

# Evaluation of a school feeding programme linked to agriculture production in Ghana

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<b>Registration date</b> 05/03/2015	<b>Overall study status</b> Completed	<input type="checkbox"/> Statistical analysis plan <input checked="" type="checkbox"/> Results
<b>Last Edited</b> 20/05/2019	<b>Condition category</b> Nutritional, Metabolic, Endocrine	<input type="checkbox"/> Individual participant data

## Plain English summary of protocol

### Background and study aims

School food programmes are a popular way to support the education, health and nutrition of school children. As of 2011, the Ghana School Feeding Programme (GSFP) reaches over 1.6 million primary school children in all 170 districts in Ghana. Private caterers are awarded contracts by the GSFP to procure, prepare and serve food to pupils. The caterers are able to procure on a competitive basis without commitment to purchasing from small-scale farmers. 'Home-grown' school feeding aims to link the increased demand for school feeding goods and services to community stakeholders, including small-holder farmers (mainly subsistence farmers) and women groups. This study aims to evaluate the impact of school feeding sourced from small-holder (mainly subsistence) farmers on school children's nutrition, health and education as well as on small holder food security in Ghana.

### Who can participate?

Pre-primary and primary school age children (2-15 years of age) and their families, and small holder farmers.

### What does the study involve?

Participating primary schools will be randomly allocated to one of the following three groups:

1. The school feeding programme group, where the standard GSFP is implemented.
2. The 'home-grown' school feeding (HGSF+) group, where the GSFP is implemented in addition to training of community-based organizations and local government.
3. The control group, where the intervention will be implemented two years later.

Half of the HGSF+ schools will also be randomly assigned to receive food fortification (the HGSF++ group). Data will be collected from children aged 5 to 15 in all of the groups, including blood samples, demographic and education characteristics of the children, and characteristics of the parents.

### What are the possible benefits and risks of participating?

School feeding programmes have been shown to support the education, health and nutrition of school children. The Government of Ghana will benefit from the findings in terms of informing the scale-up of the national programme. The participants will find out about their hemoglobin levels and parasite infection status. Overall, the study involves very low risks for participants.

The risks are related to the quality of the food service delivered by the national school feeding programme. Risks involve food hygiene, sanitation and preparation-related issues. The study will examine these risks in detail and also identify and test strategies to reduce these risks. The anemia measurement and blood film preparation will involve finger pricking that will cause some discomfort, but no major risks are associated with this procedure.

Where is the study run from?  
Imperial College London (UK)

When is the study starting and how long is it expected to run for?  
June 2013 to June 2015

Who is funding the study?  
Bill and Melinda Gates Foundation (USA)

Who is the main contact?  
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## Contact information

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# Additional identifiers

EudraCT/CTIS number

IRAS number

ClinicalTrials.gov number

Secondary identifying numbers

N/A

## Study information

### Scientific Title

The impact of school feeding on nutrition, education, agriculture and other social outcomes: design of a randomised controlled trial of 'home-grown' school feeding in Ghana

### Acronym

N/A

### Study objectives

School feeding programmes provide well documented direct benefits to school children and their families. Emerging evidence also suggests that they can provide a stable market for goods and services. This study in Ghana and a study we have begun in Mali (<http://www.controlled-trials.com/ISRCTN76705891>) are the first randomised controlled trials that will examine this in detail.

The Ghana School Feeding Programme (GSFP) was piloted in 10 schools in late 2005. By the end of 2009, GSFP had progressively grown to serve 1,695 public schools with 656,624 pupils in all the 170 districts in Ghana. As of 2011, the Ghana School Feeding Programme (GSFP) reaches over 1.6 million primary school children in all 170 districts in Ghana. Co-ordination and implementation are undertaken by a National Secretariat, with programme oversight provided by the Ministry of Local Government and Rural Development (MoLGRD). Line Ministries offer technical support through the programme steering committee (PSC), although a number of NGOs and bilateral agencies are also involved with technical support. The GSFP has become a very popular programme with the Ghanaian public and enjoys solid commitment from the government who directly fund the programme, currently with a 4 year programme budget of over 200 million USD.

The GSFP service delivery is provided through private caterers who are awarded contracts by the GSFP to procure, prepare and serve food to pupils in targeted schools. Each caterer is responsible for procuring food items from the market, preparing school meals and distributing food to pupils. Cash transfers are made from the District Assemblies, under the supervision of the District Implementing Committees (DICs), to caterers based on 40 Ghana pesewas (circa US\$0.33) per child per day. Caterers are not permitted to serve more than three schools each, and profit is derived from savings made after food has been procured, prepared and distributed. The caterers are not restricted or guided in their procurement and are able to procure on a competitive basis without commitment to purchasing from small-scale farmers even though the

GSFP project document prioritises procurement from the community surrounding the assisted schools, broadening the focus to the district and national levels when food items are not available.

School food programmes are popular interventions to support the education, health and nutrition of school children. Home-grown school feeding has the potential to link the increased demand for school feeding goods and services to community stakeholders, including small-holder farmers (mainly subsistence farmers) and women groups. There is limited evidence however of the impact of providing a reliable market for small-holder farmers through “home-grown” school feeding approaches. The GSFP was designed as a strategy to increase domestic food production, household incomes and food security in deprived communities. Despite the large investment in the national programme, to date, there are no rigorous impact evaluations of the GSFP.

This study proposes a randomized control trial which aims to evaluate the impact of school feeding sourced from small-holder (mainly subsistence) farmers on school children’s nutrition, health and education as well as on small-holder food security in Ghana.

### **Ethics approval required**

Old ethics approval format

### **Ethics approval(s)**

Ethical clearance was obtained from the appropriate boards in Ghana and at Imperial College London. Meetings were held from early stages in the study development with relevant Government Ministries both at central and decentralised levels to discuss the purpose, procedures and risks involved in the study. Informed consent was obtained from parents/guardians of children through written and verbal information provided before interviews.

### **Study design**

Randomised controlled trial

### **Primary study design**

Interventional

### **Secondary study design**

Randomised controlled trial

### **Study setting(s)**

Community

### **Study type(s)**

Quality of life

### **Participant information sheet**

Not available in web format, please use contact details to request a participant information sheet

### **Health condition(s) or problem(s) studied**

School health and nutrition

## **Interventions**

This study involves a field experiment around the scale-up of the national Ghana School Feeding Programme, including 120 primary schools in 58 Districts. The randomly assigned interventions are:

1. School feeding programme group, where the standard Ghana School Feeding Programme is implemented
2. 'Home-grown' school feeding (HGSF+) group, including schools and communities where the Ghana School Feeding Programme is implemented in addition to training of community based organizations and local government
3. Control group, including schools and household from communities where the intervention will be implemented in two years (preferably without informing schools and households of impending intervention).

The pilot project will be implemented within the existing structure of the GSFP. By using the pre-existing programme structure, the pilot will complement the current programme by delivering a number of district and community level activities aimed at enhancing the GSFP impact. In brief, these activities comprise:

1. Enhancing the linkage between school feeding and smallholder agriculture production
2. Enhanced nutrition service.

The impact evaluation will include a sub-study focusing on nutrition in school feeding with and without fortification. A sub-group of 15 of the 30 HGSF+ will be randomly assigned to receive food fortification (the HGSF++ group) in addition to training and sensitization activities that are part of the HGSF+ pilot. Data will be collected from children aged 5 to 15 in the HGSF++, HGSF+, GSFP and control villages. Data to be collected includes blood samples, demographic and education characteristics of the child, and characteristics of the parents.

The expected impact of the intervention relate to education, nutrition and social protection. The findings of this study will provide policy and programme level guidance to inform the scale-up of the Government programme. This project will be a first of its kind and aim to fill the gap in the evidence base on HGSF programmes and provide measures of cost-effectiveness of two different implementation modalities.

The study population includes approximately 5000 children, 2400 households and 120 schools. Households will be selected at random from community level listings.

The study is integrated within the monitoring and evaluation of the national school feeding programme. Local Government Authorities, the Ghana Education Service, and local chiefs will be sensitized on the project activities and asked to give their consent. Informed consent will be requested from the each of the household heads, parents and School Principals prior to the interviews using a standardized form. All the survey tools are written in English, and the enumerators will speak both English and the local language.

Participants will be free to withdraw at any stage of the process by informing the survey enumerators, Local Government Authority, programme or Ghana Education Service staff. During the data processing stages the data set will be anonymized to ensure confidentiality of the respondents. All published data sets will include no personal references to individuals.

## **Intervention Type**

Other

## **Primary outcome measure**

Small-holder farmer income, school participation and learning, and community involvement in the programme. Baseline was conducted between 22/06/2013 and 02/09/2013. Follow-up planned for November 2015.

### **Secondary outcome measures**

Nutritional status (anthropometry and anaemia) and diet diversity. Baseline was conducted between 22/06/2013 and 02/09/2013. Follow-up planned for November 2015.

### **Overall study start date**

01/06/2013

### **Completion date**

01/06/2015

## **Eligibility**

### **Key inclusion criteria**

1. Pre-primary and primary school age children (2-15 years of age) and their families
2. Small-holder farmers

### **Participant type(s)**

Mixed

### **Age group**

Mixed

### **Sex**

Both

### **Target number of participants**

The study population includes 5300 children, 1800 households, and 120 schools. Households will be selected at random from village level listings.

### **Total final enrolment**

2869

### **Key exclusion criteria**

Households with children not of primary school age

### **Date of first enrolment**

12/06/2013

### **Date of final enrolment**

02/09/2013

## **Locations**

### **Countries of recruitment**

England

Ghana

United Kingdom

**Study participating centre**  
**Imperial College of Science, Technology and Medicine**  
Exhibition Road  
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London  
United Kingdom  
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**Study participating centre**  
**Noguchi Memorial Institute for Medical Research**  
Box LG 581  
University of Ghana  
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## **Sponsor information**

**Organisation**  
Imperial College London (UK)

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**Sponsor type**  
University/education

**Website**  
<http://www3.imperial.ac.uk/>

**ROR**  
<https://ror.org/041kmwe10>

# Funder(s)

## Funder type

Charity

## Funder Name

Bill and Melinda Gates Foundation

## Alternative Name(s)

Bill & Melinda Gates Foundation, Gates Foundation, BMGF, B&MGF, GF

## Funding Body Type

Government organisation

## Funding Body Subtype

Trusts, charities, foundations (both public and private)

## Location

United States of America

# Results and Publications

## Publication and dissemination plan

A series of papers related to baseline data, including the one on design and analysis of baseline data, are currently being drafted. These relate to education, nutrition and food security /agricultural linkages. Additional papers using the follow-up data are planned.

## Intention to publish date

## Individual participant data (IPD) sharing plan

## IPD sharing plan summary

Available on request

## Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
<a href="#">Results article</a>	results	20/01/2016		Yes	No
<a href="#">Results article</a>	results	01/08/2019	20/05/2019	Yes	No