

## **Guide 4: Price Data Collection Preparation**

### ***Importance of standardisation***

Whether you are collecting data in a one-off market visit, or are regularly collecting data as part of a monitoring system, it is important that market prices are standardised. We have to know that the prices you record are the same as would be recorded by someone else visiting the market separately. We need to know that differences in price, and changes in price over time, reflect real differences and changes rather than differences due to inter-observer or intra-observer variation.

Moreover, the choice of commodities for which we monitor prices should allow the monitoring system to be:

- Sufficiently sensitive to tell us about small but important changes over time
- Sufficiently specific to distinguish between influences on different markets and different commodities.

### ***Checking against secondary sources***

Government trade, grain or livestock marketing departments may collect data routinely from markets. Avoid duplicating this work if the data sets are reliable, if they cover the commodities you are interested in and the markets you need information from.

### ***Harmonising price monitoring with existing data sets***

If you need to collect additional data try to follow the same standards as the existing system (if there is one) – e.g. monitor prices for the same type, grade or variety of commodity if these are appropriate for your study. For instance: the livestock marketing system might monitor different types of small ruminant (sheep and goats): a male animal of 1 or 2 years (sold for slaughter), plus breeding animals of each sex and a specific age or size. For camels it may be important to distinguish male transport animals from breeding stock. The point is: you want to select varieties for which changes in price are indicative of change in environmental or production stress, and you want to make sure you monitor the same type each time. However, it may be that the existing data sets do not discriminate sufficiently according to factors you are interested in (e.g they might measure “cereals” without distinguishing between locally produced and imported cereals of the same variety); they may not monitor the price of food aid in the market, or they may be too detailed to be useful for your purposes.

### ***Recording price data***

Form 2F in Annex B of Chapter 3 provides a standard format for recording market price data which you should adapt to suit the local context. You will collect different prices from different traders according to the commodities they specialise in. Make sure you distinguish between retailers and wholesalers – wholesalers usually sell by the sack.

The form requires you to find out not just current price but the price in the reference year and in different seasons of the year. While the current price is fairly straightforward, you may find some variation between traders with the reference year prices. Make sure it is clear which year you are talking about, and if they really cannot remember then ask

them about last year, and if last year was extreme (a disaster, or a bumper year) then ask them about “normal” prices, or a recent “normal year”. Check with the HEA team leader if traders have difficulty with recalling reference year prices.

### ***Checking weight and volume of units traded***

*NB: Equipment is needed to measure weights and volumes!*

A critical part of the market visit is to check the weight and volume of items traded. The weight and volumes are important to know because we need to know how many calories a household consumes if they say they consume 5 bags of maize each year, or 1 pile of potatoes every day, or if they buy (and consume) a small tin of cooking oil every day. Weights and volumes are important for any item which is an important source of calories. It is not so important therefore, to know the weight of tomatoes – as these are not an important source of calories (except for HEA studies focusing on nutrition). Tomatoes, however, like other cash crops – are important for sales. So we need to know the size of units in which they sell tomatoes, so we have an idea – when people tell us: “I sell 3 tins a day for 3 weeks” we have an idea of the quantity they sell and can cross-check this with production claims and prices between interviews. To illustrate this point: Amina sell 3 tins a day, and gets 300 per tin. Miriam sells 3 tins a day and gets 600 per tin. We need to know whether the tins they are selling are different sizes (in the market Miriam sells at the tins are double the size compared to Amina’s market) or whether Miriam is able, for some reason, to get a better price for tomatoes (she sells in a town where there is a limited supply of tomatoes) whereas Amina is old, and she sells near her house, near the river, where there is an abundance of tomatoes.

Make sure you record the local names of the units. And clarify what English translations mean. “Bag” and “sack” can be interchangeable in English. If one is heavier than the other, then be consistent (e.g. a sack may be 100kg, a bag 50kg).

You need to have a reasonably accurate **weighing scale** which can measure to around 1 kg, and a balance that can weigh larger quantities (e.g. 5-10kg). You can usually find spring balances locally (but don’t assume this). Use a **measuring jug** to measure volume ( $\frac{1}{2}$  or 1 litre jugs are the most useful). To measure weights transfer the contents of each unit (e.g. 1 tin) into the plastic bag and weigh the bag. Do the same for liquids, using the measuring jug. To weigh heavy items (such as a sack of grain) the traders may have a large measuring scale; or the weight may be common knowledge. However, if you want to find out the weight of a large unit but you don’t have a scale, do the following: weigh a smaller unit, such as a tin, and then work out the number of small units that go into the larger unit (the sack). Conversely, if you don’t have a scale that measures small units (e.g. a bowl) weigh a larger unit (e.g. a tin) and find out the number of bowls that “fit into” the tin. The same goes for liquids. Note that you only need to do this once or twice at each market, and if you are familiar with the market and know the weights and measures, it is not necessary. However, even if you know the market you probably won’t know the weight of a pile of potatoes, or a tin of grain, and you probably won’t know the difference in weight between one tin of maize and a tin of sorghum. Also, the size of the grain determines the weight of the unit in which it is sold because larger grains take up more volume, so, for instance, a sack of sorghum weighs more than a sack of maize.

Another thing to keep in mind is that shelling rates matter: since we are ultimately interested in the number of calories that any particular sack, bag or tin of grains or pulses; or jug of milk, it is important to find out whether the volume of the commodity is on or off the shell. This is especially important for ground nuts, and sometimes maize (if it is stored on the cob). For cassava, you need to find out if it is dried or fresh, as this will affect the volume to weight to calorie conversion. The [Session 8 \(Introduction to Kilocalorie Calculations\)](#) in [Module 2 \(Baseline Assessment\)](#) of the [HEA Training Guide](#) contains a kilocalorie lookup table that allows you to match the kilocalorie content to different commodities (such as dried vs fresh groundnuts for instance). So your job in the market is to make sure you find out the right weight and the right commodity so that you can convert these to the appropriate kilocalorie contribution.

### **Variations in market prices**

Market prices vary according to a number of factors. When recording prices from day markets the following points need to be noted:

1. Variation over time: prices vary throughout the day with higher prices earlier on when quality is good and there is still time to sell available supplies; lower at the end of the day as vendors try to clear out their stock.
2. Quality: the price of commodities varies according to quality, e.g. ripeness, firmness, bitterness; grain can be infested; livestock differ according to body condition and disease. Try to determine and consistently get prices for the standard quality.
3. Variety: there are many varieties of each commodity; for longitudinal monitoring you should monitor the same type each week. Try to monitor substitutes also, varieties which people will consume if the price of a preferred crop or variety rises excessively. Distinguish also between different qualities or uses (e.g. finger millet may be used for brewing whereas bulrush millet is an important food crop in some areas. Try to monitor also varieties or types that have different destination markets as well as different origins, including domestic and foreign markets.

The table below gives examples of sub-categories that may be useful in your market price analysis.

<b>Grain</b>	<b>Livestock</b>	<b>Edible Oil</b>
<ul style="list-style-type: none"> <li>▪ Red sorghum/white sorghum</li> <li>▪ Finger millet/bulrush millet</li> <li>▪ Locally produced maize/imported maize/food aid maize</li> </ul>	<ul style="list-style-type: none"> <li>▪ Livestock sold for slaughter; categorised by age or size</li> <li>▪ Livestock sold for breeding (sex/age/reproductive status)</li> <li>▪ Transport animals</li> <li>▪ Export/local market</li> </ul>	<ul style="list-style-type: none"> <li>▪ Vegetable oil (imported)</li> <li>▪ Vegetable oil (food aid)</li> <li>▪ Sesame oil (locally produced)</li> <li>▪ Groundnut oil (locally produced)</li> </ul>

4. Price variation between vendors: there may be some variation in price between vendors, particularly with respect to factors which are unrelated to the commodity (e.g. vendor's reputation, character, store, location of store). In this case then, we need to ensure that for each price that is entered on our recording sheet we

have collected as many examples as necessary to record variation among traders. As a guide, 3 traders is a reasonable sample for someone who knows the market well; those who are new may need to check with more. The average of these prices is recorded on the sheet.

5. Price variation due to change in unit volume/weight. Some commodities may not appear to change in price (i.e. it stays the same) but the quantity sold may change. This is sometimes the case for commodities sold in piles, bundles (e.g. vegetables, charcoal, and firewood). A perceptive market monitor will make note if the size of the bundles changes, even if the price remains the same, as this means a real change in cost.

### ***Getting the average price***

In a set of values, the mode is the most frequently occurring value; the median is the middle value; and the mean is the average value. No single measure of central tendency provides a complete picture of the data. For market price data collection, the data collector should consider mainly the mode, but sometimes the mean is useful if there is no clear mode.

**Mode:** the most frequently occurring value

**Mean:** the arithmetic average of a group of numbers. Add all the values together and divide the total by the total number of values