



Swedish Farmers' Acceptance of RCTs and Economic Experiments

Leon Johannes Englberger

Degree project/Independent project • 30 credits
Swedish University of Agricultural Sciences, SLU
Faculty of Natural Resources and Agricultural Sciences/Department of Economics
Environmental Economics and Management – Master's programme
Degree project/SLU, Department of Economics, 1474 • ISSN 1401-4084
Uppsala 2022



Swedish Farmers' Acceptance of RCTs and Economic Experiments

Leon Johannes Englberger

Supervisor: Jens Rommel, Swedish University of Agricultural Sciences,
Department of Economics

Examiner: Rob Hart, Swedish University of Agricultural Sciences,
Department of Economics

Credits: 30 credits

Level: Second cycle, A2E

Course title: Master thesis in Economics

Course code: EX0905

Programme/education: Environmental Economics and Management

Course coordinating dept.: Department of Economics

Place of publication: Uppsala

Year of publication: 2022

Title of Series: Degree project/SLU, Department of Economics

Part number: 1474

ISSN: 1401-4084

Online publication: <http://stud.epsilon.slu.se>

Keywords: Economics, agriculture, farmers' opinion, agricultural policy, experimental economics, economic experiments, environmental policy, RCTs

Swedish University of Agricultural Sciences

Faculty of Natural Resources and Agricultural Sciences

Department of Economics

Abstract

A shift in the Common European Agriculture (CAP) towards agri-environmental payment schemes meant to incentivise the provision of environmental public goods calls for a diverse set of policy evaluation methods. Economic experiments such as RCTs can be efficient and cost-effective tools for improving and evaluating the effectiveness of these novel policies. However, the randomisation of benefits required in RCTs is controversial and might be ill-regarded among farmers. Despite their potential usefulness, the application of economic experiments remains limited in this context due to potentially low acceptability by farmers for being the subject of such studies. In an online survey with Swedish farmers, we explore the acceptability of two different hypothetical RCT scenarios and the general willingness to participate in an economic experiment using thought experiments. Our results suggest low acceptability of RCTs in which a group of farmers is excluded from receiving a payment. Moreover, we do not find support for an alternative RCT based on randomly varying the amount of payments in a scheme. Additionally, we find that farmers state a higher willingness to participate in economic experiments if aspects of fairness and transparency are highlighted while randomised or unequal payouts are rather ill-regarded. We also find some ambiguity between stated preferences and actual behaviour in regards to the willingness to participate in experimental studies after testing two modes of monetary incentivisation for participation in our study. We conclude that in the context of agricultural policy evaluation, RCTs should only be applied with great care and that future research should focus on finding ways to adapt RCTs in a way that would increase acceptability and that aspects of fairness, transparency, and a desire for equal payments should be considered in the recruitment for economic experiments.

Keywords: Economics, agriculture, farmers' opinion, agricultural policy, experimental economics, economic experiments, environmental policy, RCTs

Sammanfattning

Uppsatsen undersöker svenska lantbrukares åsikter om användningen av så kallade randomised controlled trials (RCTs) och andra ekonomiska experiment för utvärdering av nya politiska styrmedel inom lantbruket. RCT och andra ekonomiska experiment kan effektivt bidra till att förbättra miljöprogram som förser lantbrukare med betalningar för att engagera dem i miljövänliga jordbruksmetoder. Potentiella användningen av RCT inom lantbruket skulle innebära att slumpmässigt inkludera eller exkludera lantbrukare från betalningen av sådana program. För att kunna använda RCT inom lantbruket behövs det svar på frågan om acceptansen av såna forskningsmetoder. Ytterligare undersöker vi hur man kan uppmuntra fler lantbrukare att delta i ekonomiska experiment. Vi använder oss av två tankeexperiment som presenterades i sammanhang med en enkät som skickades ut via mejl till lantbrukare i Sverige. Uppsatsens resultat visar att acceptansen för RCT är låg. Bara 24% av lantbrukarna som deltog tycker det är ett acceptabelt sett att bedöma effektiviteten av miljöprogram inom lantbruket. Studien visar också att lantbrukare med större sannolikhet deltar i ekonomiska experiment om forskarna framhåller aspekter såsom rättvisa och transparens.

Nyckelord: Ekonomi, lantbruk, lantbrukares åsikter, politiska styrmedel inom lantbruket, experimentell ekonomi, ekonomiska experiment, hållbara styrmedel, RCT

Table of Contents

List of tables	8
List of figures.....	9
1. Introduction	10
2. Background and Literature	13
2.1 Agri-environmental Payment Schemes and Evaluation of the CAP	13
2.2 Randomised Controlled Trials (RCTs).....	14
2.3 Economic Experiments and Recruitment of Farmers.....	15
3. Method.....	17
3.1 Design of The Thought Experiment - RCTs	18
3.2 Design of The Thought Experiment – Public Goods Game	21
3.3 Data Collection	24
4. Results and Discussion.....	25
4.1 Sample.....	25
4.2 Acceptance of RCTs.....	26
4.3 Factors Influencing the Willingness to Participate in an Economic Experiment.....	31
4.4 Discussion and Limitations	35
6. Concluding Remarks	37
References	38
Appendix 1: Original Questionnaire in Swedish.....	41
Appendix 2: Other reasons for accepting / not accepting the RCT scenarios (comments)	67

List of tables

Table 1. Description of RCT A and question on acceptance as appeared in the questionnaire.....	19
Table 2. Description of RCT B and question on acceptance as appeared in the questionnaire.....	20
Table 3. Description of the public goods game.	23
Table 4. Farm characteristics and socio-demographic data from our sample of Swedish farmers.	25
Table 5. Acceptance rates of the two hypothetical RCT scenarios for both framings in percent, that is the share of respondents who replied “Yes” to the question “Do you find this approach to evaluate the effectiveness of the new agri-environmental scheme acceptable?”. Number of observations after data cleaning for each treatment and framing in brackets.....	26
Table 6. Output of two multinomial logistic regression models. The acceptance of the RCT is the dependent variable in both models. Model 2 includes the treatment (RCT A and B) and the framing (lucky vs. unlucky group) as binary variables. Model 1 additionally includes a number of covariates derived from the follow-up questions of the questionnaire. As the variable for RCT acceptance is categorical, one category of the variable is used as base, in this case “No”. The same accounts for the categorical covariates as indicated in the table.	28

List of figures

Figure 1. Experimental design	18
Figure 2. Distribution of reasons for answering “Yes” or “No” to the question after each of the four hypothetical RCTs asking “Do you find this approach to evaluate the effectiveness of the new agri-environmental scheme acceptable?”. The figures show the distribution of agreement with four provided statements on a five-point Likert scale. The results of both framings (respondent framed as being among the farmers allowed to participate or receiving the higher payment versus among the farmers excluded from participation or receiving the lower payment) are aggregated since the results are nearly identical and in order to provide a better overview. The figures to the left show reasons for accepting / not accepting RCT A (one group of farmers is excluded from the payment scheme) while the figures to the right show the distribution of reasons for accepting / not accepting RCT B (one group of farmers receives a higher payment than the other).	31
Figure 3. Summarised results of the section of the survey asking about the willingness to participate in an economic experiment following the explanation of a simple public goods game. The chart shows the distribution of answers on a seven-point Likert scale for each statement.....	33

1. Introduction

This thesis explores the acceptance of novel experimental methods among Swedish farmers. The Common Agricultural Policy (CAP) of the European Union provides almost 60 billion Euros of subsidies per year to 10 million farms across Europe (European Commission, 2019). The CAP for the period of 2023 to 2027 has ten objectives to ensure a fair income for farmers (1), increase competitiveness (2), improve the position of farmers in the food chain (3), take climate change action (4), provide environmental care (5), preserve landscapes and biodiversity (6), support generational renewal (7), have vibrant rural areas (8), protect food and health quality (9), foster knowledge and innovation (10) (European Commission, 2020). While most of the payments that are meant as income support for farmers are linked to the area farmed, a large share of payments also aims at incentivising changes towards more sustainable farming practices as a means to serve objectives four, five, and six, as well as objective one. In other words, while making sure that farmers receive a fair income, they should be incentivised to make decisions that benefit the environment and mitigate negative effects of certain farming practices. This is needed because agriculture produces positive as well as negative externalities. For instance, agriculture shapes and preserves cultivated landscapes, and provides habitats for some wild animal and plant species while it reduces available habitats for others. Agriculture also contributes to pollution and eutrophication of water bodies through extensive pesticide and fertilizer use, and contributes to climate change through the use of heavy machinery running on fossil fuels. On the one hand, the need to protect certain species from extinction becomes more urgent, as wild areas unaffected by human presence are becoming rarer. On the other hand, more environmentally friendly farming practices exist or could be developed that allow to decrease these negative externalities but are not necessarily adopted by farmers since they are less cost-effective than conventional ones or would require additional effort.

Policy makers can improve the effectiveness and efficiency of the CAP by means of incentives (taxing undesired and subsidising desired practices), and regulatory policy (forbidding or limiting practices). Some novel policies include payments for ecosystem services as a means for making payments to European farmers dependent on specific farming practices or measurable environmental outcomes such as grassland biodiversity (Becker, 2022). Due to the high budget usually involved in such payment schemes and uncertainty about their effectiveness, there is a need to properly test and evaluate such policies before and after their implementation (Hasler et al., 2022). Because of the novelty of such policies, it is necessary to better understand farmers' behaviour for effective and efficient policy design and implementation (Dessart et al., 2019). Economic experiments can be a cost-effective method to causally estimate the impact of agri-

environmental policies and to get a better general understanding of relevant behaviours ex-ante and during implementation. Lefebvre et al. (2021) argue that more economic experiments should be used to evaluate the CAP since they have proved to be useful tools in other fields and are more cost-effective and reliable than “trial and error in the real world”. However, the authors also point out that important questions regarding ethical and practical challenges that arise around economic experiments remain and need to be addressed first.

One of the biggest ethical challenges in applying economic experiments to agricultural contexts is that benefits or costs need to be randomised to create a treatment and a control group. Another ethical issue according to Lefebvre et al. (2021) is that in some economic experiments, treatments would need to be applied without participants’ informed consent. Randomised controlled trials (RCTs), which can be used as a special type of economic field experiment, could provide useful insights about agricultural policies at the beginning of their implementation by creating a treatment and control group and by observing real behaviour in a natural setting. RCTs have not been used to date in evaluating the CAP since they lead to exactly these ethical concerns because one randomly selected group of farmers would need to be excluded from a policy (Behagel et al., 2019). These issues generally make it a difficult task to design economic experiments with the need for both, limiting ethical concerns while sustaining their scientific and practical value. This explains why economic experiments have been applied in agricultural contexts only to a limited extent (Palm-Forster & Messer, 2021). Moreover, while scholars call for using more economic experiments in agricultural policy evaluation, it seems to be particularly difficult to recruit farmers for economic field experiments (Weigel et al., 2020; Rosch et al., 2020). These limiting factors for conducting economic experiments with farmer subjects call for a better understanding of what motivates or keeps farmers from voluntarily participating in economic experiments meant to inform agricultural policy. Due to the mentioned ethical concerns it is crucial to understand what kind of experimental designs farmers consider acceptable tools for improving agricultural policies.

To contribute to a better understanding of farmers’ view on economic experiments, this thesis explores to what extent farmers consider certain experimental designs as acceptable and which factors motivate them to voluntarily participate in an economic experiment. In an online survey, we therefore presented Swedish farmers with two hypothetical RCT scenarios and asked them if they find these approaches to evaluate an agri-environmental scheme acceptable. We strongly build on the only study which has attempted something similar: Morawetz and Tribl (2020) used a sample of Austrian farmers and placed them in the hypothetical scenario regarding the RCT-based evaluation of a concrete payment scheme with the goal to understand the acceptance of different types of RCTs. To augment this research, our study uses a more generic approach without a specific payment scheme as an example. While Morawetz and Tribl (2020) compare a standard RCT (one group of farmers is excluded from the scheme) to a so-called up-RCT (one group of farmers receives an unconditional payment (hence up-RCT), i.e., outcomes and conditions are not monitored), we compare a standard RCT to an RCT where one group of farmers receive a lower payment than the other. Additionally, we applied two framings. Half of the participants received the RCT scenario framed as beneficial for them (allowed to participate / higher payment)

while the other half received it as being among the disadvantaged (not allowed to participate / lower payment). Furthermore, our study contained a part in which we explained to farmers participating in our study a public goods game and asked them to what extent certain factors or changes in the design of the experiment influence their willingness to participate in the experiment. Here we focused on the influence of the recruitment process, monetary incentives, and purpose of the results. Hereby we want to contribute to a better understanding of why it has been particularly difficult to recruit farmers for economic experiments as pointed out by the literature (Weigel et al., 2020; Rosch et al., 2020) and how recruitment success could be increased.

We hypothesise that acceptance of the RCT in which one group of farmers receives a lower payment than the other should be higher than acceptance of the standard RCT. This stems from the thought that it should be perceived as less problematic paying one group less than not paying one group at all. If this is the case, such RCTs could be used to defuse standard RCTs and make them more applicable as field experiments with farmer subjects. Moreover, we assume that RCT acceptance by farmers can be associated with individual characteristics such as the general willingness to participate in agri-environmental schemes. Furthermore, we hypothesise that farmers are more likely to participate in an economic experiment such as a public goods game if the experiment is perceived as fair and transparent. From this part of the study, we hope to get insights that are of practical value for future experimental economic research; especially, how farmers could be recruited more successfully to participate in such studies.

The following Section 2 of this thesis provides background information on agri-environmental payment schemes and evaluation of the CAP as well as on RCTs and other economic experiments in agricultural contexts and the recruitment of farmers. Section 3 explains the conducted online study and method in detail. Section 4 provides a presentation and discussion of the results and statistical analysis before the conclusion of the thesis in section 5.

2. Background and Literature

2.1 Agri-environmental Payment Schemes and Evaluation of the CAP

In recent years, some of the CAP budget previously used for fixed payments has been shifted to agri-environmental schemes of which some are even outcome based. The principle behind outcome-based payment schemes is that farmers are paid according to the measurement of some environmental indicator. If the criteria of the desired outcome are fulfilled, the farmer receives the payment. This is to encourage farmers to use the means to achieve the environmental improvements that are best suitable to their particular land. Ideally, this would maximise efficiency in achieving the outcome and could be superior to classic payment schemes which are based on adopting or refraining from particular farming practices. In classic agri-environmental schemes, farmers are, for example, incentivized to use less pesticides and herbicides or paid a bonus if they produce hay and instead refrain from using and producing silage (Suske et al., 2021). So far, only a few outcome-based schemes have been implemented in European member states. Examples include the “species rich grasslands” scheme in Germany which has the aim to increase grasslands’ biodiversity on agriculturally used land. In this scheme, a patch of grassland is assessed and if a set of indicator species is found the payment is granted (Keenleyside et al., 2014). In Sweden, a similar approach is used to incentivise the protection of large carnivores such as lynx and wolverine by landowners which are paid if these species occur regularly on their land (Zabel & Holm-Müller, 2008).

Such results-based schemes are difficult to design, implement, and outcomes are especially difficult to monitor. Furthermore, they require the acceptance of farmers in order to be adopted and lead to the desired outcome (Keenleyside et al., 2014). Also, it is hard to tell for certain if improvements of some environmental indicators are due to the monetary incentive paid to the farmers or if they would have occurred anyways. In order to do so, it would be required to create a control group by, for instance, excluding a group of farmers from signing up for the voluntary scheme since also external factors (e.g. climate, surrounding pool of species, etc.) might affect the outcome making it difficult to establish a fair system.

So far, the CAP has mainly been evaluated using EU-wide statistical farm and market simulation models, survey data analysed by statistics and econometrics, and by different qualitative means such as case studies, and stakeholder interviews (Colen et al., 2015). The European Commission provides an extensive monitoring and evaluation framework in order to assess the outcome of policy interventions which suggests a list of evaluation indicators and evaluation methods but also point

out the limited ability of these methods to causally assign outcomes to specific policy interventions (European Commission, 2017). Several authors therefore call for adding more experimental methods such as economic experiments and RCTs to the CAP evaluation toolbox.

2.2 Randomised Controlled Trials (RCTs)

RCTs are considered to be something like the gold standard among clinical trials (Bothwell et al., 2016). They have to a certain extent also been used in social sciences and policy evaluation. Considering them as very useful tools stems from the fact that RCTs are a special type of field experiments that allow to test the effect of a treatment on the behaviour of participants in the real world instead of a laboratory. RCTs usually consist of randomly assigning a policy or programme to a treatment group while another group is not treated and becomes the control group. Assignment to the treatment and control group is done by randomization to make sure that both groups have the same characteristics. It is then possible to statistically identify the effect of treatment and observe if there are any differences between the behaviour of both groups (Colen et al., 2016). Only through random assignment to the treatment and control group, it can be assured that the difference in observed behaviour actually is due to the treatment. If the policy would be applied to all participants or if the target group would be allowed to self-select into the policy, then a later observed change in behaviour could also be due to self-selection bias or general time trends. This is a difficulty especially concerning the evaluation of voluntary agri-environmental payment schemes. Once such a policy is implemented for all farmers in a country, it becomes nearly impossible to tell with certainty if later observed differences in farming practices are a result of the policy intervention or due to other unobservable time factors or differences between the group of farmers who chose to participate and the group of farmers who did not. RCTs could be an effective means to overcome these difficulties in assessing the policies' effectiveness.

So far however, RCTs have not been used to evaluate the CAP (Behagel et al., 2019). In the context of agricultural policy, RCTs have only been applied in developing countries. Duflo et al. (2011) collect experimental evidence on the effect of alternative policy interventions for incentivizing farmers in Kenya to use fertilisers, Giné et al. (2012) use an RCT to test a policy to improve pay-back of agricultural loans in Malawi, while Blair et al. (2013) evaluate programs on farmer's training in Armenia. Other studies in developing countries using RCTs look into effects of improved seed varieties on Tanzanian farmer's effort and yields (Bulte et al., 2014), and the impact of price information through mobile phones on farmers' marketing outcomes in India (Fafchamps & Minten, 2012). Generally, RCTs provide high internal validity but can have limited external validity (Colen et al., 2016), i.e. the results can be a good measure of the effectiveness of a particular program or policy but one should be careful using them to draw conclusions for other contexts or subject groups.

Several challenges are the reason why RCTs, despite their possible usefulness, have not been applied to assess CAP measures so far. On the one hand, applying or not applying a policy only to a sub-sample of European farmers is not in line with current EU practice and might be challenged by regulations (e.g. Lefebvre et al., 2021). On the other hand, excluding a random group of farmers from participating

in a payment scheme or other policy measure can lead to fairness concerns and might be considered unethical (Baele, 2013). Therefore, the acceptance of RCTs applied to CAP payment schemes by the affected farmers can be limited. In any way, these questions would need to be answered before researchers can make use of RCTs in evaluating the CAP. Morawetz and Tribl (2020) therefore survey the acceptance of an innovative RCT called “upRCT” where one group of farmers receives an unconditional instead of a conditional payment in comparison to a classic RCT where one group is excluded from the measure. The authors use a sample of Austrian farmers who participate in the “refrain from silage” agri-environmental payment scheme. In this scheme, farmers receive extra payments if they produce hay instead of silage. To assess the acceptance of the RCT and upRCT, the authors apply a thought experiment in which farmers are confronted with the hypothetical scenario of excluding a group from receiving the payment or that one group receives an unconditional payment in the next year, respectively. They find that the acceptance rate for the upRCT is about twice as high as for the conventional RCT.

Due to the ethical concerns arising around standard RCTs, alternative RCTs have been suggested by the literature which might be less problematic in terms of acceptability. In addition to the up-RCT suggested by Morawetz and Tribl (2020), an alternative and probably less controversial RCT would be to take a random subsample during a pilot phase of a policy and treat it first which allows a comparison to the initially untreated subsample (Shadish et al., 2002). Another alternative RCT could be to create a quasi-control group by paying one group a lower payment than the other (which is part of this study).

2.3 Economic Experiments and Recruitment of Farmers

Economic experiments have become a widespread tool within economics to better understand the complex dimensions of human behaviour in economic contexts (Camerer, 2003). Through economic experiments, it has become clear that human behaviour must be driven by more than mere self-interest and that neoclassical models of profit maximisation might miss out on substantial additional factors influencing human behaviour. Insights from experimental economics have thereby complemented standard economics by adding an understanding of psychological factors. Behavioural dimensions such as pro-social behaviour, social norms, and risk aversion are among the factors that make human behaviour deviate from purely rational profit maximising behaviour the concept of homo oeconomicus would predict and that have been observed in economic experiments (e.g. Kahnemann & Tversky 1979). In such experiments, usually real monetary incentives are used in order to observe decisions people would also make in the real world. Participants can then act within the limit of certain rules and make decisions affecting their own and, depending on the experiment, other participants monetary win or loss.

Behavioural experiments have also informed agricultural policy by leading to better understanding of farmers’ behaviour, although this literature is still small. Dessart et al. (2019) review the insights from behavioural studies within the context of agriculture and argue that their implications for designing more effective policies can in return lead to more sustainable farming practices. Economic experiments used for studying farmers’ behaviour can generally be classified as lab and field

experiments (Colen, 2016). While lab experiments usually take place in a class room and often use university students as participants, field experiments (like RCTs) use real stakeholders and, in the context of agriculture, farmers as participants. Lab experiments tend to lead to more generic results but their usefulness in predicting field behaviour can be limited (Harrison & List, 2004).

Le Coent et al. (2014), for instance, conducted a lab experiment with student subjects making use of a public goods game in which reducing fertiliser use was the public good at stake. In this experiment, one group of students received an unconditional subsidy for their contributions to the public good while the other group only received the subsidy if total contributions exceeded a certain threshold. The results showed that it could not be observed that the conditionality of the subsidy discouraged students from contributing to the public good. Kuhfuss et al. (2016) tested such a possible policy to reduce herbicide use as in the lab experiment by Le Coen et al. (2014) but with wine producers in France. In this survey, farmers could choose between different (hypothetical) contract options. Again, some contracts contained a bonus subsidy if a certain threshold was reached while others were unconditional on the total reduction. From the results of this experiment, the authors conclude that farmers prefer contracts that encourage collective participation in the scheme as they were willing to choose the contract options with the collective bonus even if payments were lower.

Several authors interested in better understanding of farmers behaviour to design more effective agri-environmental policies and in testing such policies call for more applications of economic experiments in this field (e.g. Herberich et al., 2009; Lefebvre et al., 2021; Colen, 2016). Moreover, there is especially a lack of field experiments with farmers as participants. However, recruiting farmers to participate in economic experiments has so far been a challenge among other barriers to conduct experimental studies (Rosch et al., 2019). Weigel et al. (2020) identify and test commonly applied tools to increase recruitment success for economic experiments with US farmer subjects. They find that regular mail invitations are more effective than email invitations. Furthermore, they find that larger monetary incentives for participation can have a large positive effect on recruitment rates. Additionally, reminders prove to be an effective tool to increase response rates while pointing out the societal value of taking part in a study did not have a significant effect.

The matter of why people in the end take part in a survey or experiment is complex and depends of course highly on the content and topic of the respective study and not only the mode of invitation. The economic incentives used within an economic experiment (the money that is at stake in an economic “game”) can incentivize participation itself. However, the fact that real money is at stake and that the experiment results in “winners” and “losers” might as well discourage some potential participants from signing up. As some modes of an economic experiment might be ethically challenging (e.g. applying treatments without informed consent, using deception, unequal payouts etc.), the matter of how this influences potential participants' willingness to participate becomes important. Economic experiments might need to be adapted in a way that increases acceptance and thereby leads to more successful recruitment.

3. Method

To study which factors cause higher or lower acceptance of and willingness to participate in economic experiments, this study makes use of the data of an online survey with Swedish farmers. By conducting an online survey, we aimed at targeting a large and representative sample of Swedish farmers in a cost-effective way. The parts of the survey relevant for this paper contained a set of questions regarding the acceptance of RCTs (see Part 3.1) and another set of questions about the willingness to participate in a public goods game (see Part 3.2) as part of two thought experiments. Thought experiments are a commonly used very cost-effective means to explore hypothetical behaviour in a variety of disciplines (Lenhard, 2017). Because the thought experiment involved questions on the willingness to participate in economic experiments under different incentives (for instance probabilistic vs. fixed), we also ran two versions of the survey with fixed participation incentives (60 SEK for participation in the form of Triss lottery tickets) vs. probabilistic participation incentives (10% chance of receiving 600 SEK in the form of Triss lottery tickets). The sole reason to have these two different versions was to get some understanding of the selection bias emerging from voluntary participation. The two thought experiments were followed by follow-up questions mainly about the characteristics of the respondents' farm. Here we asked farmers about their gender, age, income, means of income, how much of their income stems from CAP payments, if their farm is organic, and if they participate or have already participated in an agri-environmental payment scheme in order to measure if any of these characteristics are linked to RCT acceptance. The online survey also contained a set of questions on nudging based on Sunstein and Reisch (2016) which is not part of this thesis. For an overview of the experimental design and structure of the online survey see Figure 1. For the entire original questionnaire in Swedish see Appendix 1.

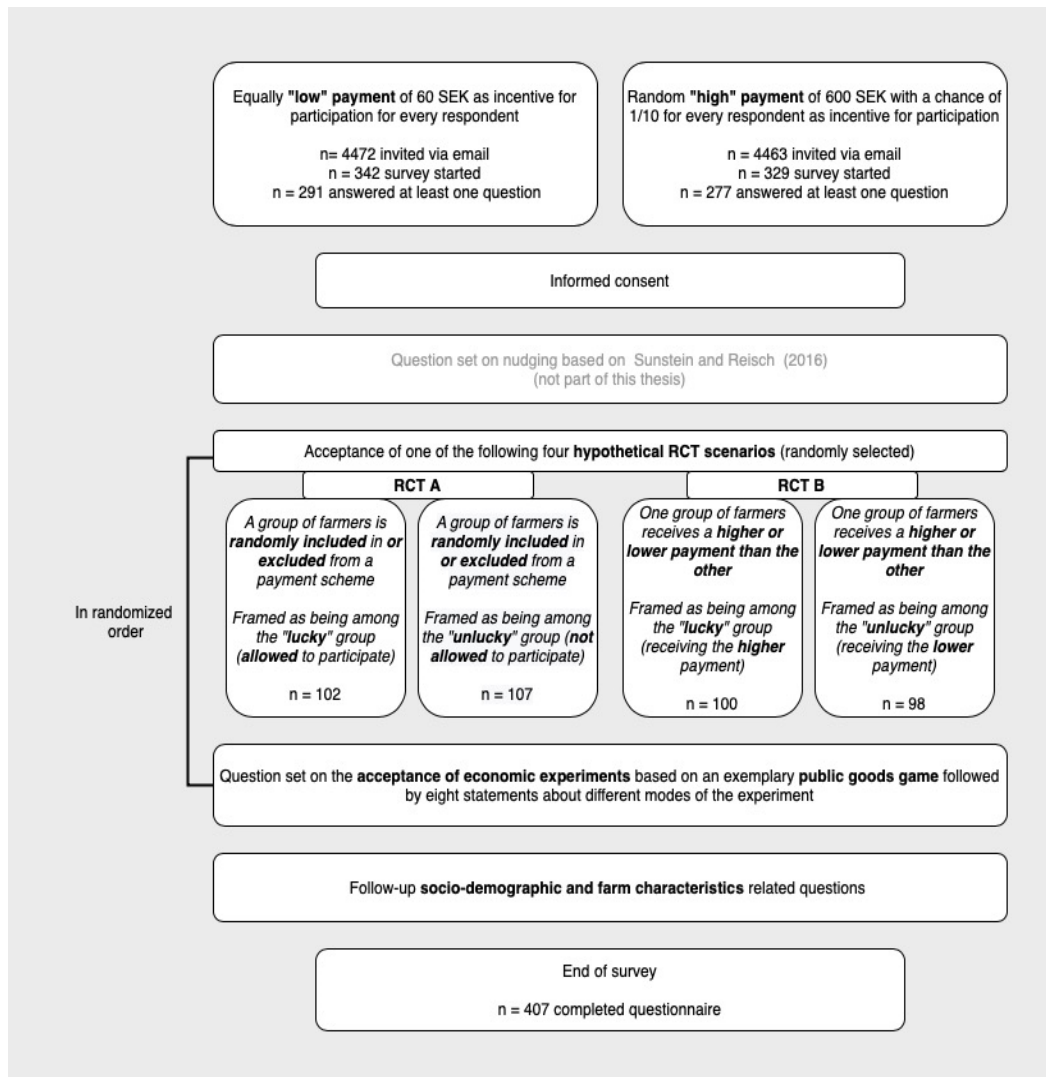


Figure 1. Experimental design

3.1 Design of The Thought Experiment - RCTs

In total, four combinations of treatments were tested of which each respondent only received one, randomly selected. In the first RCT scenario (RCT A), survey participants were presented with a hypothetical case where one group of farmers is randomly excluded from participating in a payment scheme in order to statistically test the effectiveness of the scheme. Approximately half of the participants received this hypothetical question framed as being among the group who can participate in the scheme and receive the payment. In other words, they are among the “lucky” group while the other half of respondents received the question framed as being among the group who cannot sign up for the scheme and therefore cannot receive a payment. Hence, the second group is the “unlucky” group. In the second RCT scenario (RCT B), survey participants were presented with a case in which one group of farmers receives a higher payment while the other group of farmers receives a lower one. Again, there is a “lucky” and an “unlucky” group while chance alone decides who receives the higher or lower payment, respectively. In all treatments, questions were formulated in a direct way, e.g. “*You* are not among the

farmers who can sign up for the scheme”. The scenarios were, however, clearly hypothetical. See Table 1. and 2. for the exact formulation of each treatment and framing. In all four cases, after being asked “*Do you find this approach to evaluate the effectiveness of the new agri-environmental scheme acceptable?*” respondents could choose between answering “Yes”, “Don’t know / undecided”, and “No”. Respondents who either answered “Yes” or “No” were asked to state why they found this approach acceptable or unacceptable, respectively. They could therefore state how much they agree with four given statements on a Likert scale or write down other reasons in a text box. We used two corresponding sets of questions, one for those who indicated they find the RCT acceptable and one for those who indicated they do not find the RCT acceptable. These questions were the same for RCT A and B and both framings.

Table 1. Description of RCT A and question on acceptance as appeared in the questionnaire.

RCT A: A group of farmers is randomly excluded from a payment scheme	
Framed as being among the "lucky" group (allowed to participate)	<p>In this part of the study, we want to discuss agri-environmental policy.</p> <p>Across Europe, agri-environmental schemes provide payments to farmers to engage in environmentally friendly farming practices.</p> <p>Think of the following scenario:</p> <p>To assess the effectiveness of an agri-environmental scheme, researchers want to randomly include or exclude a group of famers from being able to participate in a new scheme.</p> <p>That means, some farmers can choose to become part of the new scheme, whereas others do not have the opportunity. Chance alone decides who ends up in which group.</p> <p>You are among the farmers who can sign up for the new scheme. Do you find this approach to evaluate the effectiveness of the new agri-environmental scheme acceptable?</p>

<p>Framed as being among the "unlucky" group (not allowed to participate)</p>	<p>In this part of the study, we want to discuss agri-environmental policy.</p> <p>Across Europe, agri-environmental schemes provide payments to farmers to engage in environmentally friendly farming practices.</p> <p>Think of the following scenario:</p> <p>To assess the effectiveness of an agri-environmental scheme, researchers want to randomly include or exclude a group of farmers from being able to participate in a new scheme.</p> <p>That means, some farmers can choose to become part of the new scheme, whereas others do not have the opportunity. Chance alone decides who ends up in which group.</p> <p>You are not among the farmers who can sign up for the new scheme. Do you find this approach to evaluate the effectiveness of the new agri-environmental scheme acceptable?</p>
--	---

Table 2. Description of RCT B and question on acceptance as appeared in the questionnaire.

<p>RCT B: One group receives a higher payment than the other</p>	
<p>Framed as being among the "lucky" group (higher payment)</p>	<p>In this part of the study, we want to discuss agri-environmental policy.</p> <p>Across Europe, agri-environmental schemes provide payments to farmers to engage in environmentally friendly farming practices.</p> <p>Think of the following scenario:</p> <p>To assess the effectiveness of an agri-environmental scheme, researchers want to randomly pay one group of farmers a higher payment than another group which receives a lower payment.</p>

	<p>That means, some farmers will receive a higher payment, whereas others will receive a lower payment. Chance alone decides who ends up in which group.</p> <p>You are among the farmers who receive the higher payment. Do you find this approach to evaluate the effectiveness of the new agri-environmental scheme acceptable?</p>
<p>Framed as being among the "unlucky" group (lower payment)</p>	<p>In this part of the study, we want to discuss agri-environmental policy.</p> <p>Across Europe, agri-environmental schemes provide payments to farmers to engage in environmentally friendly farming practices.</p> <p>Think of the following scenario:</p> <p>To assess the effectiveness of an agri-environmental scheme, researchers want to randomly pay one group of farmers a higher payment than another group which receives a lower payment.</p> <p>That means, some farmers will receive a higher payment, whereas others will receive a lower payment. Chance alone decides who ends up in which group.</p> <p>You are among the farmers who receive the lower payment. Do you find this approach to evaluate the effectiveness of the new agri-environmental scheme acceptable?</p>


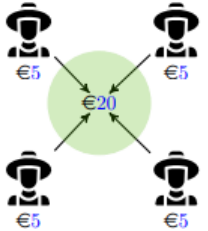
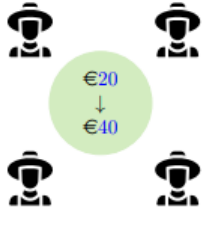
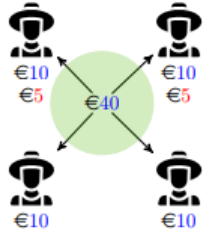
3.2 Design of The Thought Experiment – Public Goods Game

In another part of the survey, we explained to participants a simple public goods game and asked them to state how likely they would participate depending on certain modes of the game, for instance, under which conditions participants receive pay-outs.

The public goods game which was originally developed by Isaac et al. (1984) has become one of the most replicated economic experiments and is used to

measure free-riding versus pro social behaviour by observing if and to what extent people cooperate with each other. In the standard version of the public goods game, each player of a group of participants is initially endowed with an equal amount of money or tokens. In the second step of the game, participants can contribute to the group account using a share from 0% to 100% of their initial endowment. The contributions of all players to the group account are then added up and doubled, and in the next step, equally split up and redistributed among all players in the group. The optimal strategy for each player would be not to contribute to the group account if we assume profit maximisation and no preferences for other group members' pay-outs. Moreover, assuming that every member of the group follows this strategy we end up with a Nash-equilibrium in which no one contributes to the group account and everyone is left with no more than the initial endowment. The group's total pay-out would, however, be maximised if everyone contributed their all of initial endowment to the group account. Hence, everyone would leave the game with double the initial endowment. However, for each individual player it is tempting to free-ride and not contribute to the group account at all, especially in the standard version of the game in which contributions are anonymous and group members are not allowed to communicate with each other. This is because one would be best off if all other players contribute while one doesn't. Assuming that all players make the same considerations about other players' strategies, it would be risky for the individual player to contribute all of the initial endowment. For better understanding of the game we showed to participants an illustration explaining all steps of the game in detail (see Table 3.). In this example public goods game, participants are initially endowed with ten tokens. In the illustration, each of the four players contributes five tokens to the group account. The 20 tokens in the group account are then doubled to 40 and split up and redistributed in the last step of the game. This leaves each player with 15 tokens at the end of the game of which five are from the initial endowment and ten from the group account.

Table 3. Description of the public goods game.

Public goods game			
<p>In this part of the study, we want to understand how you view so-called economic experiments.</p> <p>Researchers often use small games to study human behavior. In these games, there is often interdependence among participants. One participant's actions affects others.</p> <p>Please have a look at the following example of decisions in a game. Participants in this game are endowed with tokens. They can either keep the tokens for themselves or contribute them to a group account. After all participants have made their contributions to the group account, all tokens contributed to the group account are doubled and then redistributed to the participant.</p>			
<p>Step 1 Each participant receives money...</p> 	<p>Step 2 ...and can contribute to the group account.</p> 	<p>Step 3 The contributions are doubled...</p> 	<p>Step 4 ...and equally distributed</p> 
<p>Researchers use this game to understand whether or not people voluntarily cooperate with each other.</p> <p>At the end of the game, participants will receive a payment. Please note that often these payments are used to compensate participants for their time or to incentivize their actions in the study.</p> <p>If you were asked to participate in this game, how would the following conditions change your interest in the study? Use the scale to differentiate your answers!</p>			

The public goods game was meant as a general example of an economic experiment since we can assume that most of our survey respondents were not familiar with the concept of economic experiments (at least not in detail) before participating in our survey. The explanation of the public goods game was followed by a set of statements in order to study how certain conditions change the willingness to participate in the game. Therefore, we provided a seven-point Likert scale from “Much less likely to participate” to “Much more likely to participate” for each of the eight statements. We kept the statements rather generic so that the

results would speak for the willingness to participate in economic experiments in a more general sense. On the one hand, the statements were about how people can receive a payment when participating in the game; for instance, what if all participants receive a small payment for participation or just a random selection of participants? Or what if payments depend on the participant's own decision or also on other participants' decisions? On the other hand, the statements were about transparency, how the study which the game is used for was designed, and what the results would be used for. It should be noted that some statements about how participants are paid for their participation implied changes in the mode of the experiment that in practice might not be applied to a public goods game. However, this was meant to serve the more generic purpose of the results and to have statements which are opposite to each other, e.g. *“All participants receive different payments, where the size of the payment depends on the participant's own decisions and the decisions of other participants.”* versus *“All participants receive different payments, where the size of the payment solely depends on the participant's own decisions.”*

3.3 Data Collection

The survey was sent out to 8944 email addresses of Swedish farmers registered at Statistics Sweden (Statistiska centralbyrån, SCB). Half of the email invitations were sent out offering a 60 SEK (Swedish crowns, approximately 6 Euros) payment as incentive for answering the questionnaire. The other half were offered a 600 SEK (approximately 60 Euros) lottery ticket with a chance for one randomly selected participant out of ten to receive it. Survey respondents were given the option to enter their email address after answering the question to later receive the payment or participate in the lottery, respectively. As suggested by the literature (Weigel et al., 2020), we used these incentives to increase participation in our survey as well as to test if there is a difference between offering a low but equal and a high but random payment. Out of ethical concerns we chose to use amounts with the same expected value. Data collection was carried out between January 28th and February 15th 2022.

Data analysis was carried out using the statistical software Stata; some figures based on this data were created using Microsoft Excel. To analyse the data on RCT acceptance we chose to use a simple descriptive comparison of acceptance rates between both treatments and framings as well as a multinomial logistic regression to analyse if any of the covariates derived from the follow-up questions on socio-demographics and farm characteristics influence the likelihood of a farmer accepting the RCT. Multinomial logistic regression is a commonly used and effective statistical tool to analyse data with a categorical or nominal non ordinal dependent variable (Kwak & Clayton-Matthews, 2002). In order to analyse the Likert-type data we obtained from the questions about reasons for accepting the RCT or not and for the thought experiment on the willingness to take part in an economic experiment, we chose a more descriptive approach and to use appropriate charts.

4. Results and Discussion

4.1 Sample

In total, 671 farmers started the survey of which 568 answered at least one question (278 for the lottery payment and 292 for the lower equal payment). After removing incomplete responses of respondents who did not progress until the very end of the survey, the dataset contained 407 observations. In the end, some variables contained a few less observations since we did not force answers to all questions. The median duration of the survey was 13.85 minutes among all completed questionnaires. See Table 4. for a description of the sample resulting from the follow-up questions.

Table 4. Farm characteristics and socio-demographic data from our sample of Swedish farmers.

	Mean	SD
Total hectares	177.09	249.35
Age	57.83	12.38
Income from agriculture (% of household income)	34.82	33.68
CAP payment (% of total income)	27.56	24.35
Livestock units	45.44	114.38
	Frequency	Percent
Farm's income (SEK)		
- Less than 250 000	212	54.64
- 250 000 to 400 000	24	6.19
- 400 000 to 650 000	16	4.12
- 650 000 to 800 000	60	15.46
- 800 000 to 1 100 000	14	3.61
- Above 1 600 000	47	12.11
- Do not know	15	3.87
Gender		
- Male	327	81.95
- Female	72	18.05
Organic		
- Whole farm	57	15.24
- Partly	24	6.42
- In transition	4	1.07
- No	289	77.27
Previously participated in an agri-environmental scheme		
- Less than 3 years	33	8.13

- More than 3 years	122	30.05
- Not interested	95	23.40
- No, but would consider	156	38.42

4.2 Acceptance of RCTs

Table 5. shows the resulting acceptance rates of the two different hypothetical RCT scenarios (RCT A and B) we surveyed. That is, the percentage of farmers who replied “Yes” out of the three options “Yes”, “Don’t know / undecided”, and “No” which we provided in the questionnaire following the description of each RCT. The table also shows both framings we applied. While one group of farmers received one of the RCTs framed as beneficial for them by being allowed to participate or receiving the higher payment, the other group of farmers received one of the RCTs framed as unfavourable for them by not being allowed to participate or receiving the lower payment, respectively. This leaves us with four acceptance rates as main results.

To begin with, all four acceptance rates are very low, while there does not seem to be a relevant effect of the framing we applied. There is, however, a clear difference in acceptance between the two different hypothetical RCTs (RCT A and B). While the acceptance for RCT A is 22.55% and 25.32% (depending on the framing), the acceptance for RCT B is 7.00% and 7.14%. This is somewhat striking and contrary to our hypothesis since RCT B, where one group receives a higher payment than the other, can be seen as a milder version of a standard RCT (RCT A). In other words, we would have expected that randomly paying one group a lower payment should be less controversial than randomly excluding a group from receiving the respective payment at all. These results are particularly important since an RCT based on higher and lower payments has been suggested in the literature as a somewhat “defused” alternative RCT to improve the ethical concerns that lead or might lead to low acceptance for using standard RCTs within agricultural policy assessment.

Table 5. Acceptance rates of the two hypothetical RCT scenarios for both framings in percent, that is the share of respondents who replied “Yes” to the question “Do you find this approach to evaluate the effectiveness of the new agri-environmental scheme acceptable?”. Number of observations after data cleaning for each treatment and framing in brackets.

	RCT A A group of farmers is randomly included in or excluded from a payment scheme	RCT B One group receives a higher or lower payment than the other

Framed as being among the "lucky" group (allowed to participate / higher payment)	22.55% (n = 102)	7.00% (n = 100)
Framed as being among the "unlucky" group (not allowed to participate / lower payment)	25.32% (n = 107)	7.14% (n = 98)
Average	23.94%	7.07%

Running a multinomial logistic regression with the acceptance of the RCT as the dependent variable supports the results of the descriptive analysis (see Model 2 in Table 6.). In this regression model, a binary variable containing data on which RCT a respondent received shows that RCT B decreases the likelihood that a survey participant within our sample finds the RCT acceptable. This effect is significant. The framing of the RCT (lucky vs. unlucky group) is also included in the model as an independent binary variable but has no significant effect on RCT acceptance. Model 1 in Table 6. includes a number of covariates derived from the follow-up questions asked at the end of the questionnaire. Most of these covariates do not have a large or significant effect on RCT acceptance. According to the model, age does have a significant negative although small effect on answering “Yes”. This is in line with what we would intuitively expect. Older farmers might be less comfortable with novel environmental policies and research methods they have never heard of before. Previous participation in an agri-environmental scheme seems to have a measurable positive effect on RCT acceptance since it increases the likelihood that a participant replied “Yes” instead of “No”; for the categories of the variable “participated for less than three years” and “would consider to participate” this effect is significant. This is also in line with what we would expect. Farmers who are already more familiar with or more willing to apply for agri-environmental schemes might have better understanding for the need of properly testing these schemes. All in all, the fact that most covariates do not appear to have a large or significant effect on RCT acceptance emphasises the clear result we received for the acceptance of both RCTs as there do not seem to be big differences in opinion among the farmers we surveyed in correlation with some characteristics such as income or farm size.

Table 6. Output of two multinomial logistic regression models. The acceptance of the RCT is the dependent variable in both models. Model 2 includes the treatment (RCT A and B) and the framing (lucky vs. unlucky group) as binary variables. Model 1 additionally includes a number of covariates derived from the follow-up questions of the questionnaire. As the variable for RCT acceptance is categorical, one category of the variable is used as base, in this case “No”. The same accounts for the categorical covariates as indicated in the table.

	Model 1 Coefficient (log odds)		Model 2 Coefficient (log odds)	
“No” (base)				
“Don’t know / undecided”				
RCT A (base)	0	(.)	0	(.)
RCT B	-0.959*	(-3.10)	-1.096***	(-4.21)
Unlucky group (base)	0	(.)	0	(.)
Lucky group	0.382	(1.25)	0.458	(1.79)
Total hectares	0.000368	(0.57)		
Age	-0.0136	(-1.03)		
Income	-0.0165	(-0.17)		
Farm income	0.00291	(0.54)		
CAP payment	0.00532	(0.83)		
Male (base)	0	(.)		
Female	0.00478	(0.01)		
Organic				
- whole farm	0.663	(1.54)		
- partly	-0.772	(-0.97)		
- in transition	0.994	(0.65)		

- no (base)	0	(.)		
Previously participated in an agri-environmental scheme				
- less than 3 years	-0.214	(-0.35)		
- more than 3 years	-1.171 [*]	(-2.49)		
- not interested (base)	0	(.)		
- no, but would consider	0.239	(0.64)		
Constant	-0.224	(-0.24)	-0.789 ^{***}	(-3.69)

“Yes”

RCT A (base)	0	(.)	0	(.)
RCT B	-1.611 ^{***}	(-4.39)	-1.696 ^{***}	(-5.16)
Unlucky group (base)	0	(.)	0	(.)
Lucky group	0.0106	(0.03)	0.0274	(0.09)
Total hectares	0.000733	(1.15)		
Age	-0.0290 [*]	(-1.99)		
Farm's income	-0.0565	(-0.56)		
Income from agriculture (% of household income)	-0.00337	(-0.55)		
CAP payment (% of farm's income)	-0.00295	(-0.38)		
Male (base)	0	(.)		
Female	0.0295	(0.06)		
Organic				
- whole farm	0.595	(1.29)		

- partly	0.0648	(0.10)		
- in transition	0.845	(0.55)		
- no (base)	0	(.)		
Previously participated in an agri- environmental scheme				
-less than 3 years	1.415*	(2.10)		
-more than 3 years	0.546	(0.98)		
-not interested (base)	0	(.)		
-would consider	1.215*	(2.31)		
Constant	0.255	(0.24)	-0.716**	(-3.27)
Observations	320		407	

t statistics in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

The reasons survey participants selected as relevant for finding the approach of the presented hypothetical RCT unacceptable do not vary in a relevant way among the treatments and between RCT A and RCT B. They are summarised in Figure 2. The vast majority of respondents state that it is not good that some people can gain more than others and that chance alone decides on who is being selected. Most survey participants though agree that it is important to accurately test the effectiveness of novel policy instruments, regardless if they found the RCT acceptable or not. However, a relevant share of respondents indicated that there are other reasons that influence their response, especially among those who found the RCT unacceptable. Many of the comments we received in the textbox under “Other reason(s)” show a general disapproval of any kind of state intervention that aims at steering farmers in a certain direction. Moreover, a large part of comments under “Other reason(s)” are reinforcements of the statements provided, that it is unfair to let chance decide who receives a payment at all or who receives which amount. Some comments even questioned the usefulness of the presented hypothetical RCTs as scientific methods for improving agricultural policy (see Appendix 2 for a list of comments)

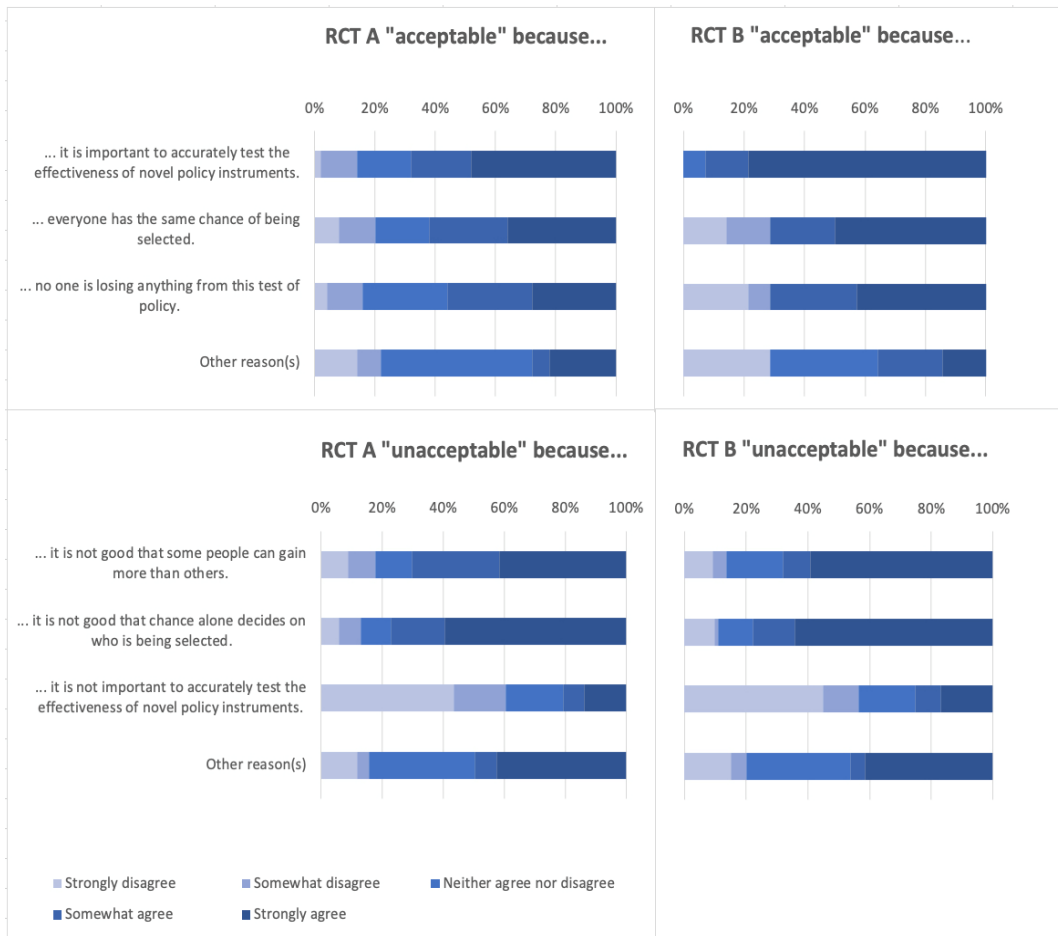


Figure 2. Distribution of reasons for answering “Yes” or “No” to the question after each of the four hypothetical RCTs asking “Do you find this approach to evaluate the effectiveness of the new agri-environmental scheme acceptable?”. The figures show the distribution of agreement with four provided statements on a five-point Likert scale. The results of both framings (respondent framed as being among the farmers allowed to participate or receiving the higher payment versus among the farmers excluded from participation or receiving the lower payment) are aggregated since the results are nearly identical and in order to provide a better overview. The figures to the left show reasons for accepting / not accepting RCT A (one group of farmers is excluded from the payment scheme) while the figures to the right show the distribution of reasons for accepting / not accepting RCT B (one group of farmers receives a higher payment than the other).

4.3 Factors Influencing the Willingness to Participate in an Economic Experiment

All in all, the results of the part of the study regarding the willingness to participate in an economic experiment and public goods game in particular show great variability among the eight statements about different modes of the experiment. Overall, the statements emphasising aspects of fairness and transparency received high rates of approval while statements that contain aspects that might be perceived as unfair or intransparent received very low rates of approval which is in line with our hypothesis. For an overview of the statements and the respective results obtained as Likert-scale data see Figure 3.

The stated likeliness to participate in the public goods game is highest for the statement “The study was designed in collaboration with farmers” with an average

answer of “more likely to participate”. This can be interpreted as such that involving farmers in designing a study seems to increase trust. This seems to be important because of the overall scepticism towards research methods and experiments involving people we observed in our study in general. On the one hand, the statement “*Only some randomly selected participants receive a payment for participation, but this payment is larger*” lead to the lowest stated likeliness to participate with an average answer of “less likely to participate”. On the other hand, the statement “*Every participant receives a small payment for their participation*” leads to comparably high stated willingness to participate. Randomization seems to be perceived as unfair although every participant would have the same chance of receiving the payment and the same expected value. Ethical concerns arising from randomization might be subtler than, for example, ethical concerns arising from providing false information to study behavioural responses. Randomization can, however, be ethically questionable as it is “*a fair procedure that produces unfair outcomes*” (Baele, 2013). The observed scepticism towards randomising payments is in line with the scepticism we observed towards RCTs. It is likely that the scepticism towards RCTs also stems from a randomization mechanism that is perceived as truly unfair.

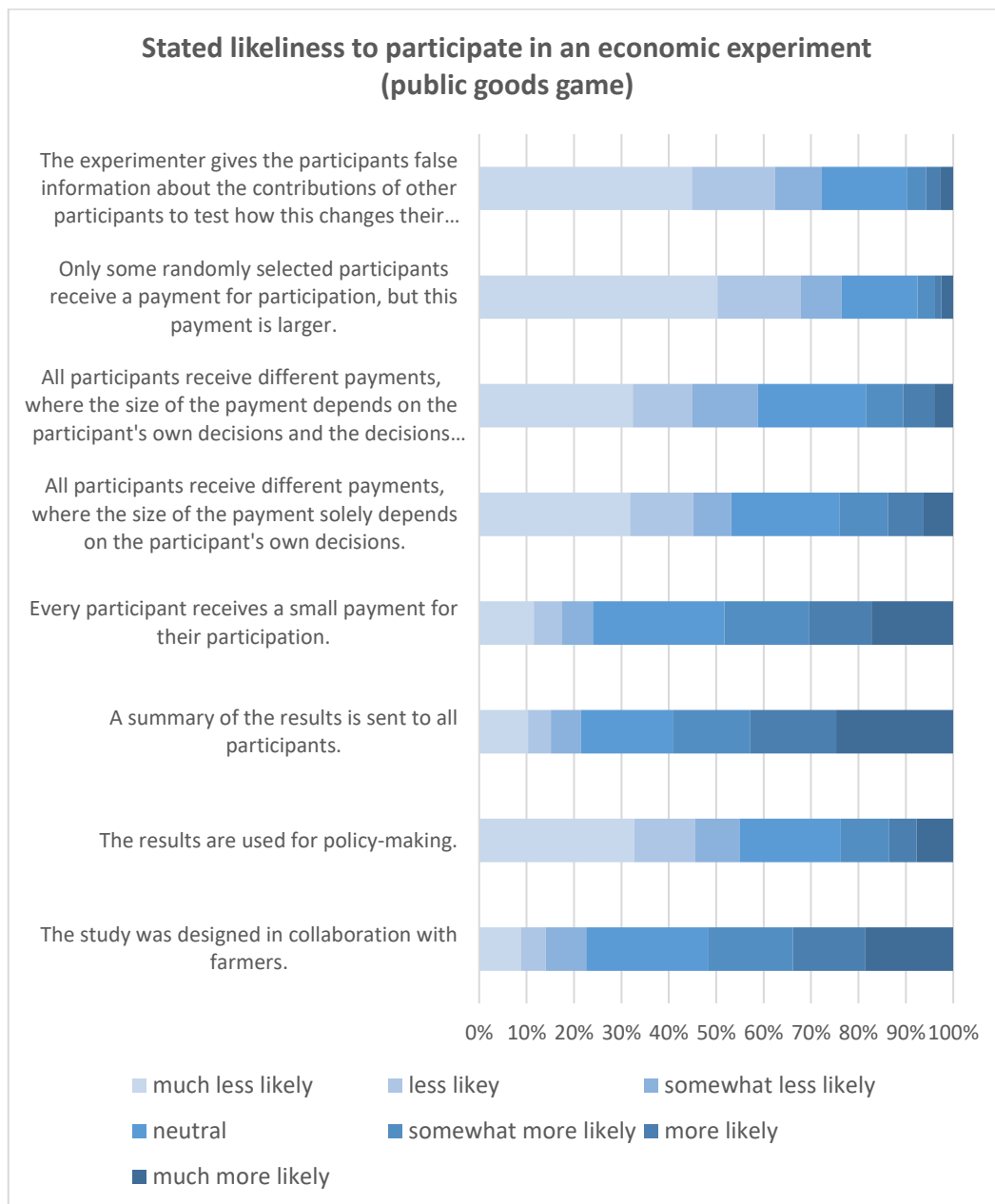


Figure 3. Summarised results of the section of the survey asking about the willingness to participate in an economic experiment following the explanation of a simple public goods game. The chart shows the distribution of answers on a seven-point Likert scale for each statement.

Payments that depend on participants' decisions or on a combination of own and other participants' decisions are something that lies at the core of most economic experiments. Not using real economic incentives would limit the usefulness of economic experiments considerably since they bring observed behaviour in the experiment as close as possible to real-world behaviour. The results of this survey, however, show that making payments conditional on participants' decisions leads to low stated willingness to participate in such an economic experiment by at least a large part of the surveyed farmers. The

statements “*All participants receive different payments, where the size of the payment solely depends on the participants own decisions.*” and “*All participants receive different payments, where the size of the payment depends on the participant’s own decisions and the decisions of other participants*” led to a rather low stated willingness to participate with an average answer of “*somewhat less likely to participate*”. In contrast, the stated willingness to participate was comparably much higher if all participants receive a small but equal payment. This shows that, at least intuitively, the core mechanism of economic experiments is ill-regarded by a relevant share of the farmer population we surveyed. It is however possible that with more background information about the purpose of differing pay-outs in economic experiments this refusal would be smaller. Participants in our study only received a short explanation of the basic concept of a public goods game and why economists use this game. Due to limited time participants spend on a survey such as ours, it can be assumed that not all answers we received rely on thorough consideration of the provided information, but rather at least partly on intuitive reactions towards specific words that are either connotated positively or negatively. For instance, the statement “*The results are used for policy-making*” was also perceived with scepticism as the stated willingness to participate was rather low. Apparently, the word “policy” or “policy-making” seems to be the source of the scepticism towards this statement. Probably, this stems from a general negative attitude some of the farmers in our sample have towards agricultural policy, or public policy and state interventions in general. It is also possible that, again, a certain distrust in research informing public policy is a reason for these rather low approval rates for this statement. However, it is difficult to prove these possible explanations since this would have required further questions on this particular matter.

We did not observe a difference in recruitment success between the two payment modes we tested as economic incentives (a low but equal payment versus a high but random payment with the same expected value). In the low payment group, 202 participants finished the questionnaire compared to 205 in the high payment group. Since these two types of incentives can be related to two of the statements we tested in the thought experiment “*Every participant receives a small payment for their participation*” and “*Only some randomly selected participants receive a payment for participation, but this payment is larger*”, we tested if there is any difference in average responses to these statements between the two groups. The average response for the former statement was 4.23 among the group who received the low payment and 4.63 among the group who received the high but random payment (on a seven-point Likert scale). This difference is small but significant ($n = 400$, $t = -2.15$, $p = 0.03$). For the latter statement, these mean values were 1.98 in the low payment group and 2.40 in the high but random payment group ($n = 398$, $t = -2.72$, $p = 0.01$). This effect is significant but equally small. Generally, the group who received the high but random payment seems to state a slightly higher willingness to participate in an economic experiment than the low payment group, given both of these modes of monetary incentivisation. However, the tendency is the same among both groups which clearly state to prefer a low but equal payment over a high but random payment. This is somewhat in conflict with the fact that we did not observe a real difference in recruitment success between the two modes of incentivisation for participation in our study.

4.4 Discussion and Limitations

This study reinforces that RCTs need to be applied with great care in the context of agricultural policy since acceptance by farmers seems to be very low. Low RCT acceptance is generally in line with the only other study on this matter to date by Morawetz & Tribl, (2020) who find an acceptance rate for their standard RCT of 22% (compared to ~24% in our study). While Morawetz & Tribl (2020) find twice as high acceptance for their alternative unconditional-payment RCT (“upRCT”), we do not find support for our alternative RCT (RCT B). This could mean that the upRCT by Morawetz & Tribl (2020) is generally perceived as less problematic while our alternative RCT is perceived as more problematic than the standard RCT. However, the two studies are not comparable to a full extent. While Morawetz & Tribl use a thought experiment based on a real agri-environmental scheme and survey only farmers participating in that scheme, we use a thought experiment with a general explanation of agri-environmental schemes and a sample of farmers independent of previous participation in such schemes. Moreover, their study relies on a sample of Austrian farmers, ours on Swedish farmers. Farming in both EU countries is governed by the CAP; however, cultural differences influencing farmers’ attitudes on state interventions might still exist.

In contrast to RCTs, other economic experiments have already been used to study farmers’ behaviour. However, scholars have identified difficulties in recruiting farmers for such experiments. The second major part of our study might provide useful insights on why farmers have been rather reluctant to accept invitations to economic experiments. The sample of farmers we surveyed tends to show higher willingness to participate in economic experiments if values such as fairness and transparency are highlighted. This challenges the set-up of many common methods within experimental economics which is needed to study certain behaviours. Especially, unequal or random payments decrease the willingness to participate in an economic experiment while equal payments for participation are perceived more positively. A desire for fairness and risk aversion might explain these stated preferences. Our results show that using monetary incentives for participation is generally accepted and might increase participation, however, the mode of payment seems to be crucial. This is in line with the literature (Weigel et al., 2020) suggesting that monetary incentives are useful in recruiting farmers but adds that fairness concerns and probably risk aversion seems to play a role. A way to make it easier to recruit farmers for economic experiments could be to pay a show-up sum to each participant and in order to keep economic incentives in the setting, participants could through their decisions in the experiment receive an additional payment. This would have the potential to mitigate the ethical concerns about unequal payments while still allowing to study economic behaviour using real money.

Generally, we need to be careful in drawing conclusions from our study that go beyond our sample of farmers taking part in the survey and for predicting real-world behaviour. Our survey suggests that farmers prefer equal payments over random but higher payments for participation in an experiment. However, we did not observe a relevant difference in recruitment success when we sent out the invitations for this study, half of them offering a low but equal payment and the other half offering a one in ten percent chance of receiving a higher payment. In

both groups we could clearly observe these mentioned preferences despite a small difference in magnitude. Hence, we cannot be sure that farmers would actually act in the way their answers in the questionnaire suggest and respond to incentives in the way they state. This is a general weakness of surveys and thought experiments. Moreover, we have to consider that participants were not randomly selected but took part in our study based on self-selection, another general weakness of most online surveys (e.g. Bethlehem, 2010). Due to the self-selection bias, we cannot assume that our sample of farmers is completely representative for all farmers in Sweden. This is because farmers voluntarily participating in our survey might have characteristics farmers who did not react to our invitation might not have to the same extent, for instance, a general interest in science or specific interest in the topic of agri-environmental schemes which made them open the survey. This could mean that our data is biased. Something we can assume but not tell for sure is that our data is confronted with an upward-bias. That is, as we can plausibly assume that people interested in science are more likely to take part in scientific surveys, we can also assume that they have more understanding for the need for research and show higher acceptance of novel research methods like the ones in our survey than the rest of the population. Hence, it is therefore more likely that we have rather overestimated than underestimated the acceptance of RCTs and the willingness to participate in economic experiments. Another general weakness of our survey might be its complexity and that we cannot be sure that all respondents fully understood each thought experiment and question in this rather long online survey with a median duration of around 14 minutes. Additionally, we cannot rule out that a different wording and presentation of the thought experiments might have yielded noticeably different results.

The low acceptance of RCTs by Swedish farmers we observed in our study might to a great extent stem from finding it unfair to let chance decide who receives a payment and who does not, as the selected reasons suggest. However, the low RCT acceptance we observed cannot be completely separated from a possibly general negative attitude towards state interventions such as agri-environmental schemes. This is something the correlation between previous participation in such schemes and RCT-acceptance, the comments we received by participants, and the part of the study on the willingness to participate in economic experiments (low approval of the statement "*the results of the study are used for policy-making*") suggest. State-interventions aiming at effecting farmers' decisions might be in conflict with non-pecuniary motivations for being a farmer such as the desire for autonomy and being self-employed (Howley, 2015). Furthermore, this can be linked to a broader discussion about farmers' attitudes on conservation measures, state interventions, and the usefulness of monetary incentives for achieving policy goals such as the objectives of the CAP since farmers' decision making cannot entirely be described by mere profit maximisation (e.g. Pedersen et al., 2012). More research needs to be done to better understand the link between farmers' attitudes on agri-environmental policy and the acceptance of research methods for assessing such policies.

6. Concluding Remarks

The results of this thesis suggest that the acceptance among Swedish farmers for using RCTs in assessing agri-environmental schemes is very low. We do not find support for an alternative RCT in which one group of farmers would receive a lower payment than the other. The acceptance for this alternative RCT is even significantly lower than for the standard RCT. This means that more research is needed for designing RCTs in a way that increases acceptability among farmers. Despite their potential usefulness for informing agri-environmental policy, applying RCTs in this context remains a practical challenge from today's viewpoint. This thesis also suggests that recruitment of farmers for economic experiments can potentially be more successful if aspects of transparency and fairness are thoroughly considered. As a part of this thesis showed some ambiguity between hypothetical and actual behaviour in regards to reacting to randomised incentives for participation, we suggest that more experimentation within the recruitment process is needed in order to find ways to increase farmers' willingness to participate in economic experiments.

References

- Baele, S. J. (2013). The ethics of new development economics: Is the experimental approach to development economics morally wrong?. *Journal of Philosophical Economics*.
- Becker, S., Grajewski, R., & Rehburg, P. (2022). Where does the CAP money go?: design and priorities of the draft CAP Strategic Plans 2023–2027 (No. 1422-2022-1182).
- Behaghel, L., Macours, K., & Subervie, J. (2019). How can randomised controlled trials help improve the design of the common agricultural policy?. *European Review of Agricultural Economics*, 46(3), 473-493.
- Bethlehem, J. (2010). Selection bias in web surveys. *International statistical review*, 78(2), 161-188.
- Blair, R., Fortson, K., Lee, J., & Rangarajan, A. (2013). Should Foreign Aid Fund Agricultural Training? Evidence from Armenia August 2013 (Vol. 19). *Mathematica Policy Research Working Paper*.
- Bothwell, L. E., Greene, J. A., Podolsky, S. H., & Jones, D. S. (2016). Assessing the gold standard—lessons from the history of RCTs. *New England Journal of Medicine*, 374(22), 2175-2181.
- Bulte, E., Beekman, G., Di Falco, S., Hella, J., & Lei, P. (2014). Behavioral responses and the impact of new agricultural technologies: Evidence from a double-blind field experiment in Tanzania. *American Journal of Agricultural Economics*, 96(3), 813-830
- Camerer, C. F. (2011). *Behavioral game theory: Experiments in strategic interaction*. Princeton university press.
- Colen, L., Paloma, S. G., Latacz-Lohmann, U., Lefebvre, M., Préget, R., & Thoyer, S. (2015). (How) can economic experiments inform EU agricultural policy?. Luxembourg (Luxembourg): Publications Office of the European Union; 2015. JRC97340
- Colen, L., Gomez y Paloma, S., Latacz-Lohmann, U., Lefebvre, M., Préget, R. and Thoyer, S. (2016). Economic experiments as a tool for agricultural policy evaluation: Insights from the European CAP. *Canadian Journal of Agricultural Economics*, 64(4): 667–694.
- Dessart, F. J., Barreiro-Hurlé, J., & van Bavel, R. (2019). Behavioural factors affecting the adoption of sustainable farming practices: a policy-oriented review. *European Review of Agricultural Economics*.

- Duflo, E., Kremer, M., & Robinson, J. (2011). Nudging farmers to use fertilizer: Theory and experimental evidence from Kenya. *American economic review*, 101(6), 2350-90.
- European Commission (2020). EU agriculture in numbers - Performance on the nine specific objectives of the CAP. Agriculture and Rural Development, May 2020.
- European Commission (2019). The common agricultural policy at a glance. Available at: https://agriculture.ec.europa.eu/common-agricultural-policy/cap-overview/cap-glance_en. (accessed 15.05.2022).
- European Commission (2017). Technical Handbook on the Monitoring and Evaluation Framework of the Common Agricultural Policy 2014-2020. Directorate-General for Agriculture and Rural Development, June 2017.
- Fafchamps, M., & Minten, B. (2012). Impact of SMS-based agricultural information on Indian farmers. *The World Bank Economic Review*, 26(3), 383-414.
- Giné, X., Goldberg, J., & Yang, D. (2012). Credit market consequences of improved personal identification: Field experimental evidence from Malawi. *American Economic Review*, 102(6), 2923-54.
- Harrison, G. W., & List, J. A. (2004). Field experiments. *Journal of Economic literature*, 42(4), 1009-1055.
- Hasler, B., Termansen, M., Nielsen, H. Ø., Daugbjerg, C., Wunder, S., & Latacz-Lohmann, U. (2022). European agri-environmental policy: Evolution, effectiveness, and challenges. *Review of Environmental Economics and Policy*, 16(1), 105-125.
- Howley, P. (2015). The happy farmer: the effect of nonpecuniary benefits on behavior. *American Journal of Agricultural Economics*, 97(4), 1072-1086.
- Isaac, R. M., Walker, J. M., & Thomas, S. H. (1984). Divergent evidence on free riding: An experimental examination of possible explanations. *Public choice*, 43(2), 113-149.
- Kahnemann, D., & Tversky A. (1979). Prospect Theory: An Analysis of Decision under Risk. *Econometrica* 47 (2): 263-291.
- Keenleyside C, Radley G, Tucker G, Underwood E, Hart K, Allen B and Menadue H (2014). Results-based Payments for Biodiversity Guidance Handbook: Designing and implementing results-based agri-environment schemes 2014-20. Prepared for the European Commission, DG Environment, Contract No ENV.B.2/ETU/2013/0046, Institute for European Environmental Policy, London.
- Kuhfuss, L., Preget, R., Thoyer, S. & Hanley, N. (2016). Nudging farmers to sign agri-environmental contracts: the effects of a collective bonus. *European Review of Agricultural Economics*, 43(3): 609–636.
- Kwak, C., & Clayton-Matthews, A. (2002). Multinomial logistic regression. *Nursing research*, 51(6), 404-410.
- Le Coent, P., Preget, R., & Thoyer, S. (2014). Why pay for nothing? An experiment on a conditional subsidy scheme in a threshold public good game. *Economics Bulletin*. 34. 1976-1989.

- Lefebvre, M., Barreiro-Hurlé, J., & Blanchflower, C., Colen, L., Kuhfuss, L., Rommel, J., Šumrada, T., Thomas, F., & Thoyer, S. (2021). Can Economic Experiments Contribute to a More Effective CAP?. *EuroChoices*. 10.11.11/1746-692X.12324.
- Lenhard, J. (2017). Thought experiments and simulation experiments: Exploring hypothetical worlds. *The Routledge companion to thought experiments*, 484-497.
- Mobarak, A. M., & Rosenzweig, M. R. (2013). Informal risk sharing, index insurance, and risk taking in developing countries. *American Economic Review*, 103(3), 375-80.
- Morawetz, U.B., and Tribl, C. (2020). Randomised Controlled Trials for the evaluation of the CAP: Empirical evidence about acceptance by farmers? *German Journal of Agricultural Economics*, 69(3): 183–199.
- Palm-Forster, L. H., & Messer, K. D. (2021). Experimental and behavioral economics to inform agri-environmental programs and policies. In *Handbook of agricultural economics (Vol. 5, pp. 4331-4406)*.
- Pedersen, A. B., & Nielsen, H. Ø. Tove Christensen og Berit Hasler (2012). Optimising the effect of policy instruments: A study of farmers' decision rationales and how they match the incentives in Danish pesticide policy. *Journal of Environmental Planning and Management*, 55(8), 1094-1110.
- Reisch, L. A., & Sunstein, C. R. (2016). Do Europeans like nudges?. *Judgment and Decision making*, 11(4), 310-325.
- Rosch, S., Raszap Skorbiansky, S., Weigel, C., Messer, K. D., & Hellerstein, D. (2021). Barriers to Using Economic Experiments in Evidence-Based Agricultural Policymaking. *Applied Economic Perspectives and Policy*, 43(2), 531-555.
- Shadish, W. R., Cook, T. D., & Campbell, D. T. (2002). *Experimental and quasi-experimental designs for generalized causal inference*. Houghton, Mifflin and Company.
- Suske W., Huber J., Depisch B., Frieß T., Holzinger W., Derbuch G., Kahapka J., Huber E., Gunczy W. L. (2020). Analyse der Zielerfüllung der ÖPUL- Maßnahme „Silageverzicht“ in Bezug auf Biodiversität. Studie im Auftrag von Land Salzburg, Land Tirol, Land Steiermark und Land Vorarlberg.
- Weigel, C., Paul, L. A., Ferraro, P. J., & Messer, K. D. (2021). Challenges in recruiting US farmers for policy-relevant economic field experiments. *Applied Economic Perspectives and Policy*, 43(2), 556-572.
- Zabel, A., & Holm-Müller, K. (2008). Conservation performance payments for carnivore conservation in Sweden. *Conservation biology*, 22(2), 247-251.

Appendix 1: Original Questionnaire in Swedish

Genom fylla i cirkeln nedan, bekräftar du att ditt deltagande i studien är frivilligt och att du är minst 18 år gammal.

- Jag samtycker. Jag är medveten om att jag endast kan delta en gång och att jag måste fylla i min email adress för att kunna ta del av belöningen. Påbörja undersökningen. (1)
- Jag samtycker inte. (2)

End of Block: Consent

Start of Block: Part 1 (Nudges)



I denna del av enkäten vill vi förstå vad du tycker om politiska styrmedel. Vi kommer ställa upp några exempel på politiska styrmedel och be om din åsikt. Vad anser du om dessa hypotetiska politiska styrmedel, Gillar du, eller ogillar du dem?

	Gillar (1)	Ogillar (2)
Regeringen kräver kalori-etiketter hos snabbmatsrestauranger (som McDonald's och Burger King). (1)	<input type="radio"/>	<input type="radio"/>
Regeringen kräver ett "trafikljus" system för mat, där hälsosam mat säljs med en liten grön lapp, ohälsosam mat säljs med en liten röd lapp, och mat som varken är speciellt hälsosam eller ohälsosam säljs med en liten gul lapp. (2)	<input type="radio"/>	<input type="radio"/>
Regeringen uppmuntrar (utan att kräva) energiproducenter att anta ett "grönt" system där konsumenterna automatiskt blir anmälda hos en miljövänlig energileverantör men kan välja att gå ur. (3)	<input type="radio"/>	<input type="radio"/>
En lag som kräver att personer berättar när de tog sitt körkort om de vill bli organdonator. (4)	<input type="radio"/>	<input type="radio"/>
En lag som kräver att alla stora livsmedelsbutiker placerar sin mest hälsosamma mat på en väldigt synlig plats i butiken. (5)	<input type="radio"/>	<input type="radio"/>

För att minska dödsfall och skador i samband med distraherade förare, antar regeringen ett offentligt utbildningsprogram bestående av grafiska historier och bilder utformat för att avskräcka folk från att smsa, mejla eller prata i telefonen medan de kör bil. (6)



I syfte att minska övervikt i barndomen antar regeringen ett offentligt utbildningsprogram bestående av information som föräldrar kan använda för att ta hälsosammare beslut rörande deras barn. (7)



Regeringen kräver att biografier visar subliminal reklam (alltså reklam som går förbi så snabbt att folk inte medvetet uppfattar dem utformat för att avskräcka människor från rökning och överkonsumtion. (8)



Regeringen kräver att flygbolag tar betalt via biljetten (100 SEK per biljett) för att kompensera för passagerares koldioxidutsläpp; under programmet kan folk välja att avstå från att betala avgiften om de inte vill. (9)



Regeringen kräver etiketter på produkter som innehåller ovanligt höga nivåer salt, som, "Denna produkt innehåller höga nivåer av salt vilket kan vara skadligt för din hälsa". (10)

Regeringen antar, på skatteåterbäringen, att folk vill donera 500 SEK till Röda Korset (eller till andra välgörande ändamål), man kan gå ur programmet, det kräver ett aktivt avstående från donationen genom meddelande. (11)

Regeringen kräver att biografier visar offentliga meddelanden utformade för att avskräcka från rökning och överkonsumtion. (12)

Regeringen kräver att stora energiförsörjare antar ett "grönt" system där konsumenter automatiskt blir anmälda hos en miljövänlig energileverantör men kan välja att gå ur. (13)

För att begränsa det ökande överviktsproblemet, kräver regeringen att stora livsmedelskedjor inte har godis vid kassorna. (14)

För miljö och folkhälsoanledningar, kräver regeringen att kök i offentliga institutioner (skolor, offentliga administrationer och liknande) en köttfri dag i veckan. (15)

Start of Block: RCT 1

I denna del av studien vill vi diskutera miljöprogram inom jordbruket.

Tvårs över Europa förser **miljöprogram inom jordbruket**, lantbrukare med betalningar för att engagera dem i **miljövänliga jordbruksmetoder**.

Ponera följande **scenario**:

För att **bedöma effektiviteten** av ett miljöprogram inom jordbruket vill forskare **slumpmässigt inkludera eller exkludera grupper av lantbrukare att delta i ett nytt program**.

Det betyder att, vissa lantbrukare kan välja att vara del av det nya programmet, medan andra inte får möjligheten. Slumpen avgör vem som hamnar i vilken grupp.

Du är bland de lantbrukare som kan delta i det nya programmet. Tycker du sättet att bedöma effektiviteten av nya miljöprogram i jordbruket är acceptabelt?

- Ja (20)
- Nej (21)
- Vet ej / obestämd (22)



Jag tycker att detta sätt är acceptabelt på grund av, ...

	Instämme r inte alls (6)	Instämme r delvis (7)	Varken instämme r eller instämme r inte (8)	Instämme r delvis (9)	Instämme r i hög grad (10)
... det är viktigt att säkert kunna fastställa effektiviteten av nya politiska styrmedel. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
... alla har samma möjlighet att bli vald. (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
... ingen förlorar något på att testa detta politiska styrmedel. (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Annan/andra anledning(ar). (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



Jag tycker inte att sättet är acceptabelt på grund av, ...

	Instämme r inte alls (6)	Instämme r delvis (7)	Varken instämme r eller instämme r inte (8)	Instämme r delvis (9)	Instämme r i hög grad (10)
... det är inte bra att vissa kan vinna på det mer än andra. (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
... det är inte bra att endast sluppen bestämmer vem som blir vald. (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
... det är inte viktigt att säkert fastställa effektiviteten av nya politiska styrmedel. (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Annan /andra anledning(ar) (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

End of Block: RCT 1

Start of Block: RCT 2

I denna del av studien vill vi diskutera miljöprogram inom jordbruket.

Tvärs över Europa förser **miljöprogram inom jordbruket**, lantbrukare med betalningar för att engagera dem i **miljövänliga jordbruksmetoder**.

Ponera följande **scenario**:

För att **bedöma effektiviteten** av ett miljöprogram inom jordbruket vill forskare **slumpmässigt inkludera eller exkludera grupper av lantbrukare att delta i ett nytt program.**

Det betyder att, vissa lantbrukare kan välja att vara del av det nya programmet, medan andra inte får möjligheten. Slumpen avgör vem som hamnar i vilken grupp.

Du är inte bland de lantbrukare som kan delta i det nya programmet. Tycker du sättet att bedöma effektiviteten av nya miljöprogram i jordbruket är **acceptabelt?**

- Ja (20)
- Nej (21)
- Vet ej / obestämd (22)



Jag tycker att sättet är acceptabelt på grund av, ...

	Instämme r inte alls (16)	Instämme r delvis (17)	Varken instämme r eller instämme r inte (18)	Instämme r delvis (19)	Instämme r i hög grad (20)
... det är viktigt att säkert kunna fastställa effektiviteten av nya politiska styrmedel. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
... alla har samma möjlighet att bli vald. (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
... ingen förlorar något på att testa detta politiska styrmedel. (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Annan/andra anledning(ar). (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



Jag tycker inte att sättet är acceptabelt på grund av, ...

	Instämme r inte alls (6)	Instämme r delvis (7)	Varken instämme r eller instämme r inte (8)	Instämme r delvis (9)	Instämme r i hög grad (10)
... det är inte bra att vissa kan vinna på det mer än andra. (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
... det är inte bra att endast slumpen bestämmer vem som blir vald. (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
... det är inte viktigt att säkert fastställa effektiviteten av nya politiska styrmedel. (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Annan/andra anledning(ar). (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

End of Block: RCT 2

Start of Block: RCT 3

I denna del av studien vill vi diskutera miljöprogram inom jordbruket.

Tvårs över Europa förser **miljöprogram inom jordbruket**, lantbrukare med betalningar för att engagera dem i **miljövänliga jordbruksmetoder**.

Ponera följande scenario:

För att **bedöma effektiviteten** av miljöprogram i jordbruket vill forskare **slumpmässigt betala en grupp av lantbrukare en högre betalning än en annan grupp som erhåller en lägre betalning.**

Det betyder att, vissa lantbrukare kommer erhålla en högre betalning än andra, endast sluppen bestämmer vem som hamnar i vilken grupp.

Du är bland de lantbrukare som erhåller den högre betalningen. Tycker du sättet att bedöma effektiviteten av nya miljöprogram i jordbruket är **acceptabelt**?

- Ja (20)
- Nej (21)
- Vet ej / obestämd (22)



Jag tycker att sättet är acceptabelt på grund av, ...

	Instämme r inte alls (6)	Instämme r delvis (7)	Varken instämme r eller instämme r inte (8)	Instämme r delvis (9)	Instämme r i hög grad (10)
... det är viktigt att säkert kunna fastställa effektiviteten av nya politiska styrmedel. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
... alla har samma möjlighet att bli vald. (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
... ingen förlorar något på att testa detta politiska styrmedel. (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Annan/andra anledning(ar). (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



Jag tycker inte att sättet är acceptabelt på grund av, ...

	Instämme r inte alls (6)	Instämme r delvis (7)	Varken instämme r eller instämme r inte (8)	Instämme r delvis (9)	Instämme r i hög grad (10)
... det är inte bra att vissa kan vinna på det mer än andra. (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
... det är inte bra att endast slumpen bestämmer vem som blir vald. (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
... det är inte viktigt att säkert fastställa effektiviteten av nya politiska styrmedel. (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Annan/andra anledning(ar). (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

End of Block: RCT 3

Start of Block: RCT 4

I denna del av studien vill vi diskutera miljöprogram inom jordbruket.

Tvårs över Europa förser **miljöprogram inom jordbruket**, lantbrukare med betalningar för att engagera dem i **miljövänliga jordbruksmetoder**.

Ponera följande scenario:

För att **bedöma effektiviteten** av miljöprogram i jordbruket vill forskare **slumpmässigt betala en grupp av lantbrukare en högre betalning än en annan grupp som erhåller en lägre betalning.**

Det betyder att, vissa lantbrukare kommer erhålla en högre betalning än andra, endast slumpen bestämmer vem som hamnar i vilken grupp.

Du är bland de lantbrukare som erhåller den lägre betalningen. Tycker du sättet att bedöma effektiviteten av nya miljöprogram i jordbruket är **acceptabelt**?

- Ja (20)
- Nej (21)
- Vet ej / obestämd (22)



Jag tycker att sättet är acceptabelt på grund av, ...

	Instämme r inte alls (6)	Instämme r delvis (7)	Varken instämme r eller instämme r inte (8)	Instämme r delvis (9)	Instämme r i hög grad (10)
... det är viktigt att säkert kunna fastställa effektiviteten av nya politiska styrmedel. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
... alla har samma möjlighet att bli vald. (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
... ingen förlorar något på att testa detta politiska styrmedel. (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Annan/andra anledning(ar). (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



Jag tycker inte att sättet är acceptabelt på grund av, ...

	Instämme r inte alls (6)	Instämme r delvis (7)	Varken instämme r eller instämme r inte (8)	Instämme r delvis (9)	Instämme r i hög grad (10)
... det är inte bra att vissa kan vinna på det mer än andra. (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
... det är inte bra att endast slumpen bestämmer vem som blir vald. (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
... det är inte viktigt att säkert fastställa effektiviteten av nya politiska styrmedel. (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Annan/andra anledning(ar). (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

End of Block: RCT 4

Start of Block: Part 3 (Experiments)



I den här delen av studien vill vi förstå hur du uppfattar så kallade ekonomiska experiment.

Forskare använder ofta **spel för att studera mänskligt beteende**, i dessa spel är

ofta deltagarna beroende av varandra. En deltagares ageranden påverkar andra.

Granska följande **exempel** av beslut i ett spel. Deltagare i detta spel är tilldelade brickor. De kan antingen behålla brickorna själva, eller bidra med dem till ett gruppkonto. Efter att alla deltagare har bidragit med sin del till gruppkontot fördubblas brickorna i kontot, och delas sedan tillbaka till alla deltagarna.

Forskare använder detta spel för att förstå om personer är villiga att frivilligt bidra för att samarbeta med andra.

Vid slutet av spelet erhåller deltagare en **betalning**. Lagg märke till att dessa betalningar **i många fall används för att kompensera deltagare för deras tid eller för att motivera deras agerande i studien**. Om du var tillfrågad att delta i

spelet, **hur hade följande förhållanden påverkat ditt intresse i studien?** Använd skalan för att anpassa dina svar!

	Mycket mindre troligt att delta (1)	(2)	(3)	(4)	(5)	(6)	Mycket mer troligt att delta (7)
Studien var utformad i samarbete med lantbrukare. (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Resultaten är använda för att stifta politiska styrmedel. (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
En sammanfattning av resultaten skickas till alla deltagande. (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Varje deltagande erhåller en liten betalning för deras deltagande. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Alla deltagande erhåller olika betalningar, där storleken av summan endast beror på deltagarens egna beslut. (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Alla deltagande erhåller olika betalning, där storleken av summan beror på deras egna beslut och andra deltagares beslut. (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Bara vissa slumpmässigt utvalda deltagare erhåller betalning för deltagande, men denna betalning är större. (7)

Den som håller i experimentet ger deltagarna falsk information om de andra deltagarnas bidrag till gruppkontot för att se hur det påverkar bidragen i gruppen. (13)

End of Block: Part 3 (Experiments)

Start of Block: Part 4 (Questions about farm size etc.)

Vad är ditt kön?

- Man (1)
- Kvinna (2)
- Annan / vill helst inte säga (3)



Fyll i din ålder.

Vilken(a) del(ar) av jordbruksproduktion står för över 10% av din inkomst från jordbruk? Markera alla som passar in på dig.

- Nötkreatur (1)
 - Mejeri (2)
 - Får eller getter (3)
 - Grisar (5)
 - Skog (6)
 - Växtodling (9)
 - Foder produktion (10)
 - Permanenta växter (t.ex. frukt) (11)
 - Hortikultur (13)
 - Annat jordbruk (7)
 - Icke-jordbruksrelaterade affärsverksamhet (8)
-

Är din gård ekologiskt certifierad?

- Ja, hela gården är ekologisk. (1)
 - Ja, delar av min gård är ekologisk. (2)
 - Nej, men är nuvarande i omställning till ekologiskt. (3)
 - Nej gården är inte ekologisk. (4)
 - Annat (5)
-
- Vet ej (6)

Deltar du, eller har du deltagit i miljöprogram i jordbruket som syftar att ge incitament till miljövänliga jordbruksmetoder?

- Ja, under tre år eller mindre (1)
 - Ja, mer än tre år (2)
 - Nej, jag är generellt inte intresserad. (3)
 - Nej, men jag skulle kunna tänka mig att gå med i ett sådant program. (4)
-

Vad var din gårds inkomst från jordbruk år 2020 (innan skatt)?

- mindre än 250 000 SEK (4)
- 250 000 till 400 000 SEK (13)
- 400 000 till 650 000 SEK (5)
- 650 000 till 800 000 SEK (6)
- 800 000 till 1 100 000 SEK (14)
- 1 100 000 till 1 600 000 SEK (16)
- Mer än 1 600 000 SEK (15)
- Vet ej (12)

Hur stor är din gård i hektar?

Arrenderad brukbar mark : _____ (1)

Ägd brukbar mark : _____ (2)

Arrenderad gräsmark : _____ (3)

Ägd gräsmark : _____ (4)

Skog : _____ (5)

Annan mark : _____ (6)

Total : _____



Hur många djurenheter har du på din gård?

Hur stor del av din hushållsinkomst kommer från jordbruk?

0 10 20 30 40 50 60 70 80 90 100

Hushållsinkomst från jordbruk i %
()



Hur stor del av din gårds inkomst kommer i direkta utbetalningar från Europeiska unionens jordbrukarstöd?

0 10 20 30 40 50 60 70 80 90 100

Hushållsinkomst från jordbruk i %
()



Page Break

Finns det något du vill dela med oss om undersökningen?

Fyll i din email adress om du är intresserad av resultatet! Vi kommer endast att använda adressen i det syftet och radera den så snart resultatet är skickat (mest troligt, under de kommande fyra månaderna). Vi kommer även att kontakta dig angående betalningen för deltagande i undersökningen på denna adress.

End of Block: Part 4 (Questions about farm size etc.)

Appendix 2: Other reasons for accepting / not accepting the RCT scenarios (comments)

RCT A lucky group acceptable because *other reasons*

Behöver mer information om det hela

Svårt att se effekten av nya regler. Finns exempel på regler som fått precis motsatt effekt än den tankta i tidigare och idagens system

snabba på utvecklingen av pol. Styrmedel

Bra att fråga.

Statistisk rätt metod

tycker att informationen är knapp

ett själv spelande piano går ej att påverka

alla berörda borde få delta

RCT A lucky group unacceptable because *other reasons*

ensidig gynnade v EKO

konkurrenssnedvridning, mindre accepterat

Det blir ett mycket missvisande resultat, beroende på förutsättningar

Om vi ska konkurrera på lika villkor kan inte staten lotta ut "lönsamhet"

osäkert

Förstår inte syftet

Staten ska inte styra mig.

det skall vara konkurrensneutralt

orättvisa

lite luddit

Politiska styrmedel ej bra

bör baseras på fakta

Oförutsägbart urval

Dåligt urval

Bör vara neutralt

orättvisa

Rättvisa

RCT A unlucky group acceptable because *other reasons*

Kostsamt

viktigt att effektivisera på ett miljövänligt sätt

sjumpen

Man måste testa och mäta för att få ett resultat

Ok om begränsat antal

Företag som inte är valda men använder miljövänliga metoder kanske är lika effektiva som de som får stöd.

Det är viktigt att utvärdera

styrgruppen måste ha relevant sammansättning

RCT A unlucky group unacceptable because *other reasons*

Marknaden ska avgöra

Alla ska delta

frivillighet viktigt

ALLA ELLER INGEN SA VARA MED

det hade varit bättre med en enkät

Jag tror att yngre och större bönder oftare väljer att delta. Färmed kommer resultaten att bli biased

LÅT VAR OCH EN BESTÄMMA

Alla bör få möjlighet att delta

Läser: forskare slumpmässigt inkludera eller exkludera grupper av lantbrukare att delta i ett nytt program.: FARLIGT: Vi vet hur "slumpen" används av PS och då deras styrning. Tror definitivt INTE på slumpen som allt för ofta är medvetet styrd. Jämför med jurnos fråga till "mannen på gatan, somallt för ofta är en aktiv kommunist eller socialist!

Branchkunskap

Staten ska inte blanda sig sådant här!

Presenterade åtgärder ska vara säkra

odemokratiskt

Finns så många olika typer av produktioner med olika förutsättningar.

avskyr myndighetskontroll

Staten ska inte snedvrída konkurrensen genom att erbjuda möjligheter till vissa men inte till andra.

kan ske på frivillig basis

Komunistiskt

alla ska behandlas lika

orättsvist

nya miljövänliga metoder ska styras på vetenskaplig grund

det behövs en grundligare undersökning av effekten av de miljövänliga jordbruksmetoderna

Brukarens borde bestämma om man tro på programmet och delas in efter val

RCT B lucky group acceptable because *other reasons*

Rättvisa...

miljöskälets vikt

RCT B lucky group unacceptable because *other reasons*

ersättning skall vara mot prestation

Det skall vara rättvist

Myndigheter skall ej syssla med sådant

att ersättningarna skiljer i storlek, vilket kan ge olika engagemang hos de utvalda lantbrukarna att svara

alla ska ha lika

Konstigt sätt att bedöma effektivitet

Det borde finnas andra sätt att utvärdera effekten av ett miljöprogram

Slöseri med allmänna medel

likabehandling är viktig

Det är svårt att bedömma effektiviteten rättvist. Olika marker har olika förutsättningar. Regler finns för vad som styr stödet. Det räcker..

Välj själv

Offentliga medel skall erbjudas lika till alla

Det fungerar inte att slänga pengar vilt omkring sig.

Jag tror att det är en dålig metod eftersom det är många andra faktorer som spelar roll. Detta kommer också att komma ut till lantbrukare och då är hela poängen meningslös, åtm. ur en vetenskaplig synvinkel.

Stor risk för symptomlösningar

Samarbete

Amatörmässigt från politiken

Det bör vara lika för alla, en tjänst=en och samma ersättning

ser inte hur utvärderingen ska gå till

Jordbruket är inget för politiker

orättvisan

Tror inte på slumpen

Påverkar inte effekten av att följa programmet

För krånglig undersökning ni har skickat!

det ska betalas efter prestation

betalning för miljöaktivitet ska vara förutsägbar

Totalt orättvist, alla har olika förutsättningar

vad är effektivt politiskt? av vilka partier ska styra. kan bli kortvariga beslut

Beslut ska grundas på fakta

För komplext, transparens är viktigt

Oseriöst förfarande med människors levebröd

felaktigt resultat

orättvisa

Bara frågan visar vilken idioti SLU håller på med

Det vore meningslöst att ge en lantbrukare mer för samma åtgärd. Det är inte troligt att den lantbrukare som får mer skulle göra mer/fler åtgärder för miljön. Resultatet av miljöåtgärder måste kunna mätas i naturen. Om det ej går, så är underlaget för miljöåtgärderna troligen för dåligt från början. Då borde insatserna aldrig göras, och ingen lantbrukare borde få någon ersättning i sådana fall.

Beror på hur stor skillnaden är

Alla har en faktiskt kostnad

Korkat

RCT B unlucky group acceptable because *other reasons*

Det är vetenskapligt test

RCT B unlucky group unacceptable because *other reasons*

slumpen kan inte avgöra hur en företagare ska ersättas för miljötjänster eller annat som politiken beställer

Bedömningar skall göras på vetenskaplig basis

fel beslutssystem i riksdagen altså personlig röstning inte partigrupp

Det är konsumenten plikt

Slumpen

Barnsligt

skall vara rättvist

det är inte ersättningen som är viktigast för att utvärdera därför kommer inte detta sätt ge rätt info tillbaka

Det enda vettiga är väl om forskning visar om de metoder som prioriteras inom EU verkligen ger det avsedda målet?!?

hypotes leder fel

lika betalt

orättvist

effektiviteten avgörs sannolikt inte genom betalning

ska vara lika

Snedvrider kokurrens

Program bör vara förankrade hos befolkningen

Det som anses som miljövänligt är aldrig det

Planering och framtidsanalytisk

Gillar inte bidragssystemet då det kostar alldeles för mycket att administrera. Sätt höga tullar på all mat som importeras och låt lantbrukarna få betalt för det de producerar istället. Det skulle finnas krav på att 25% av den mat man konsumerar ska man producerat själv. Det skulle minska matsvinnet och uppskatta det vi äter.

finns bättre styrmedel

oetiskt

Synnerligen dummt

rättvist och transparant

Man bör få betalt för de insatser men gör och inte pga lotteri eller om man begåvats med talets gåva

Orättvist

osämja bland lantbrukare

Stor/liten

orättvist

Har svårt att förstå hur detta ska bli möjligt att få korrekt data då de är så mkt mer en pengar som avgör hur vidare en bonde är effektiv och engagerad i sin gård/mark

det är slöderi med skattepengar

Politik er ett jäva rävspel

kan ej vara rätt

ingen verklighetsförankring

Publishing and archiving

Approved students' theses at SLU are published electronically. As a student, you have the copyright to your own work and need to approve the electronic publishing. If you check the box for **YES**, the full text (pdf file) and metadata will be visible and searchable online. If you check the box for **NO**, only the metadata and the abstract will be visible and searchable online. Nevertheless, when the document is uploaded it will still be archived as a digital file. If you are more than one author, the checked box will be applied to all authors. Read about SLU's publishing agreement here:

- <https://www.slu.se/en/subweb/library/publish-and-analyse/register-and-publish/agreement-for-publishing/>.

YES, I/we hereby give permission to publish the present thesis in accordance with the SLU agreement regarding the transfer of the right to publish a work.

NO, I/we do not give permission to publish the present work. The work will still be archived and its metadata and abstract will be visible and searchable.