

Supplementary material

Instructions guide for the researcher

Consumer preferences for micronutrient strategies in China. A comparison between folic acid supplementation and folate biofortification

Public Health Nutrition

[Author list removed to ensure the anonymity in refereeing]

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Rationale:

This document was used as a working tool to prepare, organize and conduct the experimental auctions in Shanxi Province. Therefore, it has to be considered as an instructions guide for the researcher, rather than for the participants. However, it not only contains the instructions for the researcher (to the participants), but also a comprehensive description of the information treatments and the provided information regarding the different auction steps (procedures, rules, information, ...). This document is specifically developed as a guidebook for the experimental auctions to determine WTP for FBR in Shanxi Province and should be treated as supplementary material to the manuscript “*Consumer preferences for micronutrient strategies in China. A comparison between folic acid supplementation and folate biofortification*”. Nevertheless, by providing a comprehensive practical auction guide, applied on a specific, novel and controversial food product, this document should contribute to future auction research. Due to word count restrictions in peer-reviewed journals, information on the auction procedures and the auction design are typically only briefly described in publications about experimental auctions with food products. This document was adapted for publication after the organization of the auctions in Shanxi Province.

Abbreviations:

FAR, Rice supplemented with folic acid pills; FBR, folate biofortified rice; GM, genetically modified; PPT, PowerPoint presentation; WTP, willingness-to-pay.

Remark: Boxes specifically refer to instructions for the participants. Words in *italic* refer to the instructions that were provided during the auctions (mainly orally). The auctioneers were asked to follow these guidelines, but used their own words to explain the procedures to the participants. We also used a PowerPoint presentation to guide the participants through the whole auction procedure (not included in this manual).

Preparations

Organizing successful experimental auctions required some practical preparations.

First, we developed, translated and collected all necessary **auction material**:

- 3-digit code per product, to be placed on auction table and mentioned on the bidding slips;
- Bidding slips (for trial and auction round 1-3);
- Code per participants, to be placed on table and to be put in bowl to select a winner (when there are multiple winners);
- Code per auction round, to be put in bowl because only one of the three auction rounds have to be selected as binding;
- PowerPoint presentation;
- Participation/informed consent form;
- Questionnaire (different parts)

Second, the **auction room** was prepared:

- Participants' tables, chairs and pens
- Auction table: products (including 3-digit codes) and selection bowl
- Multimedia: Beamer, screen, laptop

Third, the **auction products** were bought:

- Chocolate bars (trial sessions):
 - o A regular chocolate bar per person
 - o A bigger black chocolate bar and a hazelnut chocolate bar per auction
- Folic acid pills (7 pills in total)
- Rice
 - o A regular rice bag (1 kg) per person
 - o 1 GM rice bag per auction and 1 rice bag supplemented with folic acid pills

Recruitment

Who:

The **participants** of our experimental auctions had to fulfill the following criteria:

1. Female
2. Of childbearing age
3. Consuming rice
4. Living in Shanxi

Two target groups of FBR were recruited: students of childbearing age (school sample) versus women of childbearing age (market sample).

Where:

The participants of the auctions were recruited **near the auction room**, which is located close to a market place (market sample) or Shanxi Agricultural University (school sample) in Taigu County.

How:

To make sure that not only women interested in Genetically Modified food products were taking part in the experimental auction, participants were **not given specific indications as to the nature (GM, folate,...), objective (WTP) and aim of the experimental auctions** at the time they will be recruited.

Potential participants are asked to participate in a **“consumer rice experiment** (consumers’ reaction towards different rice products in Shanxi province)”, organized on behalf of [removed to maintain the anonymity of the submission process].

By referring to the **research institutes** that were involved in the organization of the auction, we clearly want to stress the non-commercial character of this study, as no private companies were aware of this study, nor were they involved. [removed to maintain the anonymity of the submission process]

The participants were also informed about the **maximum duration of the study** (one hour and a half, depending on how fast people were bidding and answering the questions).

Besides general information about the project, the female rice consumers were probably more interested in the **returns for their contribution**. Therefore, to further attract potential participants, recruiters explicitly mentioned the financial and material benefits of taking part in our study, respectively a monetary compensation and a free bag (1 kg) of conventional rice (bought in a nearby supermarket).

Participants were recruited several days before an auction, by providing them a recruitment form. Once a female rice consumer agreed to participate in the auction, she signed the list of the auction she wishes to attend.

Arrival

After a participant arrived, she was seated at the table of the participants.

Arrival briefing

As we still have to wait for other participants, you can already start by reading the participation form, completing the informed consent form and pass it on to one of the organizers. This form contains general information about this study and the key rules of participating. If you agree to participate, you will have to sign this form.

Once you have finished, we ask you to raise your hand. We will collect your form and give you a unique participant ID, which you will have to mention on each of the papers you will receive, and the first part of the questionnaire, which you already can start to fill in.

If you have questions, don't hesitate to call one of us. Thanks and have fun!

First, each participant was given a document which consists of two parts:

- **“Participation information”**, a brief overview of the main study characteristics:
 - o the purpose of the study (WTP of one or more rice products);
 - o the tasks of the participants (learning the auction procedures through training, opportunity to bid);

- the returns for the participants (participation fee, free rice bag);
 - data collection aspects (e.g. anonymity, confidentiality);
 - the rights of the participants (e.g. voluntary participation, opportunity to withdraw).
- **“Informed Consent”**, a form which consists of seven statements which the participant should sign to agree that she is informed about the different aspects of the experimental auction study, by confirming that he/she:
- voluntarily participates;
 - understands the participation information form;
 - is informed about the purpose of the study, her tasks, the opportunity to ask questions or to withdraw her consent;
 - understands that the data will be collected anonymously and confidential;
 - agrees with the above consent to participate.

Second, after collecting these forms, each participant received a **specific code**, which makes it possible to track her questionnaire and her bidding slips, and the **first part of the questionnaire**, which contains information about her socio-demographic profile (part A). We started our questionnaire with these general questions, as they are easy to answer. In that way, we could put the participant at ease. The participation/informed consent form and survey are provided at the end of this guide.

Briefing

The briefing started when **all** participants have signed their participant information/informed consent form and completed Part A of their questionnaire (socio-demographic profile). First, a short introduction of the organizers was given, continued by a brief overview of the different action steps in the auctions:

Welcome & introduction

My name is from [removed to maintain the anonymity of the submission process]. I would like to thank you all for participating in this food auction study on rice.

Today we receive help from who is a student at [removed to maintain the anonymity of the submission process]. I would like to remind you that all the information you provide, either through bidding or filling in the questionnaire, is confidential and will be treated anonymously. Therefore, it is in our best interest that you answer honestly, whatever the answer might be.

The study will last approximately one hour and a half, depending on the time you need to fill in the questionnaires and the duration of the bidding rounds.

We kindly ask you not to talk with each other or not to show your answers to other participants during the session unless told otherwise.

If you would have any question, feel free to ask one of the organizers now or later on during the market experiment.

...

You are about to make part of a market experiment on rice. In particular you will be a participant in an auction with rice. An experiment or an auction might sound weird too you, but you should not be afraid at all. Your experience as a consumer and buyer of rice is enough to participate.

I will shortly introduce what will happen in the coming hour.

Basically, there will be two main stages in this food auction.

In the first stage we will show you how the auction actually runs and how you can bid. At the end of this stage, we will ask you to decide how much you are willing to pay to exchange a chocolate bar, initially given to you, with another type of chocolates. This goal of this stage is to let you familiarize with the procedures of our food auction. However there will be monetary consequences to your bidding behavior.

In the second stage, we will run our 'real' auction with rice. During this auction you will not be allowed to talk or communicate with other participants or to show you bids to others. We will run several different bidding rounds. Each time you will have to decide if - and how much - you are willing to pay to exchange one kg of rice, initially given to you, with another rice products, based on the information you will receive.

Between several rounds you will receive a short part of a questionnaire, which you can fill in while we are collecting the bids and preparing the next round.

It might be confusing for you right now, but it will become clear to you once we start our training session.

You will not only receive a chocolate bar and one kg of rice, but also a budget of 5 Yuan for participating in this experiment. This budget can be used to bid on the auctioned products. At the end, you will receive your full participant fee.

However, be well aware that at the end of the trial auction and the actual auctions one round of bids will be selected as binding, which means that the participant with the highest bid of that round HAS to pay for the product. As this auction has to be considered as a real auction, we will charge you for every product you have to buy. This means that your take-home income will consist of your participant fee and the potential bidding budget (5 Yuan) minus the price you had to pay for the purchased product. These financial issues will be arranged after the final auction round, when we selected the binding round and product.

Training

Before starting the training sessions (gas cooker, candy), we gave an overview of the different auction procedures.

Auction procedures

What: A food auction is a market experiment with several consumers, where each participant decides for herself what the value is of an alternative products, compared to an initially given product.

In our case, we would like to know how much you value a particular rice products, compared to a typical rice bag. You will inform us of the true value you attach to this alternative products by stating the highest amount you are prepared to pay to exchange the conventional product, initially given to you, with this product. The highest exchange price you are prepared to pay is what we call your 'bid' in our auction. However, if the value of your given product is higher than the product we sell, e.g. because you do not want to like (to buy) the auctioned product, you can submit a zero bid.

In our auctions, you will have the opportunity to bid to exchange a traditional rice product with an alternative rice product, based on the provided information. As there

will be different bidding rounds in our action, we will provide you each time new information. It is up to you to evaluate whether it's (still) worth to bid or not.

What to bid: *Either way, it is in your best interest to bid exactly the price you feel the alternative product is more worth than your original product. If you bid more than you actually value the product, and you win the auction, you will have to pay more than you think it's worth. On the contrary, if you bid less than you actually value the product, compared to the conventional product, the product might be sold to another participant for a price you actually valued the product.*

So you better bid honestly, i.e. the price YOU believe this product is more worth than the initial product. The highest price you are prepared to exchange a product to the other one is your TRUE value. It is up to you, it's your money and your opinion.

If you don't want to bid on this product, or you believe this product is not more valuable than the initial product you own, you should bid zero. It is important that it is your own free choice to buy the product or not. If you prefer the product you own, and do not want to trade it for the other auctioned product, a zero bid is appropriate.

Who has to buy the product and how much does he has to pay?

There is one important rule in our auction: The participant with the highest bid HAS TO BUY the product by paying the price of the 2nd highest bidder. Remember, If you don't bid honestly, you will have to buy the product at a higher price than you want or you can't buy the product you wanted because you bid too less. It is also important to note that anyone of you could win and buy the product and, because no one will be aware of the bids of others, you should think carefully and bid truthfully.

How do we select the 'buyer' (the one who won the auction round)?:

There will be several rounds of bidding during the auctions, but there will be only round and only one product binding. At the end of the auction, we will randomly select which round and product wins, by drawing a winning round/product out of the selection bowl, which is placed on the auction table.

Two training sessions:

- Gas cooker example: illustrative example of one auction round; not presented in this guide)
- Candy auction example: illustrative example of one round and a quiz to evaluate whether the participants understand the procedures.

Here, we will only present the 2nd illustrative example, which deals with candy bars, because this example also contains a small quiz. The gas cooker example is similar to the candy bars, but does not include a quiz. Gas cookers were chosen as it reflects a common exchange practice in Shanxi Province. New gas cookers are sold door-to-door, where people can decide whether they want to pay to upgrade their old gas cooker.

Example – candy (+ quiz)

Assume an auction on candy, where participants initially receive a regular candy bar. In the first auction round, a candy bar is for sale, which is exactly the same as their given bar, except for one thing: it is sugar free.

This means: participants can bid to exchange their regular candy bar with an alternative candy bar that does not contain any sugar.

The question is thus: given this candy bar for sale, how much are you willing to pay to exchange.

The first auction round started, and everybody placed a bid, without knowing what the other participants bid. After collecting the bids, we found the following bid results:

Participant 1: 0.50 Yuan

Participant 2: 0.50 Yuan

Participant 3: 0.00 Yuan

Participant 4: 1.25 Yuan

Participant 5: 0.85 Yuan

These bids do not reflect the total price of the candy bar, but only the surplus the participants are prepared to pay to trade the products. In other words, it is the price to exchange conventional with sugar free candy.

To better understand this, you could compare this with buying jewelry or flight tickets: you pay the price to exchange your own jewel to another one; or you pay the surplus you want to pay for changing your flight ticket for a new ticket. This is what the bid is all about. If you don't want to pay more to have this auctioned product, you bid zero, i.e. you don't want to exchange.

Let's see if you understand our auction procedure.

We would like to ask you to write down:

- who won this auction round (participant 4),*
- why (highest bid),*
- and how much does she has to pay to buy the product (2nd highest bid, i.e. ¥ 0.85).*

[interaction]

Results:

Based on our auction rule, we clearly see that participant 4 wins the auction. She has the highest bid. However, as said before, she has to pay the 2nd highest bid.

Therefore, participant 4 pays 1.00 Yuan in cash and receives the sugarless candy bar, in return for her own regular candy bar.

However, there are multiple rounds in the auction, and only one round will be binding, which means that only one product from one round will be sold. Therefore, participant 4 only will have to pay this round, if it will be selected as the winning round at the end.

If this would be the binding round, this price would be deducted from the bidding budget of this participant. The participants with the highest bids in the other rounds keep their regular products and their transactions are cancelled as these rounds were not selected as binding.

[Check whether the participants correctly answered the questions and, if necessary, explain the procedures once again]

Practice

A practice round with chocolates is organized. As this auction example involves a real bidding process, with one winner at the end, some practical issues needed to be addressed. Each participant was given a regular milk chocolate bar, which is then considered their own chocolate bar, and a trial bidding slip. The auctioned chocolate bars were presented at the auction table. Communication between the participants is allowed during this training auction.

Chocolate auction trial

However, before we will start the actual auction rounds, we will organize a real auction with chocolate where YOU will actually have to bid to obtain a new, alternative chocolate by exchanging your old chocolate. As mentioned before, the budget you will receive, can be used for bidding for the chocolate and rice products. When you win an auction round that has been selected as the binding auction round, we will deduct the 2nd highest bid price from your budget.

After this chocolate example you should be familiarized with our auction procedure.

Let's start our first chocolate round:

a) You receive now a regular small milk chocolate bar of 1.6 Yuan. This is now your own chocolate bar.

b) There are now two products that can be bought. The two products are bigger than your own chocolate bar. While the first contains hazel nuts, the latter is a dark chocolate bar.

c) We now would like to ask you to report the highest amount of money you are willing to pay to exchange your own chocolate bar with each of these two bars. The value of your bid is the price YOU think this new product is more worth than the product you own now. If you do not want to exchange, a zero bid is appropriate.

d) Although this chocolate auction will have real consequences, where the highest bidder has to buy the auctioned product from the binding auction round, this is still considered as an exercise to further teach you the auction procedures. Therefore, compared to the auctions later on, you are allowed to chat or communicate with each other.

Remember, if you are willing to exchange your product with one of these two products, please write down the highest price (in Yuan) you are prepared to pay. If you don't want to trade your chocolate, because you prefer your own regular chocolate more than the chocolate for sale, you write down zero, i.e. you bid nothing. When you have the highest price, you will have to pay the price equal to the second highest bid.

e) Remember that it is in your best interest to bid the amount that you are truly willing to pay to replace your chocolate with the one at the auction table. If you bid more than your true willingness-to-pay-to-exchange, you increase your chances of purchasing the alternative chocolate, but you may have to pay a price that is greater than what you are willing to pay. On the other hand, if you bid less than the amount that you are truly willing to pay to exchange then you may forego the opportunity to purchase the other product at a price that you would have been willing to pay. So bid honestly the highest amount you want to do the exchange. When the price to pay the product is below your true value, you could exchange. When the price to pay the product is above your statement, you don't have to exchange.

f) We will now collect the bids. We ask you to keep it silent.

h) We will now randomly select the binding round and binding product. We will use this selection bowl to randomly draw the round and product that will be considered as binding.

[selection + announcement of selected round or product]

i) If we look at the bids of the selected round/product, we see that participant ... is the "buyer", and she has to pay the second highest bid to trade his own chocolate bar with the (selected) product (from round ...).

j) We will exchange the product now, but we will deduct the market price (2nd highest bid) from your budget at the end of the auction. So you (i.e. the buyer) will receive "BUDGET minus the market price = X Yuan". Instead, you receive this new chocolate bar.

Auctions

Before the actual auctions started, the products of the chocolate auction were removed from the auction table and replaced by the two auctioned rice based folate products. Each participant is endowed with a regular rice bag, a bidding slip form (round 1-3). All bidding slips are numbered based on the code each participant received during the briefing stage. Finally, each participant receives 5 Yuan.

Each auction contained three auction rounds, alternated with parts of the questionnaire, structured as follows:

- *Filling in Questionnaire part A (socio-demographic profile)*
 - Preparing the auction table and distributing the endowed products
 - Distributing the bidding slip and endowed product
 - Running the auction rounds:
- Round 1: information provision: same rice, same taste, appearance, except more folate
- *Filling in Questionnaire part B (folic acid related variables)*
- Round 2: information provision: folate benefits, focus on NTDs
- *Filling in Questionnaire part C (GM related variables)*
- Round 3: information provision: GM technology (FBR is a GM product, while FAR isn't)
- *Filling in Questionnaire part D (Negative valuation and product choice)*
- Collecting all bids
- Selecting the buyer

Briefing

We will move on to our auction rounds. We will organize three auction rounds. Each round you will receive information about a particular rice products and you can bid again on the rice products for sale, based on the additional information you will receive.

When all auction rounds are finished, and everybody submitted a sealed bit in each round, we will determine who will exchange her bag of one kg of rice. In other words, at the end of the auction, you will know whether you have to buy the auctioned rice bag or not. In between the rounds we will give you a short part of a questionnaire, which you can fill in while we are collecting the bids and preparing the next auction round.

*This is the point where your auction officially starts. From now on we ask you not to communicate with each other and look forward at all times. If you would have a question, we kindly ask you to raise your hand until one of us comes to help you. Let's first restate the **auction rules** briefly:*

1. You are not allowed to talk during the whole auction. If you have questions, raise your hand. You will have to submit your bid sealed, which means that nobody else could see what you bid. Therefore, you are asked to remain looking forward at all times.

2. Your bids are anonymous and confidential and will not be posted. We will analyze all your bids and will not know who bid what and who you are. The only thing we ask is to bid honestly the highest amount you are willing to pay to exchange your product with the product on the auction table. There are NO wrong bids/answers. You just bid what you truly believe is the price you are willing to pay more for the alternative product. If you do not want to exchange your product, you can bid zero.

This is your choice, your opinion, not ours. There is no right answer, only your answer.

3. If you think the product is not more worth than your initially given product, you write down zero.

4. The basic rules of the bidding procedure:

4a) Only one auction round will be selected. Only the highest bidder of this round has to pay the selected product from the selected round. So, there will be only one buyer, and she will only have to buy one product. This is the person that has the highest bid in the randomly selected binding round. So there is an equal chance that each of your bids could be selected as a buyer.

4b) If you are the highest bidder at the randomly selected binding round, you are required to purchase the product by exchanging your initial product with the auctioned product. The price you will need to pay is the 2nd highest bid of that round. We will charge your payment by deducting the amount from the budget of 5 Yuan or the total budget which you receive after all auction rounds are finalized.

4c) The money you have received can be used for bids/purchases during the different auction rounds. If necessary, you can bid higher.

4d) The best strategy is to bid the highest amount that you are truly willing to pay to replace your initially given rice product with the one at the auction table.

Thus: If you are willing to exchange your product with the auctioned products, please write down the highest price (in Yuan) you are prepared to pay. If you don't want to trade it, you write down zero, i.e. you bid nothing.

After summarizing the auction rules, three different auction rounds were organized:

Round 1: information about folate content

Let's start the real auction:

a) In front of you is a 1 kg bag of regular rice of 5.2 Yuan. You now own this product.

b) On the auction table there are two products available for bidding:

Information treatment:¹

Folate enriched rice bag: A bag of rice, which is exactly the same bag as yours. It has the same amount of rice (1 kg), the same taste and the same appearance. There is only one difference compared to your bag of rice. It contains significantly more folate, also known as vitamin B9, than your bag. The folate vitamin is about 40 times more available in the alternative rice bag, compared to your own regular rice bag².

Rice bag supplemented with free folic acid pills: A bag of rice, which is exactly the same bag as yours. It has the same amount (1 kg), the same taste and the same appearance. There is only one difference: this bag of rice is sold together with 7 folate (folic acid) pills³. The total amount of folate is exactly the same as in the other rice bag on the auction table, i.e. approximately 40 times more than the rice bag in front of you.

The amount of folate in these two products is equal: 400 µg folate per portion⁴ in the folate enriched rice bag, or 400 µg folate per pill in the bag with free folate pills. With both products you can achieve the recommended folate intake for a week, either by consuming each day folate enriched rice or taking one folate pill per day.

[end of information treatment]

You will need to consider each product individually in each of the rounds, which means that you will have to bid on each product separately, knowing that at the end only one of these two products will be sold (the one from the binding round).

c) Now, we ask you to report the highest amount you are willing to pay to exchange your 1 kg of rice with (each of the) rice bags on the table. The value of your bid is the price YOU think this alternative rice bag is more worth to you than the product you own now, the regular rice bag. So what do you bid to exchange your bag of rice with a bag containing more folate and a bag sold together with 7 free pills which has the same amount of folates as the bag with higher folate content?

d) It is important that no one else knows your willingness-to-pay to exchange, so be sure your bid is sealed, by folding or turning your paper.

Don't feel uncomfortable if you do not know what folate actually is/does and what is it good or bad for.

Take your time and try to report your true willingness-to-pay to exchange. This can be done by filling in the first box of your bidding slip, which states round 1.

e) If you have finished, please raise your hand and wait until we provide you with Part B of our questionnaire. Good luck!

Round 2 provided subjects information about the benefits of the increased folate content of FBR and/or FAR.

¹ In the auctions, the products are presented in a random order and represented by a randomly chosen 3-digit code, which is also shown on the biddings slips.

² The bag of rice consists of 80 µg of folates, while the bag for sale contains approximately 3000 µg of folates. Actually, it contains 12000 µg, but when taking into account processing and bio-availability issues, only ¼ remains (see Storozhenko et al. 2007 and De Steur et al. 2010).

³ Although there is a clear difference between folic acid and folate, mandarin uses a common character for both, which avoids the need to clarify this difference.

⁴ 1 portion is estimated at 133 g rice, i.e. the average rice consumption in Shanxi Province. Source: CNGOIC (2009). Food Grains Weekly Report. Newsletter, various issues. Beijing: CNGOIC.

Round 2: information about folate benefits

As will be the case in the following auction rounds, the auctioned products will be the same, only the amount of information you receive about the auctioned products will be different in each auction round.

a) In front of you is still your 1 kg bag of regular rice. You still own this product.

b) In round 2 we give you more information about the benefits of consuming more folate or vitamin B9, either by consuming the bag with folate-rich rice or by consuming the folate pills. This particular bag of rice contains a higher level of vitamin B9 or folate, as mentioned in the previous round. [this information was only briefly presented on the PPT]

Information treatment:

“Folate is the water-soluble vitamin B9 and is considered to play an essential role in human growth and development, especially during pregnancy. By consuming one of the two auctioned products you can achieve the recommended folate intake for 1 week, either by consuming each day folate enriched rice or taking a folate pill.

Consuming the daily recommended folate intake level, is good for your health, because:

For pregnant women:

- it drastically reduces the risk of delivering a baby with a (neural-tube) birth defect, such as spina bifida (split spine or open back) or a still birth.

For all people:

A higher folate level further reduces the risk of:

- Anemia (lack of oxygen in the blood),*
- Cancers (such as leukemia, breast, cervical, pancreatic & bronchial cancer)*
- Alzheimer, coronary and cardiovascular diseases.*
- Eating more folate also improves the overall resistance to diseases, whoever it takes.”*

The two bags, one with folate in the rice, the other with folate pills attached, have the same amount of folate. So the benefits of consuming will be exact the same.

[end of information treatment]

c) Now, we ask you to report the highest amount you are willing to pay to exchange your one kg of rice with each of the rice bags on the table, given this information. So what do you bid to exchange your bag of rice with a bag containing and a bag sold together with 7 free folic acid pills?

If this new information did not change the price you are willing to pay to exchange your product, you report the same willingness-to-pay, thus the same bid. If it has changed, you submit a different bid, a lower or higher bid, dependent on your opinion of the new information you obtained.

As in the previous round you still need to bid on each product individually and you can bid zero if you do not want to trade your product.

d) The procedure is entirely similar as in the previous round: bid anonymously, do not talk, look forward, and bid your true value to exchange your product with this alternative products. You can fill in your bid in the box referring to round 2. Take your time to bid and raise your hand once you have your submitted your sealed bid. We will provide you with C of our questionnaire. Good luck!

As round 3 reveals that FBR is genetically modified, this auction round was considered a crucial round.

Round 3: information about GM technology in FBR (versus non-GM FAR)

Analogues to the previous auction round, the auctioned products is the same, but we will add new information, to which you can decide to reduce or increase the price you are willing to pay to exchange your product with (one of the) new, alternative product(s), or you can decide to stop bidding.

a) In front of you is still your 1 kg bag of regular rice. You still own this product.

b) In round 3 we give you more information about the method to produce the folate enriched rice bag on the one hand, and folic acid pills on the other.

This particular bag of rice contains a higher level of vitamin B9 and is good for your health in several ways, e.g. to drastically reduce the risk of delivering a baby with a birth defect, as mentioned in the previous rounds.

Again, the two bags, one with folate in the rice, the other with free folate pills included, have the same amount of folate and the same benefits when the rice (first) or pills (second) are consumed. [this information was only briefly presented on the PPT]

Information treatment: (based on objective definition)

This product is made using genetic modification.

(definition derived from the questionnaire and adapted from Lusk et al (2004): Genetic Modification involves new methods that make it possible for scientists to create new plants and animals by taking part of genes of one plant or animal and inserting them into the cells of another plant or animal. This is sometimes referred to as genetic engineering or biotechnology. Genetically modified food is food of which the genetic material has been modified in order to taste better, last longer, or be resistant to certain pesticides. Genetic modification can also be used to alter plants in a manner that results in increased crop yields, increased nutritional value or improved health effects. Thus, the folate enriched rice is made using genetic modification in order to increase the amount of folate vitamins and health benefits)

The rice in the bag with free folic acid pills is not made using genetic modification.

[end of information treatment]

c) Now, we ask you to report the highest amount you are willing to pay to exchange your one kg of rice with each of the rice bags on the table, given this information.

If this new information did not change the price you are willing to pay to exchange your product, you report the same willingness-to-pay, thus the same bid. If it has changed your valuation, you can submit a different bid, i.e. lower or higher, dependent on your opinion regarding the new information.

As in the previous rounds you still need to bid on each product individually. You can bid zero at any time.

d) The procedure is entirely similar as in the previous rounds: bid anonymously, do not talk, look forward, and bid your true value to exchange your product with this alternative products. You can fill in your bid in the box referring to round 3.

Take your time to bid and raise your hand once you have your submitted your sealed bid. We will provide you with the last part of our questionnaire. Good luck!

In each auction, we randomly select the binding round and product.

Selection of the successful participant

This concludes the end of the auction procedure. I would like to thank you for taking part in our study. We will now proceed with the selection of the successful participant of our auction.

First of all we will select the binding auction round and product.

The randomly selected round that is binding is

The randomly selected auctioned product that is binding is

The buyer is the participant with code Her bid was Yuan.

The second highest price that this participant has to pay to exchange her rice bag with the auctioned folate enriched GM rice bag, is Yuan.

Debriefing and closing experimental auction

It was important to inform the participants of the purpose of the study and reveal information about the folate products. As FBR is still in a laboratory phase, and far from commercialized, we could not sell this product for real. Therefore, FAR was selected as binding, by which the exchange and payment took place.

Debriefing and closing

This concludes the end of the study. I would like to thank you again for taking part in our auctions. This study was conducted in order to identify if there are any differences in willingness to pay for different folate products and which determines ones product choice. We only included women in our research, as women can be protected from delivering a baby with a birth defect, when they would consume one of the two auctioned products.

[The whole folate project in China was shortly described]

We would like to thank you again. We would like to ask you not to talk about this study to others. Your participation was only useful because you were not aware of the real purpose of the auction. Therefore, do not communicate about our auction!

Before you leave the room, you have to pass our payment desk where we will give every participant its budget (minus chocolate/rice market price). If you do not bought products, the chocolate bar and rice bag are yours. If you have further questions, feel free to ask. If not, we wish you a pleasant continuation of your day.