

ADePT Agriculture (Crops)

User Guide



Photo: Chor Sokunthea/World Bank

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INTRODUCTION

ADePT (Automated DEC Poverty Tables) is a free software program developed by the World Bank's Development Data Group to promote easy and quick processing of tables and graphs to study poverty profiles.¹ ADePT analyzes microdata from household survey and outputs print-ready, standardized tables and charts. By automating the analysis of survey data, ADePT minimizes human errors and dramatically reduces the amount of time it takes to produce analytical reports.

A majority of the population in developing countries depends on agriculture for all or part of their livelihoods. Rural poor households typically practice subsistence farming so agriculture is essential to their food security. Therefore, understanding and fostering growth in the agricultural sector will boost income and improvement in the living conditions of the many poor households in developing countries. In order to better formulate, implement and monitor progress, it is essential to understand the characteristics of households that depend on agriculture for their livelihoods, the structure of agricultural holdings, and the factors that affect agricultural productivity.

The ADePT Agriculture (Crops) module aims to facilitate the computation and production of agricultural statistics and indicators from household survey data, to help analysts, policymakers and stakeholders gain a better understanding of the agricultural sector. This module is one of two modules that focus on agriculture in ADePT- the other module focuses on livestock. The two modules were designed to automate and standardize the analysis of survey data and the production of analytical tables on the agricultural sector. By making it simpler and faster to produce analytical reports, ADePT Agriculture frees up resources for interpretation of results and using the results to design evidence based policies and investments.

This manual is intended to provide users with the basic information they need to use the ADePT Agriculture (Crops) module to generate the desired tables. ADePT has a very intuitive interface, and learning to use it is extremely easy. Additional learning resources (including video tutorials) are available on the ADePT website (www.worldbank.org/adept). ADePT assumes that the user has some capabilities at handling survey data. In most cases, raw survey data will need to undergo some manipulation before it can be used with ADePT. The module is designed to be used with data from multi-topic household surveys such as the Living Standards Measurement Study (LSMS) Survey, but can be used with a variety of other types of household survey common in developing countries, such as agricultural sample surveys.

¹ For more information on ADePT, visit <http://go.worldbank.org/OBLEXLPWYO>

USING THE ADEPT AGRICULTURE (CROPS) MODULE

ADePT Agriculture (Crops) supports datasets in Stata[®], SPSS[®], and tab-delimited text formats. In order to produce a majority of the possible tables, ADePT Agriculture (Crops) requires datasets that provide information at several different levels: the household level, the plot level, and the crop level. If you are interested in calculating crop yields, it is also necessary to have a plots-crops dataset that links plots to the crops grown on them to calculate the land area under cultivation for each crop on a plot. **Note:** *Although this module refers to data at the plot level, you can also generate tables from data that are at the farm level, the garden level or the parcel level.*

ADePT has very limited data manipulation capabilities, so the **datasets need to be prepared with the necessary variables before they are loaded into ADePT**. In most cases, the user will have to do some data transformation before loading the dataset into ADePT. It will very rare for a dataset to include all the variables requested by ADePT in exactly the format requested by ADePT without any transformation. Also, the user will have to check for the presence of missing values and outliers and decide if and how to deal with them outside of ADePT.

Another essential thing the user would need to do in preparing the datasets is to **ensure that all related variables are converted into the same units**. For instance quantities may come in different units for different crops or even within the same crop, but will have to be converted to the same unit (e.g. kilograms). Similarly for land area (which may come on acres, hectares or some local units), values (local currency units, US Dollars, etc.), distances (kilometers, minutes, etc.). For each of these the input variables need to be standardized to one unit, and ADePT will use that unit for the output tables². In the case of the example dataset, all values for those variables are expressed in the local currency of Malawi, Malawian Kwachas. Performing the analysis without first standardizing the units between related variables will lead to deceiving results. Whenever possible, users should also make sure the values in their data are labeled so that the labels will appear on the output tables.

The four dataset required for ADePT Agriculture (Crops) need to include identification variables that will allow ADePT to link the different files. One critical variable that needs to be in all the datasets is a unique household identifier, a variable that uniquely identifies the household in the data and allows ADePT to link data for the households in the different files. At the plot level, there will also need to be a variable that will uniquely identify the plots associated with each household. The crop level dataset require a variable that will uniquely identify the plots grown by each household.

All the tables are produced using **sampling weights**. If sampling weights are not provided, ADePT assumes the survey is self-weighted. Users must check whether the survey from which the data they are using has sampling weights, and if so the weights must be included in the household level dataset loaded into ADePT. Failure to include sampling weight will result in inaccurate results when the survey is

² But see the section “Set parameters” below for the possibility of converting land area units.

not self-weighting. When in doubt users should consult the survey documentation to ascertain whether sample weights are available and needed.

A list of the output tables and table descriptions is provided at the end of this User Guide in Annex 1. An example output, produced using the example dataset, can be found on the ADePT website as an Excel sheet (under Crops module documentation > Crops Example Output).

Example Datasets for ADePT Agriculture (Crops)

This manual is accompanied by example datasets derived from the microdata of the Malawi Third Integrated Household Survey (IHS3) 2010/2011, courtesy of the Malawi National Statistical Office and Commissioner Mercy Kanyuka. It is important to note that not all the variables that can be used for analysis in ADePT Agriculture (Crops) are available in the Malawi IHS3 data. This may also be true of the datasets that you are trying to use with ADePT too. You do not need to specify every variable to be able to generate tables in ADePT. Similarly, the example dataset includes some variable with missing observations, which will also be common in the dataset users will be dealing with.

Generating Tables with ADePT Agriculture (Crops)

The instructions in this section are specific to the ADePT Agriculture (Crops) module. For more detailed information about installing and using the ADePT software in general, refer to the ADePT User's Guide.³

Perform the following steps to generate tables with ADePT Agriculture (Crops):

STEP 1: Install ADePT on your computer

Download ADePT from the World Bank website (www.worldbank.org/adept) and install it on your computer.

STEP 2: Download Example Files

Download the example data files for the Agriculture (Crops) module onto your hard drive from <http://go.worldbank.org/7MZ00ZML00>

STEP 3: Launch the Agriculture (Crops) Module

³ Resources for ADePT, including the User's Guide, are available at: <http://go.worldbank.org/1HHHLLLELGO>

Launch the Agriculture (Crops) module.

Click the ADePT icon in the Windows® **Start** menu, or by double-clicking on the ADePT icon on your desktop (if present). To open the Agriculture (Crops) module, double click on **Agriculture (Crops)** (see arrow in Figure 1) in the **Select ADePT Module** window.

Figure 1: Selecting Agriculture (Crops) module



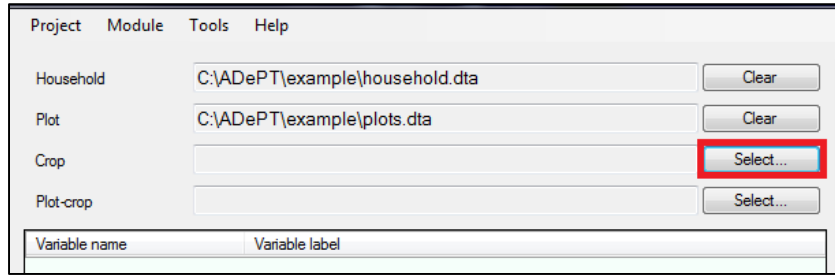
STEP 4: Specify Datasets

Specify the datasets you want ADePT Agriculture (Crops) to use to generate tables and statistics. ADePT Agriculture (Crops) allows for uploading data at four levels: household, plot, crop, and plot-crop. The household and plot data are essential. The crop and plot-crop data are not essential, but ADePT will not be able to create all the possible tables.

Figure 2 shows the ADePT Agriculture (Crops) module interface. The datasets can be specified in the upper left panel in the area in the red box in Figure 2. Click the **Select...** button on the right to specify the appropriate dataset. A window will appear that will allow you to browse files and select the appropriate dataset.

To remove a dataset, click the **Clear** button on the right. If you then want to specify another dataset, click on the **Select...** button (In red box in Figure 2), and then browse again to select the data file that you want.

Figure 2: Inputting data and mapping variables to fields



As you upload the data files, the variables in each data file will appear in the middle blue-colored panel of the interface, which is composed of two columns displaying the variable name and the variable level when present.

It is also possible to add variables by right clicking on the variable list and selecting “Add Variable”. This will allow creating a new variable based on the uploaded variables. See the general ADePT user guide for details on how to write valid expressions that ADePT will recognize.

STEP 5: Map Variables to Fields

Map the variables in the dataset to the input variable field required by ADePT Agriculture (Crops).

In the lower left panel, match the variables in the dataset to the fields required by ADePT Agriculture (Crops) to prepare the tables. For example, you can see in Figure 3 on the next page that the field Region is matched to the **region** variable.

You can pair the field with the appropriate variable by using one of two methods:

Method 1: In the lower left panel, open the drop down menu and then select the corresponding variable in the dataset, as shown for the **welfare aggregate** variable in the screen shot in Figure 3 on the next page.

Figure 3: Mapping variable in drop down menu

Household-level variables

Household ID: Mechanization status:

Regions: Technical assistance:

Urban: Participation in AG organizations:

Welfare aggregate: Receiving credit:

Total income: Distance to the market:

Crop income: Land area:

Shocks:

Household weights:

Selected variable's label: Total real annual consumption per capita

Method 2: Drag the variable name and drop it in the corresponding field in the lower left panel. See Figure 4

Figure 4: Dragging and dropping the variable name into the field

Variable name	Variable label
case_id	Unique HH Identifier
region	Region
urban	Urban/rural
hhweight	Sampling weights adjusted based on population projections
rexpaggcap	Total real annual consumption per capita
cropincome2	Annual net income from crop activities (own cons from exp module).
totincome2	Annual Net Household Income- uses crop2.
aghh	Household engaged in agriculture activities
tassist_any	Household received any technical assistance
shock101	Drought/Irregular Rains
shock102	Floods/Landslides
shock104	Unusually High Level of Crop Pests or Disease
shock106	Unusually Low Prices forAgricultural Output
shock107	Unusually High Costs ofAgricultural Inputs
agcredit	Household used credit for agriculture related activities
mech	Household used machine for agricultural purposes
land_area	Area of household land holdings

Search:

Household-level variables

Household ID: Mechanization status:

Regions: Technical assistance:

Urban: Participation in AG organizations:

Welfare aggregate: Receiving credit:

Total income: Distance to the market:

Crop income: Land area:

Shocks:

Household weights:

To remove a mapping, highlight the variable name in the input field and then press DELETE or BACKSPACE on the keyboard.

It is important to map as many variables as possible so that ADePT Agriculture (Crops) will be able to generate a wider variety of tables. Since ADePT will use the same value labels as the input variables in the output tables, it is useful to pay attention that the labelling of the variables is informative.

NOTE: The following variables are required to generate any of the tables in ADePT Agriculture (Crops): **region, welfare aggregates, urban**. Information on **land area** can be entered either at the plot level (this is the preferred option, using the plot area field), or at the household level (for the entire holding, using the **land area** field). Whenever the land area is provided at the plot level, ADePT will use that measure for all the calculations involving land area (including that of the total holdings). Should the land area variable not be available at the plot level, ADePT will use the land area variable provided at the household level, but will not be able to produce all the tables in the module.

Table 1 presents the correct mapping between the fields on the Household, Plots, Plot-Crop, and Crops tabs and the variables in the example datasets generated from the Malawi IHS3 2010/2011 microdata.

Table 1: Mapping variables in the datasets to fields in ADePT Agriculture (Crops)

Field	Description	Variable Type	Example Dataset	Variable in Example Dataset
HOUSEHOLD TAB				
Household ID	Unique household identification code. Can specify more than one variable	Identification variable	<i>household.dta</i>	<i>case_id</i>
Total income	Total income for the household (can be daily, weekly, monthly or annually)	Continuous	<i>household.dta</i>	<i>totincome2</i>
Crop income	Total income from the sales of crops	Continuous	<i>household.dta</i>	<i>cropincome2</i>
Welfare aggregate	Economic welfare of the household usually measured by household's per capita/adult equivalent consumption expenditure or income	Continuous	<i>household.dta</i>	<i>rexpaggcap</i>
Household weights	Sampling weights so that statistics calculated from the data can be representative of the whole population. Users must provide weights except in the case of self-weighting samples	Continuous	<i>household.dta</i>	<i>hhweight</i>
Urban	Denotes whether the household resides in an urban or rural area	Binary or Categorical	<i>household.dta</i>	<i>urban</i>
Regions	Geographic and administrative areas defined by the national statistics office of the country. The user can	Categorical	<i>household.dta</i>	<i>region</i>

	use district or province, or any other domain relevant to the data.			
Land Area	Total area of land operated by household grouped into categories	Continuous	<i>household.dta</i>	<i>land_area</i>
Mechanization status	Denotes whether the household used any kind of machinery or tools (i.e., hand hoe, tractor, cutlass) on their farms/plots	Binary	<i>household.dta</i>	<i>mech</i>
Technical Assistance	Denotes whether the household received any technical assistance or advice from anyone (i.e., extension worker, NGO) about methods of improving production or marketing	Binary	<i>household.dta</i>	<i>tassist_any</i>
Participation in Ag Organizations	Denotes whether the household participated in any agricultural organization or farmer's cooperative	Binary	<i>household.dta</i>	<i>aghh</i>
Receiving Credit	Denotes whether the household bought or received any items such as land, agricultural inputs, or rented farm machinery on credit	Binary	<i>household.dta</i>	<i>agcredit</i>
Distance to the market	Distance from the household to the nearest market	Continuous	<i>Not available in example dataset</i>	
Shocks	Agricultural related shocks that affected the household. Each variable specified should refer to a shock type. Can specify more than one variable	Binary	<i>household.dta</i>	<i>shock101, shock102, shock104, shock106, shock107</i>
PLOT TAB				
Household ID	Unique household identification code. Can specify more than one variable	Identification variable	<i>plots.dta</i>	<i>case_id</i>
Plot ID	Unique identification code for each plot operated by the household	Identification variable	<i>plots.dta</i>	<i>plotnum</i>
Plot Area	Size of the plot in terms of land area. The unit for this would usually be acres or hectares.	Continuous	<i>plots.dta</i>	<i>plotarea</i>
Tenancy status	Tenure status of the household on the plot. This will usually include ownership status of the plot. Examples of tenure status include owned, renting, granted by local leaders, etc.	Categorical	<i>plots.dta</i>	<i>tenure</i>
Land Ownership	Denotes whether the household owns the land that the plot is on	Binary or Categorical	<i>plots.dta</i>	<i>land_owned</i>
Property title	Denotes whether a household has a document, certificate, or title that proves ownership of the plot	Binary or Categorical	<i>plots.dta</i>	<i>property_title</i>

Irrigation status	Denotes whether there is any form of irrigation to supply water to the plot	Binary	<i>plots.dta</i>	<i>irrigation</i>
Erosion status	Denotes whether there was any problems with land erosion on the plot	Binary	<i>plots.dta</i>	<i>erosion</i>
Purpose of land use	Describes how the plot was used in the reference period (i.e., cultivated, left fallow, rented out)	Categorical	<i>plots.dta</i>	<i>land_use</i>
User defined characteristic	A plot characteristic that the user can define	Binary	N/A	N/A
Organic fertilizer Use	Denotes whether the household used organic fertilizer on the plot	Binary	<i>plots.dta</i>	<i>used_organicfert</i>
Chemical fertilizer use	Denotes whether the household used chemical/inorganic fertilizer on the plot	Binary	<i>plots.dta</i>	<i>used_chemicalfert</i>
Pesticide use	Denotes whether the household used pesticide on the plot	Binary	<i>plots.dta</i>	<i>pestherb</i>
Organic fertilizer amount	Total quantity of organic fertilizer used on the plot	Continuous	<i>plots.dta</i>	<i>organicfert_qty</i>
Chemical fertilizer amount	Total quantity of chemical/inorganic fertilizer used on the plot	Continuous	<i>plots.dta</i>	<i>chemicalfert_qty</i>
Organic fertilizer expenditure	Total value of organic fertilizer used on plot	Continuous	<i>Not available in example dataset</i>	
Chemical fertilizer expenditure	Total value of chemical/inorganic fertilizer used on plot	Continuous	<i>Not available in example dataset</i>	
Hired labor use	Denotes whether the household paid anybody to work on the plot	Binary	<i>plots.dta</i>	<i>hired_labour</i>
Hired labor expenditure	Total amount paid to all the hired labor that worked on the plot	Continuous	<i>plots.dta</i>	<i>labour_exp</i>
PLOT-CROP TAB				
Household ID	Unique household identification code. Can specify more than one variable	Identification variable	<i>plot_crops.dta</i>	<i>case_id</i>
Plot ID	Unique identification code for each plot operated by the household	Identification variable	<i>plot_crops.dta</i>	<i>Plotnum</i>
Crop ID	Unique identification code for each type of crop	Identification variable	<i>plot_crops.dta</i>	<i>crop_code</i>
Crop proportion	Proportion of plot area that the crop is planted on.	Continuous	<i>plot_crops.dta</i>	<i>Intercrop</i>
CROP TAB				

Household ID	Unique household identification code. Can specify more than one variable	Identification variable	<i>crops.dta</i>	<i>case_id</i>
Crop ID	Unique identification code for each type of crop	Identification variable	<i>crops.dta</i>	<i>crop_code</i>
Crop production	Total amount of crop harvested by the household	Continuous	<i>crops.dta</i>	<i>harvest_kg</i>
Value of crop sold	Total value of the harvested crop that was sold by the household	Continuous	<i>crops.dta</i>	<i>sold_value</i>
Quantity sold	Total quantity of the harvested crop that was sold by the household	Continuous	<i>crops.dta</i>	<i>sold_qty</i>
Quantity consumed	Total quantity of the harvested crop that was consumed by the household	Continuous	<i>Not available in example dataset</i>	
Quantity given away	Total quantity of the harvested crop that was given away to people outside the household as gifts	Continuous	<i>crops.dta</i>	<i>gift_qty</i>
Quantity spoiled	Total quantity of the harvested crop that was lost due to rodents, pests, or rotting	Continuous	<i>crops.dta</i>	<i>lost_qty</i>
Quantity used for seeds	Total quantity of the harvested crop that was used for seeds	Continuous	<i>crops.dta</i>	<i>seedsave_qty</i>
Quantity stored	Total quantity of the harvested crop that the household currently has in storage	Continuous	<i>crops.dta</i>	<i>stored_qty</i>
Quantity other	Total quantity of the harvested crop that was used for other things (ie processed into another product)	Continuous	<i>crops.dta</i>	<i>other_qty</i>
Seed type	Main type of seed planted for crop	Continuous	<i>crops.dta</i>	<i>seed_type</i>
Seed source	Main place or person that the household got their seeds for the crop from	Continuous	<i>crops.dta</i> <i>crop.dta</i>	<i>seed_source_1</i>

STEP 6: Set Whether to Account for Intercropping

Under the **Plot-Crop** tab, there is a checkbox (see Figure 5) that will enable you to tell ADePT if you want it to account for intercropping during the analysis.

Figure 5: Checkbox to select whether to account for intercropping or not

The screenshot shows the 'Plot Crop' tab in the ADePT software. It contains four dropdown menus: 'Household ID' with 'case_id', 'Plot ID' with 'plotnum', 'Crop ID' with 'crop_code', and 'Crop proportion' with an empty selection. Below these is a checkbox labeled 'Do not account for intercropping' which is checked and highlighted with a red rectangular border.

Do not account for intercropping:

If checked, ADePT will not account for intercropping during the analysis. The default setting is to not account or intercropping. This means that ADePT will assume that the crop was planted on the entire area of the plot when it is performing its analysis. Data on intercropping are difficult to collect and utilize, which is why the default option has been set to “*Do not account for intercropping*”.

Account for intercropping:

If you want to account for intercropping, uncheck the box so you can specify a variable in the Crop Proportion field. This variable should have information on the share of the plot area that the crop was planted on. The crop proportion variable will affect the calculations for the total area under cultivation and crop yields.

In this mode, ADePT will check the observations of crop proportion variable for the following three issues:

- The sum of the shares of all the crops on each plot is greater than 1
- Negative value
- Missing value

If ADePT spots any of the three issues in the crop proportion values for a plot, then ADePT will rescale the crop proportion values on that plot to ensure that the total of the crop proportions equal 1.

Example 1: Four crops were planted on a plot. In the data, the crop proportion for each crop was reported to be 0.5. The issue in this case is that total of the crop proportion in this case is 2. Therefore, ADePT will use a crop proportion of 0.25 for the 4 crops on this plot instead of 0.5.

Example 2: Two crops are planted on the plot. In the data, the crop proportion for the first crop is 1 and it is missing for the second crop. The issue in this case is that there is a missing value for crop proportion for a crop on this plot. Therefore, ADePT will use a crop proportion of 0.5 for both crops on this plot.

Should you want the rescaling of the crop proportion in the data to follow a different method, you should implement that outside of ADePT before uploading your data. In any case you will have to make sure the sum of the proportions on one plot is equal to 1, or ADePT will rescale the crop proportion values. ADePT generates a warning to let the user know how many plot-crop proportions have been changed from the original dataset.

STEP 7: Set Parameters

The **Parameters** tab allows the user to customize certain parts of the analysis in ADePT Agriculture (Crops): Units of land area measurement, the cut-off points for land area groups, the desired method for estimating crop prices, and the cut-off for the identification of the “main crops.”

Units of Land Area Measurement

ADePT Agriculture (Crops) has built-in capability to convert one land area unit to another, to report the tables in your desired land area unit. Select the units for land area in your dataset and then select the unit that you would like ADePT to use for the output tables. For example, you have a dataset where land area is reported in hectares but you would like the tables to report land area in acres, you can tell ADePT Agriculture (Crops) that you would like the output tables to be reported in acres instead of hectares (see Figure 6). As mentioned earlier, ADePT does not allow data files to have land denominated in different units. Files should be prepared outside of ADePT to ensure consistency in the units being used.

Figure 6: Feature to convert between land area units



The screenshot shows a user interface for setting land area measurement units. It features a title "Units of area measurement" and two dropdown menus. The first dropdown, labeled "- in data file", is set to "hectare". The second dropdown, labeled "- in Tables", is set to "acre". Below these is a text input field labeled "Custom unit size, (in 1 ha)" containing the value "1.00" and a spin button.

ADePT Agriculture (Crops) comes built-in with four commonly used units for land area measurement: hectares, are, acres, and square meters. If your dataset has land area measured in a unit that is not listed, you will have to choose “custom unit” from the drop down menu and then specify the conversion factor from the custom unit to your desired unit. For example, if your land data is denominated in a unit called “lot” that is equal to 0.25 of a hectare, you would select “hectares’ as your desired unit and you would have to specify 0.25 as the conversion factor from lot to hectares (See **Figure 7**).

Figure 7: Converting from a custom unit for land area measurement

Land Area Groups

For certain tables, statistics are reported in land area groups. To generate these groups, you have to specify three cut off points for the different groups of land area size: very small, small and medium (see Figure 8). Very small farms will be less than the very small cut off point. Small farms will be greater than or equal to than the very small cut off point and less than the small cut off point. Medium farms will be greater than or equal to the small cut off point and greater than the medium cut off point. Large farms will be greater than or equal to in size than the medium cut off point.

Figure 8: Setting cut off points for land area groups

By default, the cut off points implemented in the ADePT Agricultural module are those ones set by international standards⁴ (see table below).

LAND AREA GROUP	LAND AREA SIZE
Very small farms	Less than 1 hectare
Small farms	Greater than or equal to 1 hectare AND less than 2 hectares
Medium farms	Greater than or equal to 2 hectares AND less than 5 hectares
Large farms	Greater than or equal to 5 hectares

Method for Estimating Value of Crops

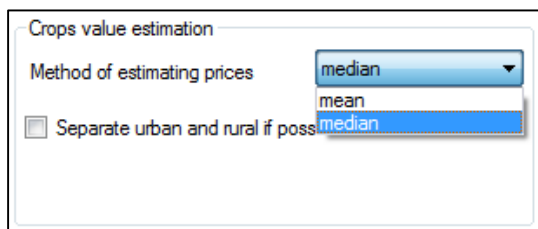
To estimate the unit value for each crop, ADePT uses data on the value and amount of crop sales from the households that sold any part of their harvest. Because the value of crops can vary across regions, ADePT calculates the estimated value of crops separately for each region. ADePT uses this estimated unit value of the each crop to calculate the total value of crop production for all agricultural households.

⁴ FAO, 2015. *World Programme for the Census of Agriculture 2020*, Rome: Food and Agriculture Organization of the United Nations.

You can tell ADePT whether to use the mean value or the median value for the estimation by using the drop down menu (Figure 9). By default, ADePT will use the mean values. Additionally, you can tell ADePT to generate these estimates separately for urban and rural households in each region by checking the box 'Separate urban and rural if possible' (Figure 9). With this option, ADePT will not use estimated prices of crops from rural households for urban households, and vice versa. You will need to have specified a variable for the urban field to be able to select this option.

To check the estimated unit value for each crop calculated by ADePT, you can look at the output in Table T99. The values in T99 are reported in the same currency as in the dataset. If no households in a region sold the crop in the dataset, then ADePT will not be able to estimate the value of that crop, so the cells in T99 for the specific crop will be blank. Since ADePT cannot calculate the value of the crop, the cells for that crop will also be blank in the tables relating to value of crop production.

Figure 9: Select method for estimating value of crops



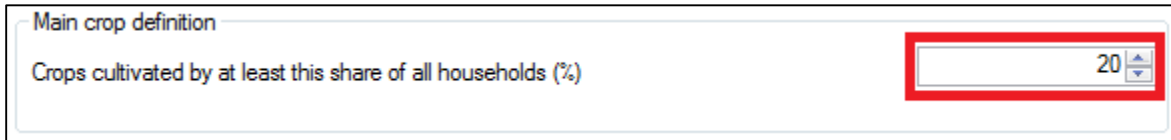
Main Crop Definition

For tables where the statistics are reported for each crop, you may not want to display all the crops that appear in the data to also appear on the tables because it would make the table very long and hard to read. ADePT Agriculture (Crops) has the feature to display only the “main crops”, defined based on the share of agricultural households that report growing the crop. The user can customize the threshold, which is set at 10 percent by default. Crops that are not considered a “main crop” will not appear on the tables referring to main crops, but will still be accounted in the other tables. By default, the minimum share is set at 10%, meaning that 10% all agricultural households in the data have to grow the crop to be considered a “main crop.” The share of agricultural households growing each crop in the dataset and the crops considered to be “main crops” are reported in Table T98. In the example dataset, 7 crops are identified as main crops as they are cultivated by more than 10 percent of the households in table T98. Only 2.6% of households grow cotton, so cotton is not considered a “main crop” and it will not appear on any of the relevant tables.

The threshold can be made more or less stringent by adjusting the parameter. If you want to define a “main crop” as a crop that is grown by at least 20% of the households, then you can change this setting from the default of 10 to 20 as in Figure 10. The example files is also useful in that it shows other adjustments the user might want to do to the data before uploading them in ADePT. In the example files, there are different crop codes that correspond to different types of maize. Two of these are classified as main crops while a few more are not. If the user is interested in computing statistics about

maize in aggregate, she will have to aggregate these crop codes into an aggregate maize code before loading the data onto ADePT.

Figure 10: Setting the definition of “main crop”



Main crop definition

Crops cultivated by at least this share of all households (%)

20

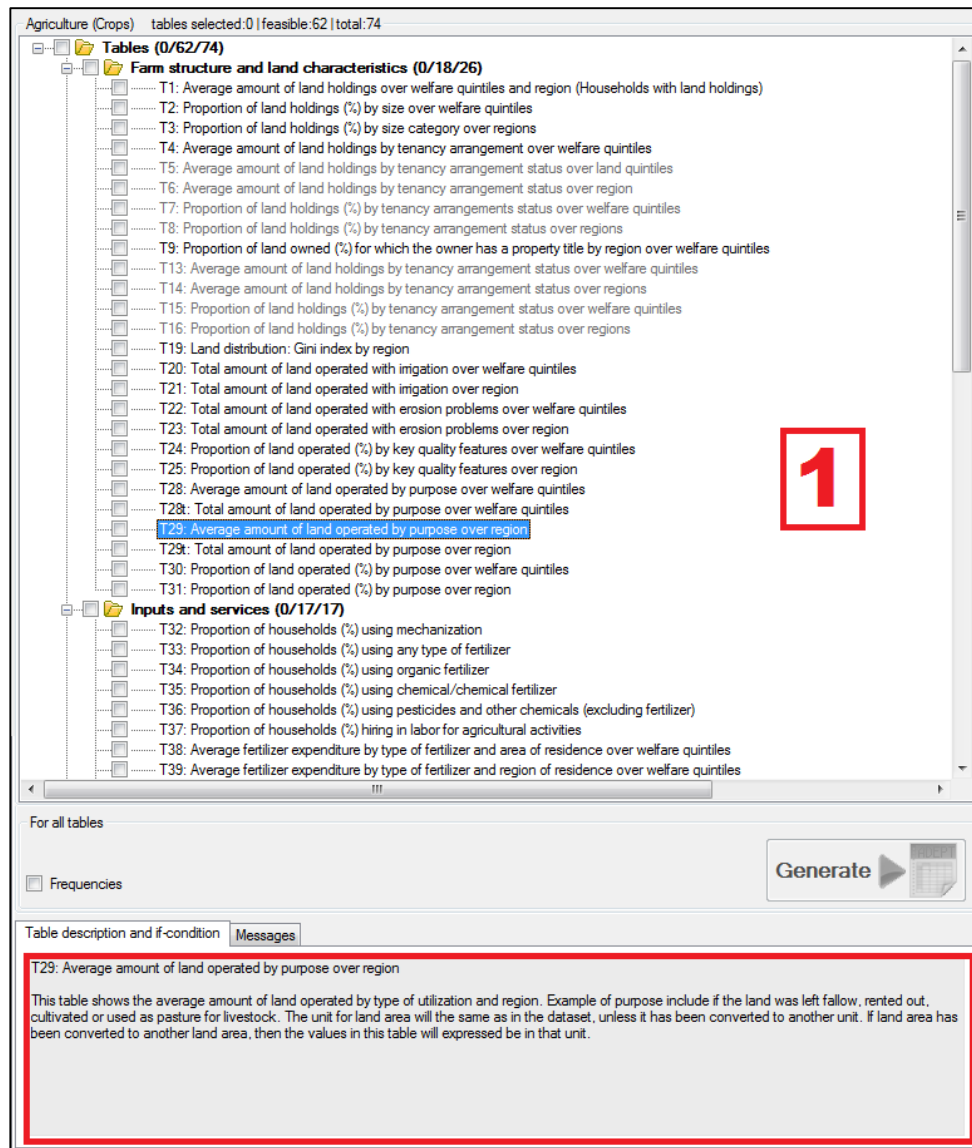
STEP 8: Select Tables

Select the tables to be generated.

In the upper right panel, you will find a list of available tables that can be generated from the data you have specified. Click on the box next to each table to select the table(s) to be generated. If not enough variables are specified to generate a certain table, then that table will be *greyed out* such as Tables T6 to T8 in area number 1 of Figure 11. All tables are greyed out when ADePT Agriculture (Crops) is initially opened and become black as you match more dataset variables to input variable fields. The full list of output tables and table descriptions is provided in Annex 1.

The tables are grouped into five categories: Farm structure and land characteristics, Inputs and services, Crop production and income, Constraints to crop production, and Ancillary and custom tables. ADePT Agriculture (Crops) provides a short description of the table in the lower right panel (see the area in the red box in Figure 11) when you click on the table’s name. In Figure 11 below, you can see that Table T29 is highlighted and the red box below contains the description for Table T29.

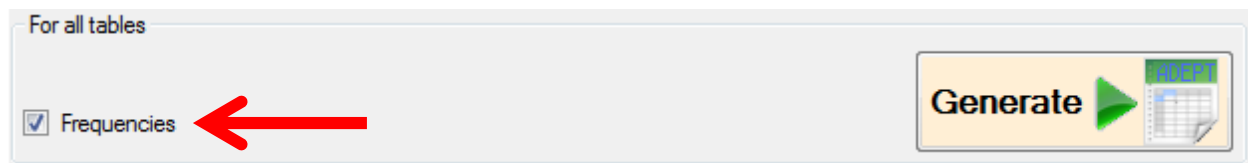
Figure 11: Selecting tables and table descriptions



STEP 9: Select Option for Frequencies



Select whether you want frequency tables to be included in the output file (see Figure 12 below). In Figure 12, the option for Frequencies is selected so ADePT Agriculture (Crops) will include the number of observations for the analysis for all the tables selected.

Figure 12: Selecting option for frequencies



Frequency tables are useful to check whether the statistics produced by ADePT are based on an adequate number of observations. They are also useful to investigate whether the tables are based on the number of observations expected by the user. Frequency tables will appear in separate worksheets from the main tables in ADePT's output.

STEP 10: Generate the Tables

Click the  button and ADePT Agriculture (Crops) will begin the calculations to generate the selected tables. You might have to wait from a few seconds to several minutes for the calculations to finish depending on the size of the dataset and the number of tables selected. You will know if ADePT is still working if the icon in the upper left corner () is still moving

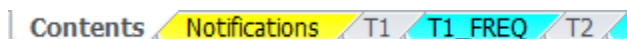
If you want to stop the calculations while ADePT is generating the tables, click the



button. While ADePT Agriculture (Crops) is performing the calculations for the tables, it will also flag inconsistencies in the data and those flags will appear in the **Messages** tab of the lower right hand panel. These messages will also appear in the "Notifications" tab (colored yellow) in the output file.

After the tables are generated, the output will be opened in a compatible spreadsheet program (i.e. Microsoft Excel®). If frequency option was selected for the tables, the frequency tables will be in separate tabs from the table with only the summary statistics. The table with the frequencies will be colored blue and will have the suffix "_FREQ" after the table name (see Figure 13 below).






Figure 13: Tabs in ADePT Agriculture (Crops) output





Flags and Alerts


Before performing the analysis, ADePT Agriculture (Crops) will perform a series of checks on the data to flag issues that can negatively affect the results produced by ADePT Agriculture (Crops). You can examine the flags and alerts in the **Messages** tab (see Figure 14) and the **Notifications** tab (colored yellow) of the output file (see Figure 13).

Figure 14: Messages about inconsistencies and issues in the data being analyzed

Table description and if-condition		Messages
Description		
	13	Land area grouped using the following thresholds: 1/2/5.
	14	Found 330 observation(s) with missing crop codes in plot-crop level data. These observation(s) are dropped from analysis.
	15	68 observations referenced in plot-crop data couldn't be found in plot data. Households affected will be removed from crops tables.
	16	Area under the crop are calculated taking into account intercropping.
	17	15661 proportions of plot occupied by crop were imputed on 6491 plots.

 **Notifications** do not affect the results of the analysis but are information that user would like to know. For example, you can see in Figure 14 that there is a notification (#13) that the land area groups were created using the thresholds of 1, 2 and 5.

 **Warnings** signal potential issues with the data that may or may not affect the results of the analysis. Users should read these warnings carefully and resolve any issues that may be having an impact on the quality of the output. In the case of the example, you can see in Figure14 that ADePT displayed a warning (#14) that ADePT found 330 observations with missing crop codes in the plot-crop level data. These observations will be dropped from the analysis.

 **Errors** prevent the use of a variable in the analysis. This could be due to a variable being incorrectly matched to its input field or a variable having a lot of missing values. This will have a substantive impact on the analysis, and in the case of some critical errors, ADePT will discontinue its analysis. You should try to fix as many errors as possible as this will most likely have a negative effect on the accuracy of the statistics in the tables that ADePT produces. Errors will appear in red in the Messages tab. Additionally, tables that were selected to be generated and could not be generated due to missing required variables will be flagged as errors.

For more information of the different kinds of problems flagged by ADePT, refer to page 39 in Chapter 5 of the ADePT User Guide.

KEY VARIABLES FOR ANALYSIS IN ADEPT AGRICULTURE (CROPS)

Characteristics of agricultural production and activities can vary significantly depending on certain key variables, such as welfare and area of residence. A majority of the tables generated by the Agriculture (Crops) module present information with respect to the key variables listed below.

Welfare Quintiles

Welfare quintiles are used to analyze how different indicators change in relation to the welfare of individuals or households. Households in the dataset area classified into the welfare quintiles based on the value of the welfare aggregate variable in the Household tab. Household per capita/adult equivalent

consumption expenditure are a preferred measure of a household's welfare, although income per capita or asset-based measures (e.g. principal component asset indices) can also be used. Users should choose the most suitable welfare indicator given the data that is available from the specific survey. Households in the fifth quintile will be the 20 percent of households at the top end of distribution of the welfare aggregate of choice (i.e. the 'richest' 20 percent), whereas households in the first quintile are those in the bottom 20 percent (i.e. the 'poorest 20 percent'). The welfare quintiles are calculated separately for the rural, urban and total samples.

Region

A significant number of ADePT tables present statistics for key variables by 'regions'. The table will be computed in the same way regardless of the administrative unit the user will enter in the region 'field' (it could be agro-ecological zones, provinces, etc.). In an official national sample survey, these would be geographic and administrative areas defined by the national statistics office of that country. The characteristics of the Agriculture sector can vary significantly between regions within a country, due to differences in factors such as geography, ethnic groups or climate.

ADePT Agriculture (Crops) will retain the value labels for the region variable in the dataset. For example, the regions in the example dataset are: "Northern," "Central," and "Southern."

The user should be careful to ensure that the variable entered in this field defines a level of geographical disaggregation the survey is supposed to be statistically representative at. If a survey is only representative at the national level, any inference made at the regional level will not be statistically valid. The survey documentation should normally include this type of information.

Land Quintiles

ADePT generates land quintiles where the households in the dataset are classified based on the total amount of land that each household holds. The sample for calculating land ownership quintiles is restricted to households that have any land holdings. Depending on the distribution of the variable that is being used for the plot area, the distribution of households in different land quintiles could be uneven. This will most likely occur if there is 'heaping' in the land area measures, which occurs when land area is being reported by the farmers. Farmers will most likely report land area in round numbers (i.e. 1 hectare, 1.5 hectare). When the cutoff for a given quintile of observations falls at one of the round numbers, all the households reporting that value will be assigned to the same quintile, and correspondingly fewer households will fall into the next quintile. To alleviate this problem, you could use GPS measured land area because it is less susceptible to the heaping phenomenon. The GPS measured land area may however not be available for all households, resulting in more missing values and fewer observations included in the analysis. The user may decide which one of the two is most appropriate given the data, and whether and how to impute missing values before uploading the data onto ADePT.

ANNEX 1 – DESCRIPTION OF ADEPT AGRICULTURE (CROPS) OUTPUT TABLES

Table No.	Name	Description
FARM STRUCTURE AND LAND CHARACTERISTICS		
1	Average amount of land holdings over welfare quintiles and region (Households with land holdings)	This table shows the average size of land holdings by area of residence over welfare quintiles. Welfare quintiles are calculated separately for rural, urban and total samples. The sample to this table is restricted to households that report operating any plots. The unit for land area will the same as in the dataset, unless it has been converted to another unit. If land area has been converted to another land area, then the values in this table will expressed be in that unit.
2	Proportion of land holdings (%) by size over welfare quintiles	This table presents the proportion of household land holdings by land size category and by welfare quintiles. The land size categories are based on the total amount of land holdings by households. Welfare quintiles are calculated separately for the rural, urban and total samples.
3	Proportion of land holdings (%) by size over regions	This table presents the proportion of household land holdings that belong to each land size category, by region. The land size categories are based on the total amount of land holdings by households.
4	Average amount of land holdings by tenancy arrangement over welfare quintiles	This table presents the average amount of land holdings by tenancy agreement status and welfare quintiles. Welfare quintiles are calculated separately for the rural, urban and total samples. The unit for land area will the same as in the dataset, unless it has been converted to another unit. If land area has been converted to another land area, then the values in this table will expressed be in that unit.
5	Average amount of land holdings by tenancy arrangement status over land quintiles	This table presents the average amount of land holdings by tenancy agreement status and land ownership quintiles. The unit for land area will the same as in the dataset, unless it has been converted to another unit. If land area has been converted to another land area, then the values in this table will expressed be in that unit.
6	Average amount of land holdings by tenancy arrangement status over region	This table presents the average amount of land holdings by tenancy agreement status and region. The unit for land area will the same as in the dataset, unless it has been converted to another unit. If land area has been converted to another land area, then the values in this table will expressed be in that unit.
7	Proportion of land holdings (%) by tenancy arrangements status over welfare quintiles	This table presents the proportion of land holdings by tenancy agreement status and welfare quintiles. Welfare quintiles are calculated separately for the rural, urban and total sample.
8	Proportion of land holdings (%) by tenancy arrangement status over regions	This table presents the proportion of land holdings by tenancy agreement status and region.
9	Proportion of land owned (%) for which the owner has a property title by region over welfare quintiles	This table presents the proportion of land owned by the households where the household has a property title for the land, by region and welfare quintiles. Welfare quintiles are calculated separately for the rural, urban and total samples.

13	Average amount of land holdings by tenancy arrangement status over welfare quintiles	This table presents the average size of land holdings by tenancy arrangement status and welfare quintiles. Welfare quintiles are calculated separately for the rural, urban and total samples. The unit for land area will be the same as in the dataset, unless it has been converted to another unit. If land area has been converted to another land area, then the values in this table will be expressed in that unit.
14	Average amount of land holdings by tenancy arrangement status over regions	This table presents the average size of land holdings by tenancy arrangement status and rural/urban welfare quintiles. Welfare quintiles are calculated separately for the rural, urban and total samples. The unit for land area will be the same as in the dataset, unless it has been converted to another unit. If land area has been converted to another land area, then the values in this table will be expressed in that unit.
15	Proportion of land holdings (%) by tenancy arrangement status over welfare quintiles	This table presents the proportion of land holdings by tenancy arrangement status and rural/urban welfare quintiles. Welfare quintiles are calculated separately for the rural, urban and total samples.
16	Proportion of land holdings (%) by tenancy arrangement status over regions	This table presents the proportion of land holdings by tenancy arrangement status and region.
19	Land distribution: Gini index by region	This table shows the extent to which the distribution of land holdings among households and across regions by applying the Gini inequality measure to household land holdings. The Gini index is a measure of inequality that ranges from 0 (perfect equality) to 100 (perfect inequality).
20	Total amount of land operated with irrigation over welfare quintiles	This table shows the total amount of land operated that has irrigation by welfare quintiles. Welfare quintiles are calculated separately for the rural, urban and total samples. The unit for land area will be the same as in the dataset, unless it has been converted to another unit. If land area has been converted to another land area, then the values in this table will be expressed in that unit.
21	Total amount of land operated with irrigation over region	This table shows the total amount of land operated with irrigation by region. The unit for land area will be the same as in the dataset, unless it has been converted to another unit. If land area has been converted to another land area, then the values in this table will be expressed in that unit.
22	Total amount of land operated with erosion problems over welfare quintiles	This table shows the total amount of land operated that experienced erosion problems, by welfare quintiles. Welfare quintiles are calculated separately for the rural, urban and total samples. The unit for land area will be the same as in the dataset, unless it has been converted to another unit. If land area has been converted to another land area, then the values in this table will be expressed in that unit.
23	Total amount of land operated with erosion problems over region	This table shows the total amount of land operated that experienced erosion problems, by region. The unit for land area will be the same as in the dataset, unless it has been converted to another unit. If land area has been converted to another land area, then the values in this table will be expressed in that unit.
24	Proportion of land operated (%) by key quality features over welfare quintiles	This table shows the proportion of land operated for each key quality feature by welfare quintiles. Welfare quintiles are calculated separately for the rural, urban and total samples. Key quality features include irrigation and erosion problems.
25	Proportion of land operated (%) by key quality features over region	This table shows the proportion of land operated for each key quality feature by region. Key quality features include irrigation and erosion problems.

28	Average amount of land operated by purpose over welfare quintiles	This table shows the average amount of land operated by type of utilization and welfare quintiles. Welfare quintiles are calculated separately for the rural, urban and total samples. Example of purpose include if the land was left fallow, rented out, cultivated or used as pasture for livestock. The unit for land area will the same as in the dataset, unless it has been converted to another unit. If land area has been converted to another land area, then the values in this table will expressed be in that unit.
28t	Total amount of land operated by purpose over welfare quintiles	This table shows the total amount of land operated by type of utilization and welfare quintiles. Welfare quintiles are calculated separately for the rural, urban and total samples. Example of purpose include if the land was left fallow, rented out, cultivated or used as pasture for livestock. The unit for land area will the same as in the dataset, unless it has been converted to another unit. If land area has been converted to another land area, then the values in this table will expressed be in that unit.
29	Average amount of land operated by purpose over region	This table shows the average amount of land operated by type of utilization and region. Example of purpose include if the land was left fallow, rented out, cultivated or used as pasture for livestock. The unit for land area will the same as in the dataset, unless it has been converted to another unit. If land area has been converted to another land area, then the values in this table will expressed be in that unit.
29t	Total amount of land operated by purpose over region	This table shows the total amount of land operated by type of utilization and region. Example of purpose include if the land was left fallow, rented out, cultivated or used as pasture for livestock. The unit for land area will the same as in the dataset, unless it has been converted to another unit. If land area has been converted to another land area, then the values in this table will expressed be in that unit.
30	Proportion of land operated (%) by purpose over welfare quintiles	This table shows the proportion of land operated by type of utilization and welfare quintiles. Example of purpose include if the land was left fallow, rented out, cultivated or used as pasture for livestock.
31	Proportion of land operated (%) by purpose over region	This table shows the proportion of land operated by type of utilization and region. Example of purpose include if the land was left fallow, rented out, cultivated or used as pasture for livestock.
INPUTS AND SERVICES		
32	Proportion of households (%) using mechanization	This table shows the proportion of households using mechanization by region and welfare quintiles. Mechanization signifies the use of farm machinery, such as a power tiller, tractor, etc, during planting or harvesting. The sample is restricted to households that participate in agricultural activities.
33	Proportion of households (%) using any type of fertilizer	This table shows the proportion of households using any type of fertilizer on their plots, by region and rural/urban welfare quintiles. Welfare quintiles are calculated separately for the rural, urban and total samples. The sample is restricted to households that participate in agricultural activities.
34	Proportion of households (%) using organic fertilizer	This table shows the proportion of households using any organic fertilizer on their plots, by region and rural/urban welfare quintiles. Welfare quintiles are calculated separately for the rural, urban and total samples. The sample is restricted to households that participate in agricultural activities.
35	Proportion of households (%) using chemical/chemical fertilizer	This table shows the proportion of households using any chemical/inorganic fertilizer on their plots, by region and rural/urban welfare quintiles. Welfare quintiles are calculated separately for the rural, urban and total samples. The sample is restricted to households that participate in agricultural activities.

36	Proportion of households (%) using pesticides and other chemicals (excluding fertilizer)	This table shows the proportion of households using pesticides and other chemicals, by region and rural/urban welfare quintiles. This table excludes chemical fertilizers. The sample is restricted to households that participate in crop activities. Welfare quintiles are calculated separately for the rural, urban and total samples.
37	Proportion of households (%) hiring in labor for agricultural activities	This table shows the proportion of households that use hired non-family labor for agricultural activities, by region and rural/urban welfare quintiles. The values in the table are expressed in the same currency as in the dataset. The sample for this table is restricted to households that participate in agricultural activities. Welfare quintiles are calculated separately for the rural, urban and total samples.
38	Average fertilizer expenditure by type of fertilizer and area of residence over welfare quintiles	This table shows the average household expenditure for fertilizers, by type of fertilizer and rural/urban welfare quintiles. The sample for this table is restricted to households that use any type of fertilizer. Welfare quintiles are calculated separately for the rural, urban and total samples. Values in this table are expressed in the same currency as in the dataset.
39	Average fertilizer expenditure by type of fertilizer and region of residence over welfare quintiles	This table shows the average household expenditure for fertilizers, by type of fertilizer and region. The sample for this table is restricted to households that used any type of fertilizer. Values in this table are expressed in the same currency as in the dataset.
40	Average pesticide/herbicide expenditure by region over welfare quintiles	This table shows the average household expenditure for pesticides/herbicides by region and welfare quintiles. The sample for this table is restricted to households that used pesticides/herbicides. Values in this table are expressed in the same currency as in the dataset.
41	Average hired labor expenditure by region over welfare quintiles	This table shows the average household expenditure for non-family hire labor, by region and welfare quintiles. The sample for this table is restricted to households that use hired non-family labor. Values in this table are expressed in the same currency as in the dataset.
42	Proportion of households (%) receiving technical assistance/extension service visits by region over welfare quintiles	This table shows the proportion of households that received agricultural extension services or technical assistance from other sources (ie radio, coop), by region and rural/urban welfare quintiles. The sample for this table is restricted to households that are participating in agricultural activities.
43	Proportion of households (%) participating in agricultural organizations/producer associations by region over welfare quintiles	This table shows the proportion of households receiving credit from any source for agricultural operations, by region and rural/urban welfare quintiles. Welfare quintiles are calculated separately for the rural, urban and total samples. This sample is restricted to households that are participating in agricultural activities.
44	Proportion of households (%) receiving credit for agricultural operations by region over welfare quintiles	This table shows the proportion of households receiving credit from any source for agricultural operations, by region and rural/urban welfare quintiles. Welfare quintiles are calculated separately for the rural, urban and total samples. This sample is restricted to households that are participating in agricultural activities.
64	Proportion of households (%) using seeds by source and area of residence over welfare quintiles	This table shows the proportion of households that are using seeds from different sources, by rural/urban welfare quintiles. It is important to note that the column totals might sometime exceed 100% because households can receive their seeds from multiple sources. The sample is restricted to households that reported participating in crop activities. Welfare quintiles are calculated separately for rural, urban and total samples.
65	Proportion of households (%) using seeds by source over region	This table shows the proportion of households that are using seeds from different sources, by region. It is important to note that the column totals can exceed 100% because households can receive their seeds from multiple sources. The sample is restricted to households that reported participating in crop activities

66	Proportion of households (%) using seeds by type and area of residence over welfare quintiles	This table shows the proportion of households that are using different types of seeds, by rural/urban welfare quintiles. It is important to note that the column total can exceed 100% because households can use multiple types of seeds. The sample is restricted to households that reported participating in crop activities. Welfare quintiles are calculated separately for rural, urban and total samples.
67	Proportion of households (%) using seeds by type over region	This table shows the proportion of households that are using different types of seeds by region. It is important to note that the column total can exceed 100% because households can use multiple types of seeds. The sample is restricted to households that reported participating in crop activities.
CROP PRODUCTION AND INCOME		
45	Average value of crop production by region over welfare quintiles	This table shows the average value of agricultural production, by region and rural/urban welfare quintiles. Welfare quintiles are calculated separately for the rural, urban and total samples. Values in this table are expressed in the same currency as in the dataset.
45t	Total value of crop production by region over welfare quintiles	This table shows the total value of agricultural production, by region and rural/urban welfare quintiles. Welfare quintiles are calculated separately for the rural, urban and total samples. Values in this table are expressed in the same currency as in the dataset.
49	Participation in crop activities - % of agricultural households	This table shows the proportion of all households that participated in crop activities, by welfare quintiles and region. Crop activities include planting and cultivating crops. Welfare quintiles are calculated separately for the rural, urban and total samples.
50	Participation in agricultural output markets - % of agricultural households	This table shows the proportion of households that sold any farm output, by region and welfare quintiles. The sample for this table is restricted to households that participate in crop activities. Welfare quintiles are calculated separately for the rural, urban and total samples.
51	Proportion of total amount of agricultural production sold (%), by "main crop"	This table shows the proportion of the total amount of farm output that was sold for each type of main crop, by welfare quintiles. Welfare quintiles are calculated separately for the rural, urban and total samples.
52	Average amount of household crop production by "main crop" over welfare quintiles	This table shows the average amount of household crop production for each type of main crop, by rural/urban welfare quintiles. The values in this table are reported in the same units used in the dataset. Main crops are the crops that were planted by a certain proportion of households in the sample. The threshold proportion to be considered a "main crop" can be adjusted in the Parameters tab. Welfare quintiles are calculated separately for the rural, urban and total samples. Only households producing corresponding crops are included in the calculation of the average production.
52t	Total amount of household crop production by "main crop" over welfare quintiles	This table shows the total amount of household crop production for each type of main crop, by rural/urban welfare quintiles. The values in this table are reported in the same units used in the dataset. Main crops are the crops that were planted by a certain proportion of households in the sample. The threshold proportion to be considered a "main crop" can be adjusted in the Parameters tab. Welfare quintiles are calculated separately for the rural, urban and total samples. Only households producing corresponding crops are included in the calculation of the total production.

53	Average amount of crop production by "main crop" over regions	This table shows the average amount of household crop production for each type of crop, by region. The values in this table are reported in the units used in the dataset. Main crops are the crops that were planted by at least a certain proportion of households in the sample.
53t	Total amount of crop production by "main crop" over regions	This table shows the total amount of household crop production for each type of crop, by region. The values in this table are reported in the units used in the dataset. Main crops are the crops that were planted by at least a certain proportion of households in the sample.
54	Average value of crop production by "main crop" over welfare quintiles	This table shows the average value of crop production for each type of crop, by rural/urban welfare quintiles. The values in this table are reported in the same currency as in the dataset. Welfare quintiles are calculated separately for the rural, urban and total samples. Main crops are the crops that were planted by a certain proportion of households in the sample. The threshold proportion to be considered a "main crop" can be adjusted in the Parameters tab. Only households reporting any crop production of corresponding crops are included in the calculation of the average value of production.
54t	Total value of crop production by "main crop" over welfare quintiles	This table shows the total value of crop production for each type of crop, by rural/urban welfare quintiles. The values in this table are reported in the same currency as in the dataset. Welfare quintiles are calculated separately for the rural, urban and total samples. Main crops are the crops that were planted by a certain proportion of households in the sample. The threshold proportion to be considered a "main crop" can be adjusted in the Parameters tab. Only households reporting any crop production of corresponding crops are included in the calculation of the average value of production.
55	Average value of crop production by "main crop" over regions	This table shows the average value of crop production for each type of crop, by region. The values in this table are reported in the same currency as in the dataset. Welfare quintiles are calculated separately for the rural, urban and total samples. Main crops are the crops that were planted by a certain proportion of households in the sample. The threshold proportion to be considered a "main crop" can be adjusted in the Parameters tab. Only households reporting any crop production of corresponding crops are included in the calculation of the average value of production.
55t	Total value of crop production by "main crop" over regions	This table shows the total value of crop production for each type of crop, by region. The values in this table are reported in the same currency as in the dataset. Welfare quintiles are calculated separately for the rural, urban and total samples. Main crops are the crops that were planted by a certain proportion of households in the sample. The threshold proportion to be considered a "main crop" can be adjusted in the Parameters tab. Only households reporting any crop production of corresponding crops are included in the calculation of the average value of production.
56	Average land area under cultivation by "main crop" over welfare quintiles	This table shows the average land area under cultivation for the main types of crops, by welfare quintiles. The values in this table are reported in the same unit (ie hectares, acres) as in the dataset. Welfare quintiles are calculated separately for the rural, urban and total samples. Main crops are the crops that were planted by a certain proportion of households in the sample. The threshold proportion to be considered a "main crop" can be adjusted in the Parameters tab. Only households reporting positive area of cultivation of corresponding crops are included in the calculation of the average area under the crop.
56t	Total land area under cultivation by "main crop" over welfare quintiles	This table shows the total land area under cultivation for the main types of crops, by welfare quintiles. The values in this table are reported in the same unit (ie hectares, acres) as in the dataset. Welfare quintiles are calculated separately for the rural, urban and total samples. Main crops are the crops that were planted by a certain proportion of households in the sample. The threshold proportion to be considered a "main crop" can be adjusted

		in the Parameters tab. Only households reporting positive area of cultivation of corresponding crops are included in the calculation of the average area under the crop.
57	Average land area under cultivation by "main crop" over welfare quintiles	This table shows the average land area under cultivation for the main types of crops, by region. The values in this table are reported in the same unit (ie hectares, acres) as in the dataset. Welfare quintiles are calculated separately for the rural, urban and total samples. Main crops are the crops that were planted by a certain proportion of households in the sample. The threshold proportion to be considered a "main crop" can be adjusted in the Parameters tab. Only households reporting positive area of cultivation of corresponding crops are included in the calculation of the average area under the crop.
57t	Total land area under cultivation by "main crop" over welfare quintiles	This table shows the total land area under cultivation for the main types of crops, by region. The values in this table are reported in the same unit (ie hectares, acres) as in the dataset. Welfare quintiles are calculated separately for the rural, urban and total samples. Main crops are the crops that were planted by a certain proportion of households in the sample. The threshold proportion to be considered a "main crop" can be adjusted in the Parameters tab. Only households reporting positive area of cultivation of corresponding crops are included in the calculation of the average area under the crop.
58	Average household crop yields by "main crop" over welfare quintiles	This table shows the average household crop yields for the main types of crops by rural/urban welfare quintiles. The unit of the yield will depend on the unit for land area under cultivation and the unit for production. In most cases, this will be kilograms per hectares. Computation of yields is based on the proportion of crop in the plot-crop level data, which may include corrections to account for seasonality. Welfare quintiles are calculated separately for the rural, urban and total samples. Main crops are the crops that were planted by a certain proportion of households in the sample. The threshold proportion to be considered a "main crop" can be adjusted in the Parameters tab. Crop yield is production from a unit of land area. Crop production is taken from the user, land area under the crop is calculated from individual plot areas accounting for intercropping.
59	Average household crop yields by "main crop" over regions	This table shows the average household crop yields for the main types of crops by region. The unit of the yield will depend on the unit for land area under cultivation and the unit for production. In most cases, this will be kilograms per hectares. Computation of yields is based on the proportion of crop in the plot-crop level data, which may include corrections to account for seasonality. Welfare quintiles are calculated separately for the rural, urban and total samples. Main crops are the crops that were planted by a certain proportion of households in the sample. The threshold proportion to be considered a "main crop" can be adjusted in the Parameters tab. Crop yield is production from a unit of land area. Crop production is taken from the user, land area under the crop is calculated from individual plot areas accounting for intercropping.
68	Proportion of crop income by regions over welfare quintiles - % of total household income	This table shows the proportion of crop income as a part of total household income, by rural/urban welfare quintiles and region. The sample is restricted to households that reported participating in crop activities. Welfare quintiles are calculated separately for rural, urban and total samples.
69	Proportion of crop income by area of residence over land quintiles - % of total household income	This table shows the proportion of crop income as a part of total household income, by land quintiles. The sample is restricted to households that reported participating in crop activities. If an urban/rural variable is specified, the sample is restricted to rural households. If no urban/rural variable is specified, the sample will be all households.

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60	Average distance from agricultural market by region over welfare quintiles	This table shows the average distance of a household from agricultural markets, by rural/urban welfare quintiles and region. The user will have to ensure that the unit for distance are in a standard unit before loading the dataset into ADePT. Welfare quintiles are calculated separately for rural, urban and total samples.
61	Proportion of households (%) that suffered any shocks by region, area of residence, and welfare quintiles	This table shows the proportion of households that have suffered any type of shocks. This can include rise in prices of agricultural inputs, drought, or flooding of plots. Welfare quintiles are calculated separately for rural, urban and total samples.
62	Proportion of households (%) that suffered any shocks by shock type and area of residence over welfare quintiles	This table shows the proportion of households that suffer from shocks, by shock type, rural/urban, and welfare quintiles. Welfare quintiles are calculated separately for rural, urban and total samples.
63	Proportion of households (%) that suffered any shocks by area of residence over region, and proportion of households (%) that suffered a particular shock by shock type over region	This table shows the proportion of households that suffered any shocks by area of residence over region, and the proportion of households that suffered a particular shock, by shock type over region (expressed in % of all households)
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98	Crops prevalence and "main crop" status - % of agricultural households	This table shows the proportion of agricultural households that are growing each crop in the data. These proportions are used to determine which crops will be considered a "main crop" in the relevant tables.
99	Estimated prices by "main crop" over region and area of residence	This table shows the estimated value of crops by region and area of residence. By default, prices are estimated using the median value of each crop in each region. This can be further disaggregated by rural/urban if the user desires. Values in this table are expressed in the same currency that was used in the dataset.
26	Total amount of land holdings by user-specified characteristic over region	This custom table shows the proportion of land holdings for a user-specified characteristic by region. The unit for land area will be the same as in the dataset, unless it has been converted to another unit. If land area has been converted to another land area, then the values in this table will be expressed in that unit.
27	Total amount of land holdings by user-specified characteristic over welfare quintiles	This custom table shows the proportion of land holdings for a user-specified characteristic by welfare quintiles. Welfare quintiles are calculated separately for the rural, urban and total samples. The unit for land area will be the same as in the dataset, unless it has been converted to another unit. If land area has been converted to another land area, then the values in this table will be expressed in that unit.
26a	Proportion of land holdings (%) by user-specified characteristic over region	This table shows the proportion of land holdings for a user-specified characteristic by region.
27a	Proportion of land holdings (%) by user-specified characteristic over welfare quintiles	This table shows the proportion of land holdings for a user-specified characteristic by welfare quintiles. Welfare quintiles are calculated separately for the rural, urban and total samples.