

*Supplementary file 3. Cereal grain and soil sample field data collection questionnaires in Ethiopia and Malawi.*

# GeoNutrition crop and soil sample metadata, Ethiopia

## Team ID

*This is the identification number assigned to your team.*

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## GID

*This is the identification number from the original sampling site lists*

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## Data recorder

*Please input your full name (your name & father's name)*

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## Locality name

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## Date and time of sampling

yyyy-mm-dd

hh:mm

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## GPS location

*GPS coordinates can only be collected when outside.*

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latitude (x.y °)

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longitude (x.y °)

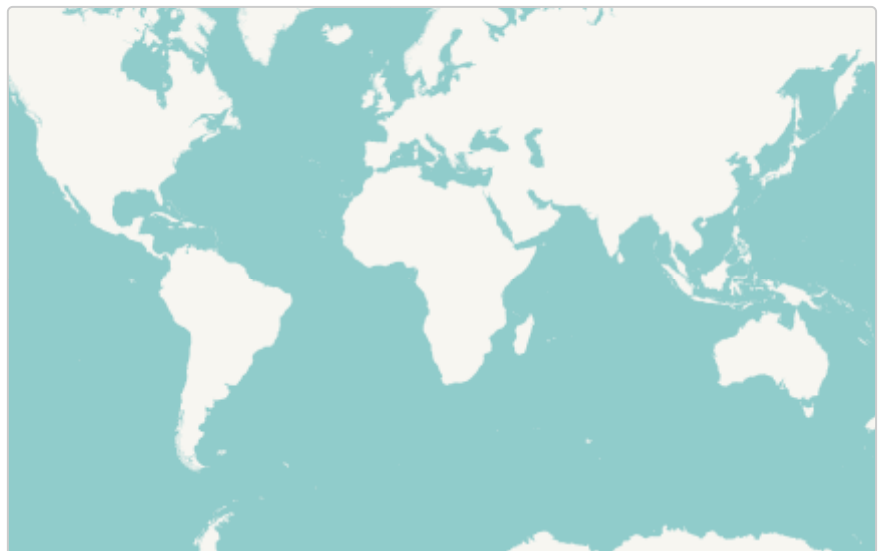
---

altitude (m)

---

accuracy (m)

---



## Site

Main

Close pair

## Has the land been ploughed recently?

Yes

No

## Crop sample

Sample ID

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### Source of grain sample

- Standing crop
- Field stack
- Store

### Crop type

- Wheat
- Teff
- Maize
- Sorghum
- Finger millet
- Pearl millet
- Other

If crop type is "Other", please write the crop here.

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### Crop variety if known

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### Crop picture

Click here to upload file. (< 5MB)

## Soil sample

Sample ID

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### Site picture

Click here to upload file. (< 5MB)

### Sample bags picture

Click here to upload file. (< 5MB)

# 2018 GeoNutrition crop and soil sample metadata, Ethiopia

## Team ID

*This is the identification number assigned to your team.*

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## TargetSiteID

*This is the identification number for this field from the original sampling site lists.*

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## Data recorder name

*Please write down your initials. E.g., DG for Dawd Gashu*

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## Locality name

*What do the local community call this place? E.g., village/kebele name*

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## GPS location

*Tap on Start GeoPoint to record the latitude, longitude and altitude of this field. Wait until the tablet populates this data automatically. Make sure the accuracy is <10 m.*

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latitude (x.y °)

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longitude (x.y °)

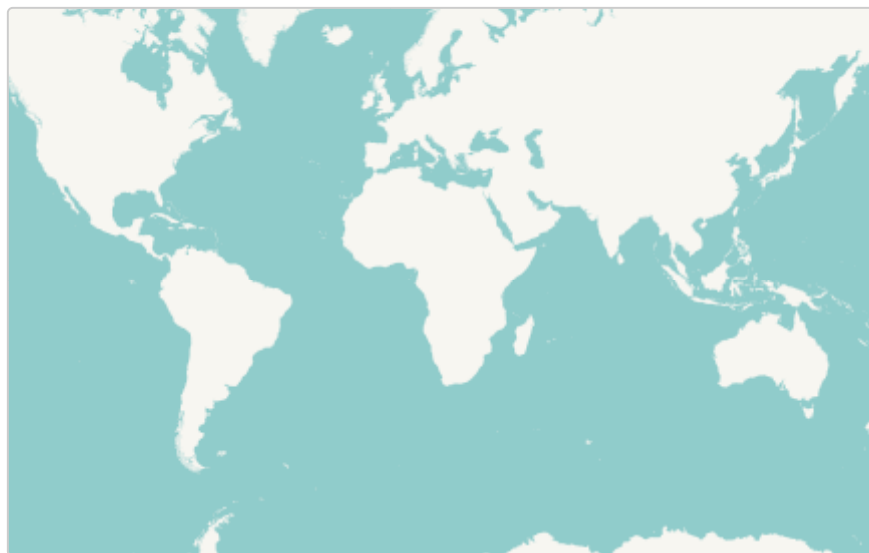
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altitude (m)

---

accuracy (m)

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## Site

*Is this site labelled as main or close pair on your sample list for your team? If it is a close pair, please select "Close Pair" for both sample sites*

Main

Close pair

**Has the land been tilled recently (since harvest)?**

- Yes
- No
- Minimum tillage is practiced
- Unknown

## Crop sample data

### CropSampleID

*Tap on Get Barcode to scan the QR-Code label on the cereal grain bag from this field using the tablet camera. Make sure that there is no other label in the sight of the tablet camera. After scan, check the sample ID recorded is what you see on the label of the grain sample bag from this field.*

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### Source of grain sample

- Standing crop
- Field stack
- Store

### Crop type

- Teff
- Wheat
- Triticale
- Barley
- Maize
- Sorghum
- Pearl millet
- Finger millet
- Rice
- Other cereal grain (specify in the next question)

**If other cereal grain was selected, please specify**

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### Crop variety if known

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**Was this an inter-cropped field?**

- Yes
- No
- Unknown

**If yes, what was inter-cropped?**

- Legume-grain
- Ethiopian kale-grain
- Other (specify)
- Unknown

**If other was selected, please specify**

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**What was the grain yield from this field?**

*Please select the unit for the cereal grain yield in the next question. If the yield is unknown, please enter 0 and select the unit as "Unknown"*

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**What is the unit for the grain yield?**

- 50 kg sacks of clean grain per hectare
- Quintal per hectare
- Other (specify)
- Unknown

**If other was selected, please specify.**

---

**Crop picture**

*Take the picture of the standing crop/ stack using the tablet camera.*

Click here to upload file. (< 5MB)

## Soil sample and field data

**SoilSampleID**

*Tap on Get Barcode to scan the QR-Code label on the soil bag from this field using the tablet camera. Make sure that there is no other label in the sight of the tablet camera. After scan, check the sample ID recorded is what you see on the label of the soil sample bag from this field.*

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**How was the soil sample taken?**

- Using auger
- Using trowel

**What is the colour of the soil?**

- Black
- Brown
- Dark brown
- Light brown
- Sandy yellow
- Red
- Other (specify in the next question)

If "Other" was selected as the soil colour, please describe it here.

---

**Was fertiliser applied to this field in this cropping season?**

- Yes
- No
- Unknown

**If yes, which one (s)?**

- NPK
- NPS
- NPK (Boron and zinc blended)
- NPS (Boron and zinc blended)
- Urea
- Urea (Boron and Zinc blended)
- Diammonium phosphate
- Ammonium nitrate
- Triple super phosphate
- Other (specify in the next question)
- Unknown

If other fertilizer was selected, please specify here

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What was the fertilizer application rate? (kg per hectare)

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**Was lime applied to this field in this cropping season?**

- Yes
- No
- Unknown

If yes, what type of lime? E.g., dolomite, chalk, etc

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What was the lime application rate? (kg per hectare)

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Were manure or organic residues applied to this field in this cropping season?

- Yes
- No
- Unknown

If yes, what type

- Farmyard manure
- Compost
- Crop residue left on field
- Crop residue burned on the field
- Other (specify in the next question)
- Unknown

If other was selected above, please specify

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**Site picture**

*Take the picture of the site with some easily identifiable landmarks.*

Click here to upload file. (< 5MB)

**Sample bags picture**

*Take the picture of the grain and soil bags with the labels facing the camera.*

Click here to upload file. (< 5MB)



# GeoNutrition crop and soil sample metadata, Malawi

## Team ID

*This is the identification number assigned to your team.*

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## GID

*This is the identification number for this field from the original sampling site lists.*

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## Data recorder

*Please write down your initials.*

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## Locality name

*What do the local community call this place?*

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## Date and time of sampling

*No need for manual input. Please swipe left to continue to the next question.*

yyyy-mm-dd

hh:mm

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## GPS location

*Tap on Record Location to record the latitude, longitude and altitude of this field. Wait until the tablet populates this data automatically. Make sure the accuracy is <10 m.*

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latitude (x.y °)

---

longitude (x.y °)

---

altitude (m)

---

accuracy (m)

---



## Site

*Is this site labelled as main or close pair on your sample list for your team?*

Main

Close pair

**Has the land been tilled recently (since harvest)?**

- Yes
- Not yet
- Minimum tillage is practiced
- Unknown

## Crop sample data

### CropSample ID

*Tap on Get Barcode to scan the QR-Code label on the cereal grain bag from this field using the tablet camera. Make sure that there is no other label in the sight of the tablet camera. After scan, check the sample ID recorded is what you see on the label of the grain sample bag from this field.*

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### Source of grain sample

- Standing crop
- Field stack
- Store

### Crop type

- Maize
- Sorghum
- Finger millet
- Pearl millet
- Rice
- Other cereal grain (specify in the next question)

**If other cereal grain was selected, please specify**

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### Crop variety if known

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**Was this an inter-cropped field?**

- Yes
- No
- Unknown

**If yes, what was inter-cropped?**

- Legume-grain
- Cassava-grain
- Legume-cassava-grain
- Other (specify)
- Unknown

**If other was selected, please specify**

---

**What was the grain yield from this field?**

*Please select the unit for the cereal grain yield in the next question. If the yield is unknown, please enter 0 and select the unit as "Unknown"*

---

**What is the unit for the yield?**

- 50kg sacks of clean grain per acre
- Ox-carts of maize cobs with husks per acre
- Ox-carts of dehusked maize cobs per acre
- Unknown

**Crop picture**

*Take the picture of the standing crop/ stack using the tablet camera.*

Click here to upload file. (< 5MB)

## Soil sample and field data

**SoilSample ID**

*Tap on Get Barcode to scan the QR-Code label on the soil bag from this field using the tablet camera. Make sure that there is no other label in the sight of the tablet camera. After scan, check the sample ID recorded is what you see on the label of the soil sample bag from this field.*

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**What is the colour of the soil?**

- Black
- Brown
- Dark brown
- Light brown
- Sandy
- Red
- Other (specify in the next question)

**If "Other" was selected as the soil colour, please describe it here.**

---

**Was fertiliser or lime applied to this field in this cropping season?**

- Yes
- No
- Unknown

**If yes, which one (s)?**

- Urea
- Diammonium phosphate
- Ammonium nitrate
- NPK (23:21:0 + 4S) basal dressing
- NPK with Zn (23:10:5 + 1%Zn + 6%S)
- Triple super phosphate
- Lime
- Other (specify in the next question)
- Unknown

**If other fertiliser/lime was selected, please specify here**

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**What was the rate of application? (number of 50 kg bags per acre)**

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**Were manure or organic residues applied to this field in this cropping season?**

- Yes
- No
- Unknown

**If yes, what type**

- Farmyard manure
- Compost
- Crop residue left on field
- Crop residue burned on the field
- Other (specify in the next question)
- Unknown

**If other was selected above, please specify**

---

**Site picture**

*Take the picture of the site with some easily identifiable landmarks.*

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**Sample bags picture**

*Take the picture of the grain and soil bags with the labels facing the camera.*

Click here to upload file. (< 5MB)