</i>	<i>The sales should not exceed reported production (d076).</i>
	Maize marketing, two harvests before the most recent one			
d133	Did you sell any maize after the harvest two seasons before the most recent one? (c184) <p style="text-align: center;">—</p>	F1.0	<i>yes=1, no=0</i>	<i>If 'no', skip to d135 if newly sampled household and skip to d139 if Afrint I household</i>
d134	What was the total amount of maize sold two seasons ago? <p style="text-align: center;">___ bags _____ kg (c185)</p>	F6.0	<i>Express in local units (bags etc.), then recalculate into kg after the interview/ survey</i>	<i>The sales should not exceed reported production (d077).</i>
	<u>Only for newly sampled households to answer:</u> Maize marketing conditions at the time when the household was formed			
d135	Did you sell any maize at the time when this household was formed? (c186) <p style="text-align: center;">—</p>	F1.0	<i>yes = 1, no = 0</i>	<i>If 'no', skip to d139</i>
d136	Since you formed your farm/household, how has the amount of maize you sell changed? (c187) <p style="text-align: center;">—</p>	F1.0	<i>1= less maize sold now 2= no significant change 3= more maize sold now</i>	

d137	Is the price you receive for maize better or worse today as compared to when the household was formed? (c188) —	F1.0	1= worse price today (price has decreased) 2= no significant price change 3= better price today (price has increased)	
d138	In your view, how has access to market outlets for maize changed since you formed your household? (c189) —	F1.0	1= market access is worse now 2= market access unchanged 3= market access is better now	
	Maize marketing conditions – in relation to 2002			
d139	Did you sell any maize after the harvest in 2002? —	F1.0	yes=1, no=0	If 'no', skip to d143
d140	Since 2002, how has the amount of maize you sell changed? —	F1.0	1= less maize sold now 2= no significant change 3= more maize sold now	
d141	Is the price you receive for maize better or worse today as compared to in 2002? —	F1.0	1= worse price today (price has decreased) 2= no significant price change 3= better price today (price has increased)	
d142	In your view, how has access to market outlets for maize changed since 2002? —	F1.0	1= market access is worse now 2= market access unchanged 3= market access is better now	
	Cassava			

	<p><u>Control variable: x002</u></p> <p>For interviewer: Did this household grow cassava last season or not, and is this a reinterviewed household or not?</p> <p style="text-align: center;">—</p>	F1.0	<p>1 = 'Grew cassava, old household', 2 = 'Grew cassava, new household', 3 = 'Did not grow cassava, old household', 4 = 'Did not grow cassava, new household'</p>	<p>If x002 eq 1, go to d143 (cassava). Answer d143-d146, d148, d150-d179, d192-d203, d208-d211. If x002 eq 2, go to d143 (cassava). Answer all questions. If x002 eq 3, go to x003/d212 (sorghum). If x002 eq 4, answer d180-d191, d204, d208, then go to x003/d212 (sorghum)</p>
	<p>Cassava, area</p>			
d143 M	<p>Do you grow cassava in pure stand or mixed with other crops? (c195)</p> <p style="text-align: center;">—</p>	F1.0	<p>1 = pure stand only 2 = intercropped</p>	
	<p><i>If cassava is mixed with other crops (d143), ask respondent to estimate the size of the land under which cassava would occur as pure stand.</i></p>			
M d144	<p>What has been your average area under cassava (pure stand equivalent) during the past year?</p> <p style="text-align: center;">—, — local unit</p> <p style="text-align: center;">local unit = _____</p> <p>Recalculation:</p> <p style="text-align: center;">—, — ha (c197)</p>	F5.2	<p><i>Express in local unit and then recalculate into hectares after the interview/survey</i></p>	

M d145	<p>What was the average area under cassava (pure stand equivalent) the year before last?</p> <p>____, __ local unit</p> <p>Recalculation</p> <p>____, __ ha (c198)</p>	F5.2	Express in local unit and then recalculate into hectares after the survey	
M d146	<p>What was the area under cassava (pure stand equivalent) two years ago?</p> <p>____, __ local unit</p> <p>Recalculation:</p> <p>____, __ ha (c199)</p>	F5.2	Express in local unit and then recalculate into hectares after the survey	
d147	<p>Only for newly sampled households to answer:</p> <p>What was the size of the land under cassava in the most recent season, compared to when the household was formed (reference year d018)? (c200)</p> <p>—</p>	F1.0	<p>0= did not grow cassava at that time</p> <p>1= area decreased since then</p> <p>2= area unchanged</p> <p>3= area increased since then</p>	
d148	<p>What was the average size of the land under cassava in the most recent season as compared to 2002?</p> <p>—</p>	F1.0	<p>0= did not grow cassava in 2002</p> <p>1= area decreased since then</p> <p>2= area unchanged</p> <p>3= area increased since then</p>	
	Cassava, production			

M d149	Only for newly sampled households to answer: Do you get more or less cassava from a given size of land (e.g. one acre) today, compared to at the time when your household was formed, i.e. have the yields increased or decreased? (c208) —	F1.0	0= did not grow cassava at that time 1= yields have decreased 2= yields unchanged 3= yields have increased	
M d150	Do you get more or less cassava from a given size of land (e.g. one acre) today, compared to in 2002, i.e. have the yields increased or decreased? —	F1.0	0= did not grow cassava in 2002 1= yields have decreased 2= yields unchanged 3= yields have increased	
M d151 d152 d153 d154	What was the cassava output during last season used for? Rank after importance. 1.Home consumption — 2.Payment for hired labour — 3.Sale — 4.Other uses (seed, animal feed, brewing, gifts, storage losses etc.) —	F1.0	0 = cassava was not used for this purpose 1 = most cassava was used for this purpose, i.e. most important use 2 = second most important use 3 = third most important use 4 = fourth most important use	
d155 M	How much of the work involved in the production of cassava does the farm manager alone carry out? — — — %	F3.0		If 100%, then skip to d158
M d156 d157	Who else is involved in the production of cassava? Rank the two most important persons: Person no. 1 involved: — Person no. 2 involved: —	F1.0	0 = Nobody else 1= Spouse of farm manager 2= Other male member of the household 3= Other female member of the household	

	Cassava, technology & inputs			
	Cassava, technology & inputs – most recent season			
d158	Are you using any new cassava varieties today as compared to when the household was established? —	F1.0	<i>yes=1, no=0</i>	
d159	Are you using any new cassava varieties today as compared to what your parents were using? —	F1.0	<i>yes=1, no=0</i>	
d160	Have you ever purchased or received stem-cuttings from a formal agency or from an NGO? —	F1.0	<i>yes=1, no=0</i>	
M d161	During the most recent season, how much money did you spend on artificial fertiliser for cassava? — — — — <i>local currency</i> — — — — USD	F4.0	<i>Indicate in local currency but recalculate into USD after the survey</i>	
d162	What was the amount of chemical fertilizer used on cassava in the most recent season as compared to 2002? —	F1.0	<i>0 = No fertiliser applied in 2002 1 = Amount decreased since then 2 = Amount unchanged 3 = Amount increased since then</i>	
d163	During the most recent season, were pesticides applied on cassava? (c211) —	F1.0	<i>yes=1, no=0</i>	

d164	During the most recent season, what was your main method of land preparation for cassava? (c212) —	F1.0	1= hoe cultivation 2= oxen ploughing 3= tractor ploughing 4= other	
M	Cassava fields: During last year did you use/apply...?	F1.0	yes=1, no=0	
d165	Crop rotation (c213) —			
d166	Intercropping —			
d167	Intercropping with nitrogen fixing crops (beans etc.) (c214) —			
d168	Fallowing (c215) —			
d169	Improved fallowing —			
d170	Animal manure (c216) —			
d171	Zero or minimum tillage (cf. c217) —			
d172	Breaking the hard pan (cf. c217) —			
d173	Green manure/compost/residue incorporation (c218) —			
d174	Soil and water conservation (level bunds, grass strips, terracing etc.) (c219) —			
d175	Improved planting practices —			
d176	Integrated (Soil) Nutrient Management (INM) —			
d177	Integrated Pest Management (IPM) —			
d178	Agroforestry —			
d179	Pesticides/herbicides —			

	<u>Only for newly sampled households to answer:</u> Cassava, technology & inputs – when the household was formed			
d180	When your household was formed, did you grow cassava? (c220) —	F1.0	<i>yes=1, no=0</i>	<i>If 'no', skip to d192</i>
d181	Do you use more or less chemical fertilizer on cassava today as compared to when this household was formed? (c222) —	F1.0	<i>0 = No fertiliser applied at that time 1 = Amount decreased since then 2 = Amount unchanged 3 = Amount increased since then</i>	
d182	Were pesticides applied on cassava at that time? (c223) —	F1.0	<i>yes=1, no=0</i>	
d183	At the time when your household was formed, what was your main method of land preparation for cassava? (c224) —	F1.0	<i>1= hoe cultivation 2= oxen ploughing 3= tractor ploughing 4= other</i>	

	Cassava fields: Did you at that time use/apply...?	F1.0	<i>yes=1, no=0</i>	
d184	Crop rotation (c225) —			
d185	Intercropping with nitrogen fixing crops (beans etc.) (c226) —			
d186	Fallowing (c227) —			
d187	Animal manure (c228) —			
d188	Conservation tillage (cf. c229) —			
d189	Breaking the hard pan (cf. c229) —			
d190	Green manure/compost/residue incorporation (c230) —			
d191	Soil and water conservation (level bunds, grass strips, terracing etc.) (c231) —			
	Cassava marketing conditions			
	Cassava marketing conditions, the most recent year			
d192	Did you sell any cassava in the course of the past year counting from today? (c235) —	F1.0	<i>yes=1, no=0</i>	<i>If 'no', skip to d200</i>
d193 M	Was cassava mainly sold as tubers or in processed form (e.g. flour, gari, chips etc.)? (c236) —	F1.0	<i>1= Mainly sold as tubers 2= Mainly sold in processed form</i>	

M d194	What was the total amount of cassava (tubers equivalents) sold during this period? <p style="text-align: center;">___ bags _____ kg (c237)</p>	F6.0	<i>Express in local units (bags etc.), then recalculate into kg after the interview/ survey.</i>	<i>Recalculate processed cassava into raw equivalents.</i>
M d195	What was (is) the lowest price you received during this period for tubers? <p style="text-align: center;">___ local currency/100 kg ___, ___ USD/100 kg (c238)</p>	F5.2	<i>indicate in local currency per 100 kg but recalculate into fixed USD after interview</i>	
M d196	What was (is) the highest price you received during this period for tubers? <p style="text-align: center;">___ local currency/100 kg ___, ___ USD/100 kg (c239)</p>	F5.2	<i>indicate in local currency per 100 kg but recalculate into fixed USD after survey</i>	
M d197	Did the traders pay a lower price for some of your produce due to post-harvest quality deterioration? <p style="text-align: center;">—</p>	F1.0	<i>0= no 1= yes, for some of my produce 2= yes, for most of my produce</i>	
d198	What is your main market outlet for cassava? (c241) <p style="text-align: center;">—</p>	F1.0	<i>1= At farm gate, 2= In the village market, 3= In market outside the village, 4= Through outgrower scheme, 5= State marketing board, 6= NGO or donor project, 7= Farmers' groups or organization, 8= Other</i>	
d199	Do you grow cassava on the basis of a pre-arranged contract with a private trader? (c242) <p style="text-align: center;">—</p>	F1.0	<i>yes=1, no=0</i>	
	Cassava marketing, the year before last			

d200	Did you sell any cassava during the year before the last year? —	F1.0	yes=1, no=0	If 'no', skip to d202
d201	What was the total amount of unprocessed cassava (tubers equivalents) sold during this period? — — — bags — — — — — kg (c244)	F6.0	Express in local units (bags etc.), then recalculate into kg after the interview/ survey	
	Cassava marketing, two years ago			
d202	Did you sell any cassava two years ago? —	F1.0	yes=1, no=0	If 'no', skip to d204
d203	What was the total amount of unprocessed cassava (tubers equivalents) sold during this period? — — — bags — — — — — kg (c246)	F6.0	Express in local units (bags etc.), then recalculate into kg after the interview/ survey	
	<u>Only for newly sampled households to answer:</u> Cassava marketing conditions, when the household was formed			
d204	Did you sell cassava at the time when the household was formed? (c247) —	F1.0	yes=1, no=0	If 'no', skip to d208
d205	Since you formed your farm/household, how has the amount of cassava you sell changed? (c248) —	F1.0	1= less cassava sold now 2= no significant change 3= more cassava sold now	

d206	Is the price you receive for unprocessed cassava (tubers) better or worse today as compared to when the household was formed? (c249)	F1.0	1= worse price today (price has decreased) 2= no significant price change 3= better price today (price has increased)	
d207	In your view, how has access to market outlets for cassava changed since you formed your household? (c250)	F1.0	1= market access is worse now 2= market access unchanged 3= market access is better now	
	Cassava marketing conditions - in relation to 2002			
d208	Did you sell any cassava in 2002?	F1.0	yes=1, no=0	if 'no', skip to d212
d209	Since 2002, how has the amount of cassava you sell changed?	F1.0	1= less cassava sold now 2= no significant change 3= more cassava sold now	
d210	Is the price you receive for unprocessed cassava (tubers) better or worse today as compared to in 2002?	F1.0	1= worse price today (price has decreased) 2= no significant price change 3= better price today (price has increased)	
d211	In your view, how has access to market outlets for cassava changed since 2002?	F1.0	1= market access is worse now 2= market access unchanged 3= market access is better now	
	Sorghum			

	<p><u>Control variable: x003</u></p> <p><i>For interviewer: Did this household grow sorghum last season or not, and is this a reinterviewed household or not?</i></p> <p>—</p>	F1.0	<p>1 = 'Grew sorghum, old household', 2 = 'Grew sorghum, new household', 3 = 'Did not grow sorghum, old household', 4 = 'Did not grow sorghum, new household'</p>	<p><i>If x003 eq 1, go to d212 (sorghum). Answer d212-d219, d221-d224, d226-d256, d271-d281, d286- d289.</i></p> <p><i>If x003 eq 2, go to d212 (sorghum). Answer all questions.</i></p> <p><i>If x003 eq 3, go to x004/d290 (rice). If x003 eq 4, answer 257-d270, d282, d286, then go to x004/d290 (rice)</i></p>
	<p>Sorghum, area</p>			
d212 M	<p>During the most recent season, did you grow sorghum in pure stand only or do you have sorghum fields mixed with other crops? (c256)</p> <p>—</p>	F1.0	<p>1= pure stand only 2= intercropped</p>	
d213	<p>During the most recent season, was the land under sorghum irrigated? (c258)</p> <p>—</p>	F1.0	<p>yes=1, no=0</p>	<p><i>If 'no', skip to d215</i></p>
d214	<p>If irrigated, did you take more than one crop of sorghum per year? (c259)</p> <p>—</p>	F1.0	<p>yes=1, no=0</p>	
d215	<p>If only one sorghum crop was taken, what was the land used for after the sorghum? (c260)</p> <p>—</p>	F1.0	<p>0= no specific use 1= for other crops 2= for grazing 3= other uses</p>	
d216	<p>If the land was used for other crops after harvest, which crops? (c261)</p> <p>—</p>	F1.0	<p>1= other food crops 2= vegetables 3= other</p>	

	<i>If sorghum is mixed with other crops (d212), ask respondent to estimate the size of the land under which sorghum would occur as pure stand:</i>			
M d217	<p>What was the area under sorghum (pure stand equivalent) leading up to your most recent harvest?</p> <p>____, __ local unit</p> <p>local unit = _____</p> <p>Recalculation:</p> <p>____, __ ha (c262)</p>	F5.2	<i>Express in local unit and then recalculate into hectares after the survey</i>	
M d218	<p>What was the area under sorghum (pure stand equivalent) during the season before the most recent one?</p> <p>____, __ local unit</p> <p>Recalculation:</p> <p>____, __ ha (c263)</p>	F5.2	<i>Express in local unit and then recalculate into hectares after the survey</i>	
M d219	<p>What was the area under sorghum (pure stand equivalent) two seasons before the most recent one?</p> <p>____, __ local unit</p> <p>Recalculation:</p> <p>____, __ ha (c264)</p>	F5.2	<i>Express in local unit and then recalculate into hectares after the survey</i>	
d220	<p>Only for newly sampled households to answer:</p> <p>What was the size of the land under sorghum in the most recent season, compared to when the household was formed (reference year d018)? (c265)</p> <p>—</p>	F1.0	<p>0= did not grow sorghum at that time</p> <p>1= area decreased since then</p> <p>2= area unchanged</p> <p>3= area increased since then</p>	

d221	What was the average size of the land under sorghum in the most recent season as compared to 2002? —	F1.0	0= did not grow sorghum in 2002 1= area decreased since then 2= area unchanged 3= area increased since then	
	Sorghum, production (grain)			
M d222	What was the total production of sorghum (grain) after your most recent harvest? ___ bags (or other local unit) _____ kg (c266)	F6.0	Express in bags or other local unit, then recalculate into kg after the survey.	If double cropping due to irrigation, include total production over the last year
M d223	What was the total production of sorghum during the harvest before the most recent one? ___ bags (or other local unit) _____ kg (c267)	F6.0	Express in bags or other local unit, then recalculate into kg after the survey.	
M d224	What was the total production of sorghum two seasons ago? ___ bags (or other local unit) _____ kg (c268)	F6.0	Express in bags or other local unit, then recalculate into kg after the survey.	
M d225	Only for newly sampled households to answer: At the time when your household was formed, did you get more or less sorghum from a given size of land (e.g. one acre) compared to now, i.e. have the yields increased or decreased? (c269) —	F1.0	0= did not grow sorghum at that time 1= yields have decreased 2= yields unchanged 3= yields have increased	

d239	What was the amount of chemical fertilizer used on sorghum in the most recent season as compared to 2002? —	F1.0	0 = No fertiliser applied in 2002 1 = Amount decreased since then 2 = Amount unchanged 3 = Amount increased since then	
d240	During the most recent season, were pesticides applied on growing sorghum crop? (c277) —	F1.0	yes=1, no=0	
d241	During the most recent season, what was your main method of land preparation for sorghum? (c278) —	F1.0	1= hoe cultivation 2= oxen ploughing 3= tractor ploughing 4= other	

M	Sorghum fields: During the most recent season, did you use/apply...?	F1.0	<i>yes=1, no=0</i>	
d242	Crop rotation (c279) —			
d243	Intercropping —			
d244	Intercropping with nitrogen fixing crops (beans etc.) (c280) —			
d245	Fallowing (c281) —			
d246	Improved fallowing —			
d247	Animal manure (c282) —			
d248	Zero or minimum tillage (cf. c283) —			
d249	Breaking the hard pan (cf. c283) —			
d250	Green manure/compost/residue incorporation (c284)___			
d251	Soil and water conservation (level bunds, grass strips, terracing etc.) (c285) —			
d252	Improved planting practices —			
d253	Integrated (Soil) Nutrient Management (INM) __			
d254	Integrated Pest Management (IPM) —			
d255	Agroforestry —			
d256	Pesticides/herbicides —			
	<u>Only for newly sampled households to answer:</u> Sorghum, technology & inputs – when the household was formed			

d257	When your household was formed, did you grow sorghum? (c286) —	F1.0	<i>yes=1, no=0</i>	<i>If 'no', skip to d271</i>
d258	At the time when this household was formed, what proportion of the land planted with sorghum was irrigated? (c287) —	F1.0	<i>0= none 1= 1/4 2= 1/2 3= 3/4 4= all or nearly all</i>	
d259	At the time when this household was formed, what was the main variety of sorghum planted? (c288) —	F1.0	<i>1= traditional 2= improved variety 3= hybrid</i>	
d260	Do you use more or less chemical fertilizer on sorghum today as compared to when this household was formed? (c289) —	F1.0	<i>0 = No fertiliser applied at that time 1 = Amount decreased since then 2 = Amount unchanged 3 = Amount increased since then</i>	
d261	Were pesticides applied on growing sorghum crop at that time? (c290) —	F1.0	<i>yes=1, no=0</i>	
d262	At the time when your household was formed, what was your main method of land preparation for sorghum? (c291) —	F1.0	<i>1= hoe cultivation 2= oxen ploughing 3= tractor ploughing 4= other</i>	

	Sorghum fields: Did you at that time use/apply...?	F1.0	<i>yes=1, no=0</i>	
d263	Crop rotation (c292) —			
d264	Intercropping with nitrogen fixing crops (beans etc.) (c293) —			
d265	Fallowing (c294) —			
d266	Animal manure (c295) —			
d267	Conservation tillage (cf. c296) —			
d268	Breaking the hard pan (cf. c296) —			
d269	Green manure/compost/residue incorporation (c297) —			
d270	Soil and water conservation (level bunds, grass strips, terracing etc.) (c298) —			
	Sorghum marketing conditions			
	Sorghum marketing conditions, most recent harvest			
d271	Did you sell or do you intend to sell any sorghum following your most recent harvest? (c302) —	F1.0	<i>yes=1, no=0</i>	<i>If 'no', skip to d278</i>
M	What was the total amount of sorghum sold (or is planned to be sold) after the most recent harvest?	F6.0	<i>Express in local units (bags etc.), then recalculate into kg after the survey</i>	<i>The sales should not exceed reported production (d222).</i>
d272	<p style="text-align: center;">— — — bags</p> <p style="text-align: center;">— — — — — kg (c303)</p>			<i>The amount should equal d229.</i>

M d273	What was (is) the lowest price for sorghum you received following the most recent harvest? ____local currency/100 kg ____, __ USD/100 kg (c304)	F5.2	indicate in local currency per 100 kg but recalculate into fixed USD after survey	
M d274	What was (is) the highest price you received following the most recent harvest? ____local currency/100 kg ____, __ USD/100 kg (c305)	F5.2	indicate in local currency per 100 kg but recalculate into fixed USD after survey	
M d275	Did the traders pay a lower price for some of your produce due to post-harvest quality deterioration? —	F1.0	0= no 1=yes, for some of my produce 2= yes, for most of my produce	
d276	What is your main market outlet/crop depot for sorghum? (c307) —	F1.0	1= At farm gate, 2= In the village market, 3= In market outside the village, 4= Through outgrower scheme, 5= State marketing board, 6= NGO or donor project, 7= Farmers' groups or organization, 8= Other	
d277	Do you grow sorghum on the basis of a pre-arranged contract with a private trader? (c308) —	F1.0	yes=1, no=0	
	Sorghum marketing, the harvest before the most recent one			
d278	Did you sell any sorghum after the harvest before the most recent one? (c309) —	F1.0	yes=1, no=0	If 'no', skip to d280

d284	Is the price you receive for sorghum better or worse today as compared to when the household was formed? (c315) —	F1.0	1= worse price today (price has decreased) 2= no significant price change 3= better price today (price has increased)	
d285	In your view, how has access to market outlets for sorghum changed since you formed your household? (c316) —	F1.0	1= market access is worse now 2= market access unchanged 3= market access is better now	
	Sorghum marketing conditions – in relation to 2002			
d286	Did you sell any sorghum after the harvest in 2002? —	F1.0	yes=1, no=0	If 'no', skip to d290
d287	Since 2002, how has the amount of sorghum you sell changed? —	F1.0	1= less sorghum sold now 2= no significant change 3= more sorghum sold now	
d288	Is the price you receive for sorghum better or worse today as compared to in 2002? —	F1.0	1= worse price today (price has decreased) 2= no significant price change 3= better price today (price has increased)	
d289	In your view, how has access to market outlets for sorghum changed since 2002? —	F1.0	1= market access is worse now 2= market access unchanged 3= market access is better now	
	Rice			

	<p><u>Control variable: x004</u></p> <p><i>For interviewer: Did this household grow rice last season or not, and is this a reinterviewed household or not?</i></p> <p>—</p>	F1.0	<p><i>1 = 'Grew rice old household', 2 = 'Grew rice, new household', 3 = 'Did not grow rice, old household', 4 = 'Did not grow rice, new household'</i></p>	<p><i>If x004 eq 1, go to d290 (rice). Answer d290-d296, d298-d301, d303-d336, d353-d363, d368-d371. If x004 eq 2, go to d290 (rice). Answer all questions. If x004 eq 3, go to d372 (rural – urban...). If x004 eq 4, answer 337-d352, d364, d368, then go to d372 (rural – urban...)</i></p>
	<p>Rice, area</p>			
d290	<p>During the most recent season, was any of the land planted with rice irrigated? (c323)</p> <p>—</p>	F1.0	<p><i>yes=1, no=0</i></p>	<p><i>If 'no', skip to d292</i></p>
d291	<p>If irrigated, did you take more than one rice crop per year? (c324)</p> <p>—</p>	F1.0	<p><i>yes=1, no=0</i></p>	
d292	<p>In addition to rice, what was the land used for? (c325)</p> <p>—</p>	F1.0	<p><i>0= no specific use 1= for other crops 2= for grazing 3= other uses</i></p>	
d293	<p>If the irrigated land was used for other crops after harvest, which crops?(c326)</p> <p>—</p>	F1.0	<p><i>1= other food crops 2= vegetables 3= other</i></p>	

M d294	<p>What was the area under rice leading up to your most recent harvest?</p> <p>_____, __ local unit</p> <p>local unit = _____</p> <p>Recalculation:</p> <p>_____, __ ha (c327)</p>	F5.2	Express in local unit and then recalculate into hectares after the survey	
M d295	<p>What was the area under rice during the season before the most recent one?</p> <p>_____, __ local unit</p> <p>Recalculation:</p> <p>_____, __ ha (c328)</p>	F5.2	Express in local unit and then recalculate into hectares after the survey	
M d296	<p>What was the area under rice two seasons before the most recent one?</p> <p>_____, __ local unit</p> <p>Recalculation:</p> <p>_____, __ ha (c329)</p>	F5.2	Express in local unit and then recalculate into hectares after the survey	
d297	<p>Only for newly sampled households to answer:</p> <p>What was the size of the land under rice in the most recent season, compared to when the household was formed (reference year d018)? (c330)</p> <p>—</p>	F1.0	<p>0= did not grow rice at that time</p> <p>1= area decreased since then</p> <p>2= area unchanged</p> <p>3= area increased since then</p>	
d298	<p>What was the average size of the land under rice in the most recent season as compared to 2002?</p> <p>—</p>	F1.0	<p>0= did not grow rice in 2002</p> <p>1= area decreased since then</p> <p>2= area unchanged</p> <p>3= area increased since then</p>	

	Rice (paddy), production			
M d299	<p>What was the total production of paddy (grain) after your most recent harvest/last year?</p> <p> ___ bags (or other local unit)</p> <p> _____ kg (c331)</p>	F6.0	Express in bags or other local unit, then recalculate into kg after the interview/survey.	If double cropping due to irrigation include total production over the last year.
M d300	<p>What was the total production of paddy during the harvest before the most recent one?</p> <p> ___ bags (or other local unit)</p> <p> _____ kg (c332)</p>	F6.0	Express in bags or other local unit, then recalculate into kg after the survey.	
M d301	<p>What was the total production of paddy two seasons ago?</p> <p> ___ bags (or other local unit)</p> <p> _____ kg (c333)</p>	F6.0	Express in bags or other local unit, then recalculate into kg after the survey.	
d302 M	<p>Only for newly sampled households to answer:</p> <p>At the time when your household was formed, did you get more or less paddy from a given size of land (e.g. one acre) compared to now, i.e. have the yields increased or decreased? (c338)</p> <p> —</p>	F1.0	<p>0= did not grow rice at that time</p> <p>1= yields have decreased</p> <p>2= yields unchanged</p> <p>3= yields have increased</p>	
d303 M	<p>In 2002, did you get more or less paddy from a given size of land (e.g. one acre) compared to now, i.e. have the yields increased or decreased?</p> <p> —</p>	F1.0	<p>0= did not grow rice in 2002</p> <p>1= yields have decreased</p> <p>2= yields unchanged</p> <p>3= yields have increased</p>	

M	How much of the total output of paddy (d299) following the most recent season was used for:	F6.0	<i>Express in local units (bags etc.), calculate into kg after the survey</i>	
d304	1.Home consumption (c334) _____ bags _____ kg			
d305	2.Payment for hired labour (c335) _____ bags _____ kg			
d306	3.Sale (c336) _____ bags _____ kg			
d307	4.Other uses (seed, animal feed, brewing, gifts, storage losses etc.) (c337) _____ bags _____ kg			
d308	Total (c.f. d299) _____ bags _____ kg			
d309 M	How much of the work involved in the production of rice does the farm manager alone carry out? _____ %	F3.0		<i>If 100%, then skip to d312</i>
M	Who else is involved in the production of rice? Rank the two most important persons:	F1.0	<i>0 = Nobody else 1= Spouse of farm manager 2= Other male member of the household 3= Other female member of the household</i>	
d310	Person no. 1 involved: _____			
d311	Person no. 2 involved: _____			

	Rice, technology & inputs			
	Rice, technology & inputs – most recent season			
d312	During the most recent season, what types of rice were grown? Indicate the proportions (in per cent): 1.Upland rice (rainfed) (c339) ___ %	F3.0		
d313	2.Lowland rainfed rice (c340) ___ %			
d314	3.Lowland irrigated rice (c341) ___ %			
	Total 100 %			
d315	During the most recent season, what was the <i>main</i> variety of rice planted? (c342) —	F1.0	1= <i>traditional</i> 2= <i>improved</i>	
d316	Did you plant any NERICA or NERICA descendants? M —	F1.0	<i>yes = 1, no = 0</i>	
d317	How did you acquire (get hold of) the rice seed you used in the most recent season? —	F1.0	1 = <i>own stock</i> 2 = <i>other farmers or neighbours</i> 3 = <i>purchased in the market</i> 4 = <i>received or purchased from extension agents, NGOs or other formal organizations</i>	
M	During the most recent season, how much money did you spend on chemical fertiliser for rice? ___ <i>local currency</i>	F4.0	<i>Indicate in local currency but recalculate into USD after the survey</i>	
d318	____ <i>USD</i>			

d319	What was the amount of chemical fertilizer used on rice in the most recent season as compared to 2002? —	F1.0	0 = No fertiliser applied in 2002 1 = Amount decreased since then 2 = Amount unchanged 3 = Amount increased since then	
d320	During the most recent season, were pesticides applied on growing rice crop? (c344) —	F1.0	yes=1, no=0	
d321	During the most recent season, what was your main method of land preparation? (c345) —	F1.0	1= hoe cultivation 2= oxen ploughing 3= tractor ploughing 4= other	

M	Rice fields: During the most recent season, did you use/apply...?	F1.0	<i>yes=1, no=0</i>	
d322	Crop rotation (c346) —			
d323	Intercropping —			
d324	Intercropping with nitrogen fixing crops (beans etc.) (c347) —			
d325	Fallowing (c348) —			
d326	Improved fallowing —			
d327	Animal manure (c349) —			
d328	Zero or minimum tillage (cf. c350) —			
d329	Breaking the hard pan (cf. c350) —			
d330	Green manure/compost/residue incorporation (c351) —			
d331	Soil and water conservation (level bunds, grass strips, terracing etc.) (c352) —			
d332	Improved planting practices —			
d333	Integrated (Soil) Nutrient Management (INM) —			
d334	Integrated Pest Management (IPM) —			
d335	Agroforestry —			
d336	Pesticides/herbicides —			
	<u>Only for newly sampled households to answer:</u> Rice, technology & inputs – when the household was formed			

d337	When your household was formed, did you grow rice? (c353) —	F1.0	<i>yes=1, no=0</i>	<i>If 'no', skip to d353</i>
d338	When your household was formed, what types of rice were grown? Indicate the proportions (in per cent): 1.Upland rice (rainfed) (c354) ___%	F3.0		
d339	2.Lowland rainfed rice (c355) ___%			
d340	3.Lowland irrigated rice (c356) ___%			
	Total 100 %			
d341	At that time, what was the <i>main</i> variety of rice planted? (c357) —	F1.0	<i>1=traditional 2=improved</i>	
d342	Do you use more or less chemical fertilizer on rice today as compared to when this household was formed? (c358) —	F1.0	<i>0 = No fertiliser applied at that time 1 = Amount decreased since then 2 = Amount unchanged 3 = Amount increased since then</i>	
d343	Were pesticides applied on growing rice crop at that time? (c359) —	F1.0	<i>yes=1, no=0</i>	
d344	At the time when your household was formed, what was your main method of land preparation? (c360) —	F1.0	<i>1= hoe cultivation 2= oxen ploughing 3= tractor ploughing 4= other</i>	

	Rice fields: Did you at that time use/apply...?	F1.0	<i>yes=1, no=0</i>	
d345	Crop rotation (c361) —			
d346	Intercropping with nitrogen fixing crops (beans etc.) (c362) —			
d347	Fallowing (c363) —			
d348	Animal manure (c364) —			
d349	Conservation tillage (cf. c365) —			
d350	Breaking the hard pan (cf. c365) —			
d351	Green manure/compost/residue incorporation (c366) —			
d352	Soil and water conservation (level bunds, grass strips, terracing etc.) (c367) —			
	Rice marketing conditions			
	Rice marketing conditions, most recent harvest			
d353	Did you sell or do you intend to sell any paddy following your most recent harvest? (c371) —	F1.0	<i>yes=1, no=0</i>	<i>If 'no', skip to d360</i>
M	What was the total amount of paddy sold (or is planned to be sold) after the most recent harvest? — — — bags	F6.0	<i>Express in local units (bags etc.), then recalculate into kg after the survey</i>	<i>The sales should not exceed reported production (d299).</i>
d354	— — — — — kg (c372)			<i>The amount should equal d306.</i>

M d355	What was (is) the lowest price for paddy you received following the most recent harvest? <p style="text-align: center;">____local currency/100 kg ____, __ USD/100 kg (c373)</p>	F5.2	<i>indicate in local currency per 100 kg but recalculate into fixed USD after survey</i>	
M d356	What was (is) the highest price you received following the most recent harvest? <p style="text-align: center;">____local currency/100 kg ____, __ USD/100 kg (c374)</p>	F5.2	<i>indicate in local currency per 100 kg but recalculate into fixed USD after survey</i>	
d357 M	Did the traders pay a lower price for some of your produce due to post-harvest quality deterioration? <p style="text-align: center;">—</p>	F1.0	<i>0= no 1= yes, for some of my produce 2= yes, for most of my produce</i>	
d358	What is your main market outlet/crop depot for rice? (c376) <p style="text-align: center;">—</p>	F1.0	<i>1= At farm gate, 2= In the village market, 3= In market outside the village, 4= Through outgrower scheme, 5= State marketing board, 6= NGO or donor project, 7= Farmers' groups or organization, 8= Other</i>	
d359	Do you grow rice on the basis of a pre-arranged contract with a private trader? (c377) <p style="text-align: center;">—</p>	F1.0	<i>yes=1, no=0</i>	
	Rice marketing, the harvest before the most recent one			
d360	Did you sell any paddy after the harvest before the most recent one? (c378) <p style="text-align: center;">—</p>	F1.0	<i>yes=1, no=0</i>	<i>If 'no', skip to d362</i>

d366	Is the price you receive for paddy better or worse today as compared to when the household was formed? (c384) —	F1.0	1= worse price today (price has decreased) 2= no significant price change 3= better price today (price has increased)	
d367	In your view, how has access to market outlets for paddy changed since you formed your household? (c385) —	F1.0	1= market access is worse now 2= market access unchanged 3= market access is better now	
	Rice marketing conditions – in relation to 2002			
d368	Did you sell any rice after the harvest in 2002? —	F1.0	yes=1, no=0	If 'no', skip to d372
d369	Since 2002, how has the amount of paddy you sell changed? —	F1.0	1= less rice sold now 2= no significant change 3= more rice sold now	
d370	Is the price you receive for paddy better or worse today as compared to in 2002? —	F1.0	1= worse price today (price has decreased) 2= no significant price change 3= better price today (price has increased)	
d371	In your view, how has access to market outlets for paddy changed since 2002? —	F1.0	1= market access is worse now 2= market access unchanged 3= market access is better now	
	Rural – Urban and Rural – Rural Linkages (staple crops)			Wheat and teff to be added for Ethiopia, bananas for Uganda etc.
d372	Do you send any staple crop (maize, cassava, sorghum, rice) to relatives residing outside the village? —	F1.0	yes=1, no=0	If 'no', skip to d378

d397	Do you send any other crops than staples or do your relatives collect any other crops than staples when they visit you? —	F1.0	yes=1, no=0	
	<i>Other food crops and vegetables (for local markets)</i>			
	<u>Control variable: x005</u> <i>For interviewer: Did this household grow any other food crops and/or vegetables (for local markets) last season or not, and is this a reinterviewed household or not?</i> —	F1.0	1 = 'Grew other food crops/vegs, old household', 2 = 'Grew other food crops/vegs, new household', 3 = 'Did not grow other food crops/vegs, old household', 4 = 'Did not grow other food crops/vegs, new household'	If x005 eq 1 or 2, go to d398 (other food crops/vegs). If x005 eq 3 or 4, go to x006/d438 (cash crops).

d398	What other food crops and/or vegetables do you grow or did grow in the most recent season?	F1.0	<i>yes=1, no=0</i>	<i>If none of these crops are grown, skip to d438</i>
d399	1. Bananas (c391) —			
d400	2. Beans (c392) —			
d401	3. Peas (c393) —			
d402	4. Irish potatoes (c394) —			
d403	5. Sweet potatoes (c395) —			
d404	6. Millet (c396) —			
d405	7. Groundnuts (c397) —			
d406	8. Yams —			
d407	9. Cocoyams —			
d408	10. Vegetables for local markets (c398) —			
d409	11. Fruits for local markets__			
d410	12. Other (c399) —			

d425 M	During the most recent season, did you use chemical fertiliser on any of these crops? (c411) —	F1.0	yes=1, no=0	
d426	Was animal manure used? (c412) —	F1.0	yes=1, no=0	
d427	Was green manure used? (c413) —	F1.0	yes=1, no=0	
d428	Were pesticides applied? (c414) —	F1.0	yes=1, no=0	
d429	Which one of the crops you sell is most profitable? (c415) — —	F2.0	Use codes given in d398 Bananas=1, beans=2 etc. No crops are sold=0	If '0', then skip to d434
d430	Do you sell more or less of this crop today as compared to when you formed your farm/household? (c416) —	F1.0	0= crop not grown at that time 1= less is sold now 2= no change 3= more is sold now	
d431	In your view, how has the overall market access for this crop changed since you formed your household? (c417) —	F1.0	0= crop not grown at that time 1= market access is worse now 2= market access unchanged 3= market access is better now	
d432	Do you sell more or less of this crop today as compared to in 2002? —	F1.0	0= crop not grown in 2002 1= less is sold now 2= no change 3= more is sold now	
d433	In your view, how has the overall market access for this crop changed since 2002? —	F1.0	0= crop not grown in 2002 1= market access is worse now 2= market access unchanged 3= market access is better now	

d434 M	How much of the work involved in the production of this crop does the farm manager alone carry out? — — — %	F3.0		<i>If 100%, then skip to d437</i>
M d435 d436	Who else is involved in the production of this crop? Rank the two most important persons: Person no. 1 involved: — Person no. 2 involved: —	F1.0	0 = <i>Nobody else</i> 1 = <i>Spouse of farm manager</i> 2 = <i>Other male member of the household</i> 3 = <i>Other female member of the household</i>	
d437	Do you grow any of the crops mentioned (d398) on the basis of a pre-arranged contract with a private trader? (c418) —	F1.0	<i>yes=1, no=0</i>	
	<i>Non-food cash crops (wholly or partly for export)</i>			
	<u>Control variable: x006</u> <i>For interviewer: Did this household grow any non-food cash crops (wholly or partly for export) last season or not, and is this a reinterviewed household or not?</i> —	F1.0	1 = <i>'Grew cash crops, old household'</i> , 2 = <i>'Grew cash crops, new household'</i> , 3 = <i>'Did not grow cash crops, old household'</i> , 4 = <i>'Did not grow cash crops, new household'</i>	<i>If x006 eq 1, go to d438 (cash crops). Answer d438-d465, d467-d468.</i> <i>If x006 eq 2, go to d438 (cash crops). Answer all questions.</i> <i>If x006 eq 3 or 4, go to d469 (agricultural techniques).</i>

	Which non-food cash crops do you currently grow or did you grow during the most recent season?	F1.0	<i>yes=1, no=0</i>	<i>If none of these crops are grown, skip to d469</i>
d438	1.Cotton (c420) _____			
d439	2.Sugar cane (c421) _____			
d440	3.Cashew nuts (c422) _____			
d441	4.Cocoa (c423) _____			
d442	5. Tobacco (c424) _____			
d443	6.Coffee (c425) _____			
d444	7.Tea (c426) _____			
d445	8.Sisal (c427) _____			
d446	9. Pyrethrum (c428) _____			
d447	10. Fruits and vegetables, mainly for export _____			
d448	11. Flowers _____			
d449	12. Spices, like ginger and vanilla _____			
d450	13. Other (c429) _____			
M	What is the total size of your farm devoted to the cash crops mentioned? _____ <i>local unit</i> <i>local unit</i> = _____	F5.2	<i>Express in local unit and then recalculate into hectares after the interview/survey</i>	
d451	Recalculation: _____, ____ ha (c430)			

d452	How much of this land was irrigated? _____ <i>local unit</i> Recalculation: _____, __ ha (c431)	F5.2	<i>Express in local unit and then recalculate into hectares after the interview/survey</i>	
d453 M	During the most recent season, did you use chemical fertiliser on any of these crops? (c432) —	F1.0	<i>yes=1, no=0</i>	
d454	Was animal manure used? (c433) —	F1.0	<i>yes=1, no=0</i>	
d455	Was green manure used? (c434) —	F1.0	<i>yes=1, no=0</i>	
d456	Were pesticides applied? (c435) —	F1.0	<i>yes=1, no=0</i>	
d457	Which one of the crops you sell is most profitable? (c436) — —	F2.0	<i>Use codes given in d438-d450: Cotton=1, sugar cane=2 etc. No crops are sold=0</i>	<i>If '0', then skip to d462</i>
d458	Is the price you receive for your most profitable non-food cash crop better or worse today as compared to when the household was formed? (cf. c437) —	F1.0	<i>0= crop not grown at that time 1= worse price today (price has decreased) 2= no significant price change 3= better price today (price has increased)</i>	
d459	In your view, how has the overall market access for your most profitable non-food cash crop changed since you formed your household? —	F1.0	<i>0= crop not grown at that time 1= market access is worse now 2= market access unchanged 3= market access is better now</i>	

d460	Is the price you receive for your most profitable non-food cash crop better or worse today as compared to in 2002? —	F1.0	0= crop not grown in 2002 1= worse price today (price has decreased) 2= no significant price change 3= better price today (price has increased)	
d461	In your view, how has the overall market access for your most profitable non-food cash crop changed since 2002? —	F1.0	0= crop not grown in 2002 1= market access is worse now 2= market access unchanged 3= market access is better now	
d462 M	How much of the work involved in the production of this cash crop does the farm manager alone carry out? — — — %	F3.0		If 100%, then skip to d465 If no cash crop is sold: consider the cash crop which you mainly produce
M d463 d464	Who else is involved in the production of this cash crop? Rank the two most important persons: Person no. 1 involved: — Person no. 2 involved: —	F1.0	0 = Nobody else 1= Spouse of farm manager 2= Other male member of the household 3= Other female member of the household	
d465	In case either only men <i>or</i> only women are responsible for the production of this cash crop, is the other sex (men or women) responsible for the production of any other cash crops? —	F1.0	yes=1, no=0	
d466	Only for newly sampled households to answer: Since you formed your farm/household, has there been any change in the overall amount of land devoted to non-food cash crops? (c440) —	F1.0	1= less land under cash crops now 2= no change 3= more land under cash crops now	

d467	Has there been any change in the overall amount of land devoted to non-food cash crops since 2002? —	F1.0	<i>1= less land under cash crops now 2= no change 3= more land under cash crops now</i>	
d468	Do you grow any of the mentioned cash crops on the basis of a pre-arranged contract with a private trader? (c438) —	F1.0	<i>yes=1, no=0</i>	
	4 Agricultural Techniques			

M	Which of the following agricultural techniques do you have enough knowledge about to be able to practice? <i>(Whether you do practice them or not is not relevant in this question, we will return to that below)</i>	F1.0	<i>I= yes, 0= no</i>	
d469	Crop rotation —			
d470	Intercropping —			
d471	Intercropping with nitrogen fixing crops (beans etc.) —			
d472	Fallowing —			
d473	Improved fallowing —			
d474	Animal manure —			
d475	Zero or minimum tillage —			
d476	Breaking the hard pan —			
d477	Green manure/compost/residue incorporation —			
d478	Chemical fertilizer —			
d479	Soil and water conservation (level bunds, grass strips, terracing etc.) —			
d480	Improved planting practices —			
d481	Integrated (Soil) Nutrient Management (INM) —			
d482	Integrated Pest Management (IPM) —			
d483	Agroforestry —			
d484	Pesticides/herbicides —			
d485	Rain water harvesting —			
d486	Irrigation —			

M	Which of the following agricultural techniques do you practice?	F1.0	<i>I= yes, 0= no</i>
d487	Crop rotation —		
d488	Intercropping —		
d489	Intercropping with nitrogen fixing crops (beans etc.) —		
d490	Fallowing —		
d491	Improved fallowing —		
d492	Animal manure —		
d493	Zero or minimum tillage —		
d494	Breaking the hard pan —		
d495	Green manure/compost/residue incorporation —		
d496	Chemical fertilizer —		
d497	Soil and water conservation (level bunds, grass strips, terracing etc.) —		
d498	Improved planting practices —		
d499	Integrated (Soil) Nutrient Management (INM) —		
d500	Integrated Pest Management (IPM) —		
d501	Agroforestry —		
d502	Pesticides/herbicides —		
d503	Rain water harvesting —		
d504	Irrigation —		

M	Consider the techniques that you have enough knowledge about to be able to practice, but that you are not practicing today: which are the two main reasons for not practicing them?		F1.0	<p><i>0= I am already practicing this technique or I am not familiar with the technique</i></p> <p><i>1= they are too labour consuming</i></p> <p><i>2= they involve other extra costs which I cannot afford, e.g. inputs, animals, tools, logistics</i></p> <p><i>3=I do not find it as a relevant technique for me, e.g. they do not seem to make a difference/ they do not seem to have any effects on yields, etc.</i></p> <p><i>4=they demand community efforts, which do not exist at this point</i></p> <p><i>5= I used to practice the technique but have abandoned it for economic or labour reasons</i></p> <p><i>6= I used to practice the technique but have abandoned it since it didn't have any positive effect on my crops</i></p>
d505	Crop rotation	Major reason 1: __		
d506		Major reason 2: __		
d507	Intercropping	Major reason 1: __		
d508		Major reason 2: __		
	Intercropping with nitrogen fixing crops (beans etc.)			
d509		Major reason 1: __		
d510		Major reason 2: __		
d511	Fallowing	Major reason 1: __		
d512		Major reason 2: __		
d513	Improved fallowing	Major reason 1: __		
d514		Major reason 2: __		
d515	Animal manure	Major reason 1: __		
d516		Major reason 2: __		
d517	Zero or minimum tillage	Major reason 1: __		
d518		Major reason 2: __		
d519	Breaking the hard pan	Major reason 1: __		
d520		Major reason 2: __		
	Green manure/compost/residue incorporation			
d521		Major reason 1: __		
d522		Major reason 2: __		

d523	Chemical fertilizer	Major reason 1: __		
d524		Major reason 2: __		
d525	Soil and water conservation (level bunds, grass strips, terracing etc.)	Major reason 1: __		
d526		Major reason 2: __		
	Improved planting practices			
d527		Major reason 1: __		
d528		Major reason 2: __		
	Integrated (Soil) Nutrient Management (INM)			
d529		Major reason 1: __		
d530		Major reason 2: __		
	Integrated Pest Management (IPM)			
d531		Major reason 1: __		
d532		Major reason 2: __		
d533	Agroforestry	Major reason 1: __		
d534		Major reason 2: __		
d535	Pesticides/herbicides	Major reason 1: __		
d536		Major reason 2: __		
d537	Rain water harvesting	Major reason 1: __		
d538		Major reason 2: __		
d539	Irrigation	Major reason 1: __		
d540		Major reason 2: __		

	Where did you learn of the techniques you do practice at this point/ where did the information (about the techniques) come from? (When you have learnt of a technique from several sources, choose the source which you consider had the greatest effect on your adoption decision).	F1.0	<i>0 = I am not practicing this technique</i> <i>1= I learnt of it from my parents/ a family member</i> <i>2= I learnt of it from a fellow farmer/ a neighbour</i> <i>3 = I learnt of it from an extension agent/ NGO/ other formal organisation</i> <i>4 = I learnt of it from the radio/ newspaper/ TV</i> <i>5= I learnt of it from an NGO</i> <i>6= I learnt of it from the input supplier/ private trader</i> <i>7= I learnt of it through an outgrower scheme</i> <i>8= other</i>	
d541	Crop rotation —			
d542	Intercropping —			
d543	Intercropping with nitrogen fixing crops (beans etc.) —			
d544	Fallowing —			
d545	Improved fallowing —			
d546	Animal manure —			
d547	Zero or minimum tillage —			
d548	Breaking the hard pan —			
d549	Green manure/compost/residue incorporation —			
d550	Chemical fertilizer —			
d551	Soil and water conservation (level bunds, grass strips, terracing etc.) —			
d552	Improved planting practices —			
d553	Integrated (Soil) Nutrient Management (INM) —			
d554	Integrated Pest Management (IPM) —			
d555	Agroforestry —			
d556	Pesticides/herbicides —			
d557	Rain water harvesting —			
d558	Irrigation —			

	When did you learn of the techniques that you practice?	F1.0	<i>0= I am not familiar with this technique</i> <i>1= Within the last year</i> <i>2= Within the last five years (2002-2007)</i> <i>3=More than five years ago</i>
d559	Crop rotation —		
d560	Intercropping —		
d561	Intercropping with nitrogen fixing crops (beans etc.) ___		
d562	Fallowing —		
d563	Improved fallowing —		
d564	Animal manure —		
d565	Zero or minimum tillage —		
d566	Breaking the hard pan —		
d567	Green manure/compost/residue incorporation ___		
d568	Chemical fertilizer —		
d569	Soil and water conservation (level bunds, grass strips, terracing etc.) —		
d570	Improved planting practices —		
d571	Integrated (Soil) Nutrient Management (INM) ___		
d572	Integrated Pest Management (IPM) —		
d573	Agroforestry —		
d574	Pesticides/herbicides —		
d575	Rain water harvesting —		
d576	Irrigation —		

d577	What type of drying facility do you use when you are going to dry your produce? —	F1.0	0= none, I dry it on the ground 1= tarmac road 2= bags, tarpaulins, mats 3= concrete drying floor 4= other	
d578	How do you store your produce? —	F1.0	1= bags inside house 2= in a grainery 3= bags in a proper store 4= other	
d579	In the case that you store the bags inside your house, how do you store them? —	F1.0	1= in bags straight on the floor 2= in bags on pallets on the floor to allow for air circulation and to reduce humidity 3= in bags under the ceiling 4= other	
d580	Do you use any pesticides or any other technique to protect your stored crop, e.g. rat poison or treating the seeds to protect them from mould/insects before bagging them? —	F1.0	1= yes, 0= no	
d581	Estimation of post-harvest losses: If you consider a bag of grain that you store before selling or consuming, when you are going to sell or consume it, how much of the content in the bag has generally been eaten or contaminated by animals or destroyed by mould/insects? — — % lost	F2.0	If there are no post-harvest losses, indicate '0'	Alternatively, ask: if you store e.g. 10 bags, when you are going to sell or consume them, how many can you use if you recalculate them into full bags in the case of storage losses? Then estimate the storage losses and record that per cent.

5 Land resources				
M d582	<p>Summing up the information given, what would you say has been the total cultivated area of this farm during the most recent season/year</p> <p> ___, __ <i>local unit</i></p> <p> <i>local unit</i> = _____</p> <p>Recalculation:</p> <p> ___, __ ha (c441)</p>	F5.2	<i>Express in local unit and then recalculate into hectares after the survey</i>	<i>This area should not fall below the total of the areas reported for each crop, respectively; i.e. d070 (maize) + d144 (cassava) + d217 (sorghum) + d294 (rice) + d423 (other food crops and vegetables) + d451 (non-food cash crops).</i>
M d583	<p>How much extra land would you be able to put under cultivation if you wanted to expand your farm?</p> <p> ___, __ <i>local unit</i></p> <p>Recalculation:</p> <p> ___, __ ha (c442)</p>	F5.2	<i>Express in local unit and then recalculate into hectares after the survey</i>	<i>Take into account land that presently is under fallow.</i>
M d584	<p>How much of the total land belonging to this farm was irrigated?</p> <p> ___, __ <i>local unit</i></p> <p>Recalculation:</p> <p> ___, __ ha (c443)</p>	F5.2	<i>Express in local unit and then recalculate into hectares after the survey</i> <i>If no irrigation, indicate '0'</i>	<i>Refers to any type of land with water sources other than rain, like seasonally flooded land, valley-bottom land, riverside land etc.</i> <i>If '0', then skip to d586</i>
d585	<p>If irrigated, what was the source of irrigation? (c444)</p> <p> —</p>	F1.0	<p>1= privately owned well</p> <p>2= privately owned river diversion</p> <p>3= community owned irrigation system</p> <p>4= government owned scheme</p> <p>5= other</p>	

d586	Only for newly sampled households to answer: Since this household was formed, how has the total size of the land cultivated changed? (c445) —	F1.0	<i>1= less land is cultivated now 2= no change 3= more land is cultivated now</i>	
d587	Only for newly sampled households to answer: Since this household was formed, how has the total size of the land under irrigation changed? (c446) —	F1.0	<i>0= no land was irrigated at that time 1= less land is irrigated now 2= no change 3= more land is irrigated now</i>	
6 Livestock & Fish				
Livestock				
d588	Which types of livestock/animals do you have? Cows (c447) ---	F3.0	<i>Indicate number of livestock. If no livestock of that type, write '0'</i>	
d589	Oxen (c448) ---			
d590	Goats/sheep (c449) ---			
d591	Camels/donkeys (c450) ---			
d592	Pigs (c451) ---			
d593	Poultry (c452) ---			
d594	Do you regularly sell any animal produce, like milk etc.? —	F1.0	<i>yes=1, no=0</i>	
d595	Do you regularly sell animals? —	F1.0	<i>yes=1, no=0</i>	

d596	Do you use your livestock for draught or transport? —	F1.0	yes=1, no=0	
d597	Do you stall-feed any cattle? (c454) —	F1.0	yes=1, no=0	
d598	How do you keep most of your cattle? (c455) —	F1.0	1= stall feeding (zero grazing, tethered) 2= private (own) grazing land 3= communal (open) grazing land	
d599	Do you cultivate fodder crops? (c453) —	F1.0	yes=1, no=0	
d600	Only for newly sampled households to answer: At the time when your household was formed, did you stall-feed any cattle? (c456) —	F1.0	yes=1, no=0	
d601	Only for newly sampled households to answer: At the time when your household was formed, how did you keep most of your cattle? (c457) —	F1.0	1= stall feeding (zero grazing) 2= private (own) grazing land 3= communal (open) grazing land	
d602	If you have cows, how many are graded or cross-breed milk cows? — — —	F3.0		
d603	Only for newly sampled households to answer: At the time your household was formed, were any of your cows, if you had any, graded or cross-breed milk cows? (c459) —	F1.0	yes=1, no=0	

	Fish			
d604	Do you have a fish pond? —	F1.0	yes=1, no=0	
d605	Do you have access to fishing waters/ do you fish? —	F1.0	yes=1, no=0	If 'no', then skip to d607
d606	For which purpose are you mainly fishing? —	F1.0	1= household uses/ own consumption 2= commercial purposes 3= other purpose	
	7 Labour Resources			
M d607	No. of household members who regularly sleep here: 16-60 years? (c460) --	F2.0		Consider only regularly residing household members
d608	No. of males (c461) --			
d609	No. of females (c462) --			
M d610	No. of household members who regularly sleep here: 15 and below? (c464) --	F2.0		Consider only regularly residing household members
M d611	No. of household members who regularly sleep here: 61 and above? (c465) --	F2.0		Consider only regularly residing household members
M d612	How many of the household members are able workers? --	F2.0		

M	How many of the household members are suffering from a long-term illness?	F2.0		
d613	16-60 years	--		
d614	15 and below	--		
d615	61 and above	--		
M	How many household members are working on the farm?	F2.0		
d616	16-60 years	--		
d617	15 and below	--		
d618	61 and above	--		
M	How many household members were working on the farm in 2002?	F2.0		
d619	16-60 years	--		
d620	15 and below	--		
d621	61 and above	--		
M	How many people depend on the produce and income of the farm?	F2.0		
d622	16-60 years	--		
d623	15 and below	--		
d624	61 and above	--		

M	How many people depended on the produce and income of the farm in 2002?	F2.0		
d625	16-60 years --			
d626	15 and below --			
d627	61 and above --			
d628 M	Main occupation of head of household? (c466) —	F1.0	1= <i>farming</i> 2= <i>non-farm</i> 3= <i>do not work (retired)</i>	
d629 M	Main occupation of farm manager? (c467) —	F1.0	1= <i>farming</i> 2= <i>non-farm</i> 3= <i>do not work (retired)</i>	
d630 M	How many adult household members (16-60 years) do regularly take on employment outside the farm? (c468) --	F2.0		
d631 M	How many adult household members (16-60 years) do regularly take on non-farm employment? --	F2.0		
d632 M	How many adult household members (16-60 years) are regularly involved in some kind of micro business? (c469) --	F2.0		
d633 M	How many adult household members (16-60 years) are regularly involved in large-scale business? (c470) --	F2.0		

d634 M	How many adult household members (16-60 years) take on employment outside the farm on a seasonal basis? --	F2.0		
d635 M	How many adult household members (16-60 years) take on non-farm employment on a seasonal basis? --	F2.0		
d636 M	Apart from resident household members, how many adult family members do regularly work on this farm unit? (c471) --	F2.0		
M d637 d638 d639 d640 d641 d642 d643 d644 d645	Which tasks are men and women having the main responsibility for respectively? Land preparation — Planting — Weeding — Fertilising — Watching crops — Harvesting — Transporting crops — Tending livestock — Other —	F1.0	1= mainly men 2= mainly women 3= equal participation	
d646 M	Does your household regularly hire farm labour? (c472) —	F1.0	yes=1, no =0	If 'no', skip to d656

M	If you hire farm labour, for which tasks?	F1.0	yes=1, no =0	
d647	Land preparation (c473) ___			
d648	Planting (c475) ___			
d649	Weeding (c477) ___			
d650	Fertilising (c479) ___			
d651	Watching crops (c474) ___			
d652	Harvesting (c480) ___			
d653	Transporting crops (c478) ___			
d654	Tending livestock (c476) ___			
d655	Other (c481) ___			
d656 M	<i>To investigator: Cf. the village diagnostics (v036) where the local concept for 'exchange labour' is established. It is this concept that should be used here to avoid confusion.</i> Does your family use [exchange labour]? ___	F1.0	yes=1, no =0	If 'no', skip to d666

M	If you use [exchange labour], for which tasks?	F1.0	<i>yes=1, no =0</i>	
d657	Land preparation —			
d658	Planting —			
d659	Weeding —			
d660	Fertilising —			
d661	Watching crops —			
d662	Harvesting —			
d663	Transporting crops —			
d664	Tending livestock —			
d665	Other —			
	8 Institutional Conditions			
d666	Have you received advice from extension staff (governmental) at any time during the last year? (c483) —	F1.0	<i>0=never 1=rarely 2=regularly</i>	
d667	Have you received advice from non-governmental extension services at any time during the last year? —	F1.0	<i>0=never 1=rarely 2=regularly</i>	<i>If d666 eq. '0' and d667 eq. '0', then skip to d669</i>
d668	If you have received advice from any extension service (governmental or non-governmental), did you pay? —	F1.0	<i>yes=1, no=0</i>	

d669	Are you (farm manager) a member of any local farmer group/organisation/club/association dealing with agriculture? (c484)	F1.0	yes=1, no =0	
d670	Do you at present obtain any form of agricultural input credit? (c485)	F1.0	yes=1, no =0	
d671 M	Only for newly sampled households to answer: How did you first obtain land in this village when your household was formed? (c486)	F1.0	1=I was allocated virgin land/pasture 2=I was allocated family land under fallow 3=I inherited land already under cultivation 4=I purchased land 5=I borrowed/rented land	
d672 M	What is the status of most of the land that you now cultivate? (c487)	F1.0	1= individually owned by farm household 2= use rights allocated by communal/clan/ government authority 3= rented/borrowed from other individuals/ families	
d673 M	Do you have full control of all the land you now cultivate or do you need to consult any other person in order to obtain permission for cultivation, change crops/land use, for some or all of your land? (c488)	F1.0	1= full control 2= need permission	
d674 M	Do you hold a formal title or registration of all or parts of your land?	F1.0	yes = 1, no = 0	

M	If you wanted to expand your farm size, which alternatives would be possible in this village?	F1.0	<i>yes = 1, no = 0</i>	
d675	Clearing virgin land? —			
d676	Turning grazing land into cultivation? —			
d677	Bringing fallow land into permanent cultivation? —			
d678	Renting / borrowing land? —			
d679	Buying land? —			
d680 M	If you had the means to expand your farm size, what would be the most appropriate measure in your case? (c489) —	F1.0	<i>1= clearing virgin land 2= turning grazing land into cultivation 3= bringing fallow land into permanent cultivation 4= renting/borrowing land 5= buying land</i>	
d681 M	How will your children mainly obtain land in this village? (c490) —	F1.0	<i>1= They will be allocated land not previously cultivated (virgin land or pasture) 2= They will be allocated family land now under fallow 3= They will inherit land already under cultivation 4= They will rent/borrow land 5= They will purchase land</i>	

	9 Incomes and Expenditures			
	<i>Incomes</i>			
d682 M	Which income source generated most cash for your household in the course of the past year? (cf. c501) — —	F2.0	<i>1= Sale of food staples, 2= Sale of other food crops, 3= Sale of non-food cash crops, 4= Sale of animals/animal produce, 5= Leasing out machinery (e.g. tractors) and/or equipment, oxen, push carts etc., 6= Work on others' farms/agricultural labour, 7= Non-farm salaried employment, 8= Micro business, 9= Large-scale business, 10= Rent, interest, 11= Pensions, 12= Remittances from absent household members, children etc.</i>	
d683 M	Which <i>farm income source</i> generated most cash for this household in the course of the past year (cf. c502) —	F1.0	<i>1= sale of food staples, 2= sale of other food crops, 3= sale of non-food cash crops, 4= sale of animals/animal produce, 5= leasing out machinery (e.g. tractors) and/or equipment, oxen, push carts etc.</i>	

M	How much money (make an estimation) have the different sources of cash income generated in the course of the past year?	F4.0	<i>indicate in local currency but recalculate into fixed USD after survey</i>
	01.Sale of food staples (cf. c491)		<i>0 = this was not one of the household's income sources</i>
	----- <i>local currency</i>		
d684	----- USD		
	02.Sale of other food crops (cf. c492)		
	----- <i>local currency</i>		
d685	----- USD		
	03.Sale of non-food cash crops (cf. c493)		
	----- <i>local currency</i>		
d686	----- USD		
	04.Sale of animals/animal produce (cf. c494)		
	----- <i>local currency</i>		
d687	----- USD		
	05.Leasing out machinery (e.g. tractors) and/or equipment, oxen, push carts etc.		
	----- <i>local currency</i>		
d688	----- USD		
	06.Work on others' farms /agricultural labour		
	----- <i>local currency</i>		
d689	----- USD		

d690	07.Non-farm salaried employment (cf. c495) _____ <i>local currency</i> _____ USD			
d691	08.Micro business (cf. c496) _____ <i>local currency</i> _____ USD			
d692	09.Large-scale business (cf. c497) _____ <i>local currency</i> _____ USD			
d693	10.Rent, interest (cf. c498) _____ <i>local currency</i> _____ USD			
d694	11.Pensions (cf. c499) _____ <i>local currency</i> _____ USD			
d695	12.Remittances from absent household members, children etc. (cf. c500) _____ <i>local currency</i> _____ USD			

M	Consumer durables: which of the following assets do you possess?	F1.0	<i>yes=1, no =0</i>	
d696	Wired electricity/power (c503) ___			
d697	Mobile or stationary telephone (c504) ___			
d698	Diesel power generator or similar (c505) ___			
d699	Water pipe to house (c506) ___			
d700	TV-set (c507) ___			
d701	Radio (c508) ___			
d702	Tape recorder (c509) ___			
d703	Bicycle (c510) ___			
d704	Sewing machine (c511) ___			
d705	Kerosene stove or other modern stove (c512) ___			
d706	Battery torch (c513) ___			
d707	If you do not own a mobile or stationary telephone – do you still have access to either of them? ___	F1.0	<i>yes=1, no =0</i>	
d708 M	Means of transport: which is your most advanced means of own transport? (c514) ___	F1.0	<i>1= foot, 2= bicycle, 3= donkey/horse, 4= motor bike, 5= car, tractor, truck</i>	
d709 M	Housing standard: what kind of house do you have? (c515) ___	F1.0	<i>1= mud house with thatched roof 2= mud house with corrugated iron roof 3= block/brick house with corrugated iron roof or other more advanced housing types</i>	<i>Interviewer may ask or observe housing standard</i>

d710	<i>For interviewer:</i>	F1.0	1= very poor 2= below average wealth 3= average wealth 4= above average 5= very wealthy	Consider land and livestock assets, non-farm incomes, capital assets, consumer durables etc
M	Looking at this household by way of its capital assets and appearance, how would you rank its wealth in comparison with other households in this village? (c516)			
	—			
	Expenditures			
	Looking at the costs for purchased inputs in farm production, how much would you say that you have spent on the following expenditures?		0 = No cash outlay 1 = A low/small cost 2 = A moderate cost 3 = A very significant cost	
d711	Seeds (c517)			
	—			
d712	Chemical fertilizer (c518)			
	—			
d713	Pesticides (c519)			
	—			
d714	Hired labour (c520)			
	—			
d715	Land rented (c521)			
	—			
d716	Machinery/ implements for land preparation (c522)			
	—			
d717	Transport (c523)			
	—			
d718	Land improvement measures (conservation structures, irrigation etc.) (c524)			
	—			

	Which food crops did you purchase during the past year?	F1.0	<i>yes=1, no =0</i>	
d719	Maize (c525) —			
d720	Cassava (c526) —			
d721	Sorghum (c527) —			
d722	Rice (c528) —			
d723	Bananas (c529) —			
d724	Beans (c530) —			
d725	Peas (c531) —			
d726	Irish potatoes (c532) —			
d727	Sweet potatoes (c533) —			
d728	Millet (c534) —			
d729	Groundnuts? (c535) —			
d730	Vegetables (c536) —			
	Which animal produce/food did you purchase during the past year?	F1.0	<i>yes=1, no =0</i>	
d731	Milk (c537) —			
d732	Meat (c538) —			
d733	Fish (c539) —			
d734	Egg —			
d735	In the past year, have you borrowed money to be able to cover your expenditures? (c541) —	F1.0	<i>yes=1, no =0</i>	

d736	Are you normally able to save some money every year for future needs? (c542)	F1.0	yes=1, no =0	
	—			
d737	How many meals per day does your household generally eat during the <i>lean season</i> ?	F1.0	yes=1, no =0	
	Breakfast —			
d738	Lunch —			
d739	Dinner —			
	How many meals per day does your household generally eat during the rest of the year (the lean season excluded)?	F1.0	yes=1, no =0	
d740	Breakfast —			
d741	Lunch —			
d742	Dinner —			
	<i>THANK YOU</i>			