

Programme - Workshop ANIPLAN – Payerbach Reichenau

Monday, May 11th

Morning	Arrival
12.30 am	Lunch
2 pm	Welcome and Introduction to ANIPLAN What are our goals for the project/this workshop (C. Winckler)
2.20pm	Update and status of the ANIPLAN project Country reports (max. 8 minutes per country) (Facilitated and led by M. Vaarst)
4pm	Coffee break
4.30pm	Expectations to a model for animal health and welfare planning to use in practice, as the major outcome from this project Presentations given by BioAustria and ANIPLAN Austria (C. Größ/E. Gratzner)
5.30pm	Group discussions about the expectations How we ourselves in our different countries perceive our own expectations, and the expectations expressed by the farmers where we work in this project, and with the stakeholders, organisations etc. with whom we communicate. We aim at answering the following questions, <ul style="list-style-type: none">- What are the expectations in our own context (research, advisory service, farmers, organisations)?- What is needed to make our efforts in the project meeting these expectations?- How to disseminate our results?
6:30	Plenary presentations of the group discussion
7pm	dinner

Tuesday, May 12th

This day is concentrating on methods, applications and pros/cons for qualitative and quantitative research, Rahel Kilchsperger and Silvia Ivemeyer (FIBL) will give us an introduction and we will discuss in groups:

8am	Breakfast
8.30	Qualitative research and different methods (R. Kilchsperger)
9.00	Short discussion about main objectives and questions of this task in our project <ul style="list-style-type: none">o Evaluation of advisory actions (farmer field schools/one-to-one advice)o What is the impact of those?
9.30	Possible methods for investigation of these objectives with special focus on group focus interviews (R. Kilchsperger)
10.00	Workshop (including coffee at 10.30) Did processes operate as expected? Were farmers able to carry out their duties? Where do participants see strengths and weaknesses of the planning? What could still be improved? What were the expectations (farmers and researchers)? What effects have been observed (farmers and researchers)? Were any of them unintended?
12.00	Discussion of methods: Which method fits best?
12.30	Lunch
1.30pm	Walk and talk: personal update and other never-ended discussions during visiting an organic dairy herd
3.30pm	Quantitative research and different methods (S. Ivemeyer)
4.00	Coffee
4.30	Group discussion in 3-4 groups (housing, animal based, records) – how to apply quantitative methods for our data?
6.00	Plenary feed back of the afternoon's discussions
7.00pm	Dinner

Wednesday, May 13th

This day is a **work day** with data and research results, plans and analysis and concrete going through our data collected so far. We suggest to build up a day of group work, interactive 'open space discussions' and the result of the day is not just plans (but also plans) – we actually have looked at our data bases and the different data formats.

Please take your data sheets, farm reports, and written animal health and welfare plans from your country. You do not have to bring the whole office and a suitcase with data, but please take examples to make it clear to everybody how they look, and data files either on your computer or on a memory stick.

8.00 am	<i>Breakfast</i>
8.30am	Information and discussion about future or current or ongoing projects or collaborations related to ANIPLAN
9.00 am	Group discussion in 4 groups (assessment – facilitation – quantitative data – qualitative data)
10.30am	<i>Coffee break</i>
11.30am	Open space discussions in the 4 groups where there are posters related to each topic + computer demonstrations and 1 person staying as representative from each of the four groups, while the others float around between the four group rooms.
12.30pm	<i>Lunch</i>
2.30 pm	Short plenary: where are we and what are the 7 main issues to discuss for the rest of the day
3.00pm	Discussion in 2 Groups (Qualitative group/facilitation and quantitative group/assessment) Exchange and conceptualisation of ideas, harmonising expectations between the data and the analyses
4.00pm	<i>Coffee</i>
4.30pm	Working in groups relevant based on either a short update after the coffee break, or in combination with the 7 main issues identified between 2:30 and 3 pm
7.00 pm	Dinner with wine

Thursday, May 14th

8 am	<i>Breakfast</i>
8.30am	Summary meeting: Decisions and plans for the last phase of the project and time table. Decisions on the workshop in Switzerland – ideas on whom to invite and what we expect from that. Joint writings and conference participation. 'Test presentation' by Mette Vaarst for the CORE meeting in Rome in June 2009.
10.30am	<i>Coffee break</i>
11.00am	Group work in future work teams (e.g. on writing a certain article or doing some analyses together); various meetings and making plans concrete; confirmation of agreements.
12.30pm	<i>Lunch</i>

CORE Organic

ANIPLAN Workshop
May 11th-14th, 2009, Reichenau, Austria

LIST OF PARTICIPANTS

ANIPLAN partners:

Elisabeth Gratzner, Austria
Johann Huber, Austria
Christine Leeb, Austria
Elisabeth Stöger, Austria
Christoph Winckler, Austria
Mette Vaarst, Denmark
Lindsay Whistance, Denmark
Jan Brinkmann, Germany
Solveig March, Germany
Berit Hansen, Norway
Cecilie Mejdell, Norway
Silvia Ivemeyer, Switzerland
Michael Walkenhorst, Switzerland
Gidi Smolders, The Netherlands
Madeleine Neale, United Kingdom
Phillipa Nicholas, United Kingdom
Steve Roderick, United Kingdom

External participants:

Christa Größ, BioAustria (invited speaker, 11.05.2009)
Rahel Kilchsperger, FibL Switzerland (invited speaker, 12.05.2009)
Maria Keuschnigg, Federal Ministry of Agriculture, Forestry, Environment and Water Management,
Austria (11.05.2009)
Davide Bochicchio, Italy
Anke Gutmann, Austria (11.05.2009)

CORE Organic

ANIPLAN
Project meeting 11th May 2009



Development of animal health and welfare planning in organic dairy farming in Europe

Mette Vaarst, Christine Leeb, Pip Nicholas, Stephen Roderick, Gidi Smolders, Michael Walkenhorst, Jan Brinkmann, Solveig March, Elisabeth Stöger, Elisabeth Gratzner, Christoph Winckler, Vonne Lund, Britt I.F. Henriksen, Berit Hansen, Madeleine Neale, Johann Huber & Lindsay K. Whistance

Project structure

WP 1. Coordination and knowledge transfer

WP 2. Development of principles for animal health planning in organic dairy farms and assessing the use of health plans.

WP3: Application and testing of animal based parameters for evaluation of animal health and welfare and development

WP4. Communication about animal health and welfare and disease prevention in advisory systems and farmer groups.

WP 5. Analysing the effect of minimised use of medicine through animal health promotion

'Original hypothesis'

- Medicine use in organic dairy herds can be minimised through active and well planned animal health and welfare promotion and disease prevention.

Yes – this hypothesis has been maintained and will be maintained during the project.

Objective

- To minimise medicine use in organic dairy herds through active and well planned animal health and welfare promotion and disease prevention.

Intermediate objectives

- Develop animal health and welfare planning principles for organic dairy farms under diverse conditions based on an evaluation of current experiences.
- Application of animal health and welfare assessment based on the WelfareQuality parameters in different types of organic dairy herds across Europe. This will result in an overview of the herds and allow for potential adaptations for the organic situation (e.g. pasture systems, longer cow/calf contact). For calves, a special system will be developed by the Norwegian partners, and combined and tested together with the WelfareQuality assessment system.
- Develop guidelines for communication about animal health and welfare promotion in different settings. This can be part of existing animal health advisory services or farmer groups such as the Danish Stable School system and the Dutch network program.

Main results so far

- Animal health and welfare planning more important than having an animal health and welfare plan
- Principles for animal health planning in ANIPLAN



In conclusion ...

- Health and welfare planning on organic farms relevant
 - The principles we use are built on:
 - The idea of diversity (farms and regions)
 - Farmer ownership
 - The process of planning led by the farmer
- ⇒ Emphasis on health and welfare planning as a help for the farmer to improve his / her farm
- ⇒ Not the 'document' itself
 - ⇒ Not owned by inspection or 'a legislative demand'

Animal health plan Animal health and welfare planning

Plan: the document



Planning:
The
process

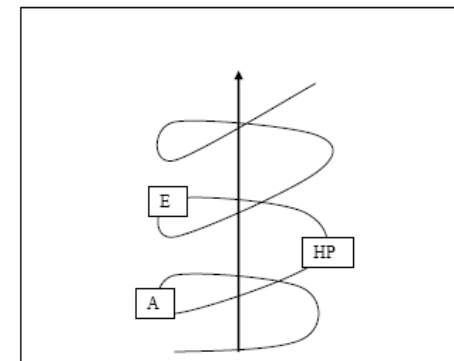
ANIPLAN – practice and development



Principles developed

1. The process => continuous improvement
2. Farm specific
3. Farmer ownership
4. External person(s) should be involved
5. External knowledge
6. Organic principles framework
7. Written
8. Acknowledge good aspects

1. Health planning as a process for continuous improvement



A= Assessment
HP= Health planning
E= Evaluation

1. Health planning as a process for continuous improvement

- Turning an un-acceptable situation into an acceptable situation
- But important is: it does not stop there!
Making good things even better!



2. Farm specific



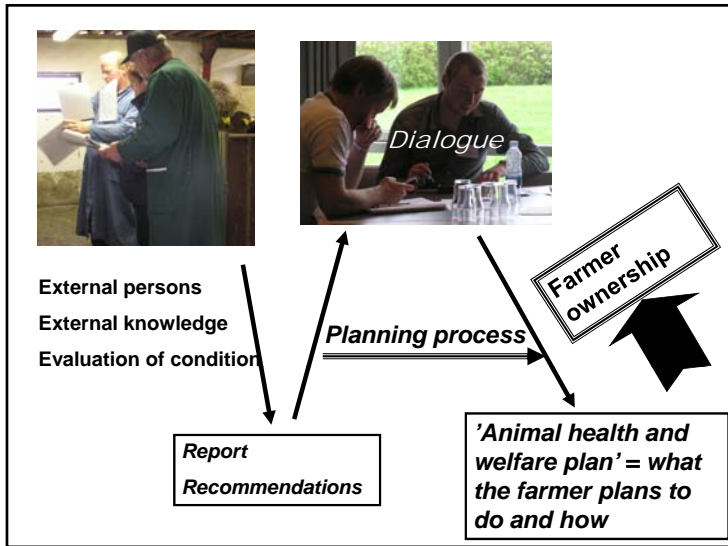
3. Farmer ownership



4. External persons should be involved

5. External knowledge





6. Organic principles framework

- IFOAM principles:
 - Harmony
 - Principle of precaution
 - Re-circulation
 - Local / closeness
- IFOAM's new ...
 - Health
 - Ecology
 - Fairness
 - Care
- ... & 'good animal welfare'
 - Animals as part of the farm & animals as individuals ...including 'naturalness'

6. Organic principles framework: Animal welfare in organic farming: naturalness human care-giving

- Natural behaviour
- Natural feed
- Natural
- No hunger, no thirst, no disease, no death, no suffering

7. Written

- Common memory of the involved persons ('External persons involved')
- Follow up ('Continuous process towards improvement')
- REMEMBER:
 - The written plan is NOT the recommendations given by others but the commitments actively expressed by the farmer ('Farmer ownership')

8. Acknowledge good aspects



... included in the evaluation part ...

Inclusion of new scientific aspects and more extended assessments ... compared to original plan

- The urge for cross-disciplinary approach
 - One wp about communication
 - Process in focus
 - ⇒ We have decided to involve qualitative research approaches in addition to the quantitative research
- More resource demanding animal welfare assessment for scientific purposes: more extended analysis (less focus on epidemiology?)

Which challenges for the organic sector will project results contribute to solve, and how?

- That the animal herd and individual animals often are not thought well into the farm
- Give guide lines to the 'right approach' to medicine reduction: better animal health and welfare
- Develop a process for conscious and continuous planning for the future, meeting concerns for animal health and welfare in organic herds
- Include 'organic aspects' into the planning – meet needs for being 'more and more organic'

Which challenges do you see in the future for the organic sector (in the domain of the project participants) and which research needs do they point to?

- Resilience and needs to farm to principles in addition to the rules
- Ensure strong responsibility and ownership within the sector
-

Which challenges remain (now)?

- That each country develop data to support the process and base the decisions at
- Despite strong links to end-user environments: to link it to the structures in which the farmers live and the farms exist
- Evaluate long term effects of the process of animal health and welfare planning
-

c- experience with transnational research, added value, scientific inspiration and perspectives for the European sector.

- Synergy
- Greater external validity for European farmers
- Interdisciplinary approaches are strengthened
- Networks between national + international platforms
- Understanding of 'organic' is constantly challenged

c- experience with transnational research, added value, scientific inspiration and perspectives for the European sector: more general and recommendations

- It is an advantage with previous collaboration
- Our experience: very different backgrounds but all with tradition of on-farm-research
- Good long and intense workshops
- Regular communication very necessary

On farm research & development

Strong links to end-user environments



Cross-cutting issues to be raised later: Recommendations to CORE-2

Emphasise the need to see projects as joint cross-national projects and with common interest:

- Commitment of all countries to common decision made by the project review committee / how to deal with country-specific priorities and restrictions ?
- Sub-contract issues

Minimising medicine use in organic dairy herds through animal health and welfare planning

- State of the CoreOrganic project in Germany -



Solveig March¹, Jan Brinkmann² & Christoph Winckler²

¹Georg-August-University of Goettingen

²University of Natural Resources and Applied Life Sciences



CoreOrganic: Animal HEALTH and WELFARE plans



aims of the german subproject:

- o to integrate welfare-issues in the current Pilot-Study on herd-health-plans
- o to assess the efficiency of such animal-health-and-welfare-plans (AHW plans) in 40 organic dairy herds (last farm visit in Winter 2008/2009)

CoreOrganic: Animal HEALTH and WELFARE plans



the current pilot-study on herd-health-plans:

- o health data collected since 2004
- o indicators and target-values for animal health defined
- o herd-health-plans implemented on 28 farms in summer 2006 (farm-individual measures)
- o welfare-issues integrated in winter 2007/2008

10th farm visit (winter 2008/09) finished in early may



9th visit

- o QBA
- o Avoidance distance
- o Behaviour
- o Clinical scoring

Measurement of effectiveness/impact of health and welfare planning on ANIMAL

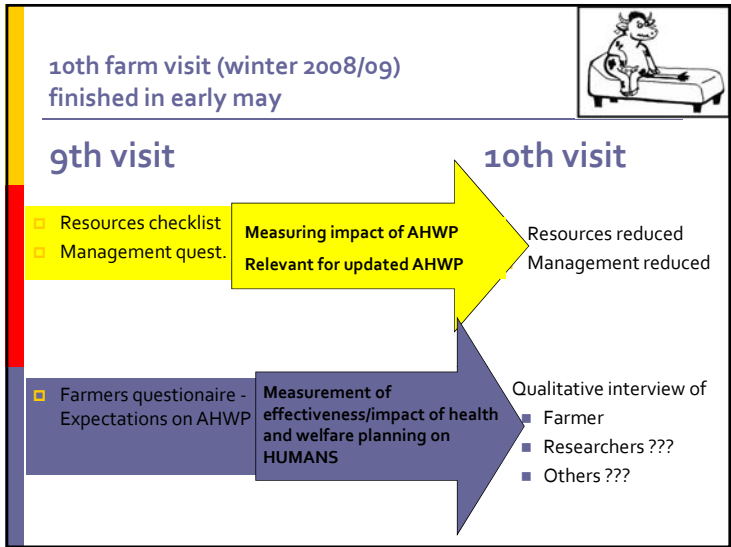
10th visit

- o QBA
- o Avoidance distance
- o Behaviour
- o Clinical scoring

- o Herd health records

Measurement of Minimising medicine use
Updated AHWP

- o Herd health records



CoreOrganic: Animal HEALTH and WELFARE plans



next steps:

- o data analysis
- o organize regional farmer meetings -> 'stable schools' regarding AHW-plans and the minimisation of medicine use following the Danish approach

Current state of Austrian ANIPLAN team

E. Gratzer, T. Hofer, H. Huber, Ch. Leeb, E. Stöger, Ch. Winckler

What happened ...

- implementation of HHWP finished in summer 2008
- Knowing Animals conference Florence
- 3rd (final) farm visits still going on

CORE Organic farms Austria

- 40 randomly selected farms, 3 assessors
- characteristics of the farms:
 - loose housing systems (cubicle and deep litter)
 - > 25 cows (Ø 38 cows/herd)
 - Simmental, Brown Swiss, Holstein Friesian
 - milk recording scheme
- distribution of farms within Austria:
 - Upper Austria (n=9), Salzburg (n=8), Lower Austria (n=7), Styria (n=6), Carinthia (n=6), Tyrol (n=4)

Distribution of farms

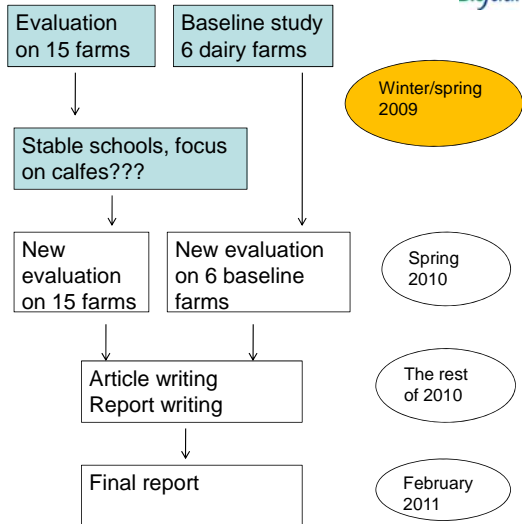
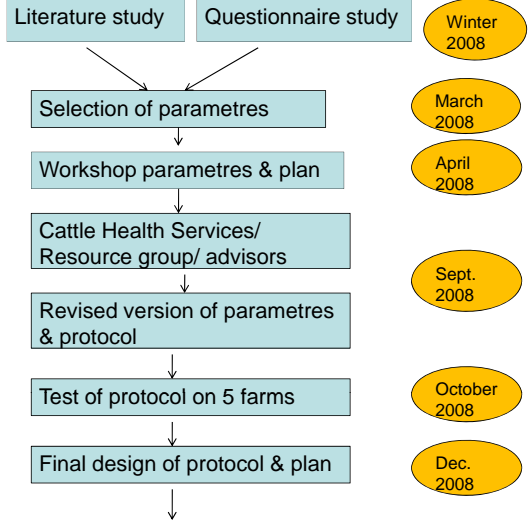


Next steps

- data analysis including check on effectiveness of HHWP
- feedback to farmers
- publications

Country report Norway

ANIPLAN Calf



CORE organic

Country report The Netherlands

CORE organic

10 farms Feb/March 2009 (and 4 extra horned herds)
85 – 300 animals, 35 – 150 cows
all family farms (not hired staff) except 1
2 with AMS
3 horned herds
2 deep litter/7 cubicles/ 1 cubicles + deep litter

Created a database for all figures/remarks/etc
No follow-up to the farmers (no AHW-plans)

Farmers liked the assessment,
glad to tell what went well (or wrong)

It took far over 8 hours per farm



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Remarks/results

- Lying time
 - Does not always reflect the real problem (not lying down!)
 - In deep litter lie-down-time 30% shorter than in cubicles
- Clinical scoring
 - # skin damages (0.5) horned cow 12.8, dehorned 3.5
 - Horned herds more hairless patches and lesions (hindquarter, shoulder, flank)
 - # skin damages horned herds in cubicles 17, deep litter 7.
- ADF
 - Up to 95% touchable cows
 - Horned cows no higher ADF than dehorned cows
- Social behavior
 - Big difference between horned and dehorned herds
 - In horned herds less physical contact
 - Cows move away before they are touched
 - Nearly no social licking



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Remarks/results2

- Recording health records rare
- No written AHW-plans
- Think health strategy is effective ($x=3.7$), but can be improved ($x=3.3$)
- Proud of: being organic, antibiotic free, low concentrates, low cost price, family support, only natural things.
- Needs improvement: slippery floor, natural light, age herd, dead animals, small barn



CORE organic and in the meantime ..

we go on with:

- Low concentrate feeding (15 farms)
- Drying off management (27 farms)
- Resistance (50 farms)
- Network group Antibiotic free farming (25 farmers)

- New: 2 network groups of farmers exchanging knowledge about herbs in relation to cow health.





Erwartungen an Umsetzungsmodelle für Tiergesundheits- und Wohlbefindenspläne

**Workshop ANIPLAN in Reichenau
am Montag, 11. Mai 2009**

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BIO AUSTRIA - das Bio-Netzwerk in Österreich (1)

Bio Austria




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BIO AUSTRIA - das Bio-Netzwerk in Österreich (2)

- BIO AUSTRIA ist das Netzwerk der Bio-Verbände.
- BIO AUSTRIA ist die Vertretung der Bio-Bauern und Bio-Bäuerinnen auf Bundesebene.
- Gegründet: 2005
- Mitglieder: 13.000 Bauern
- Kooperationspartner: 250 Verarbeitungs- und Handelsbetriebe

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BIO AUSTRIA - Leistungen

- Beratung in allen Fragen der Erzeugung und Vermarktung.
- Angebot von Bildungsveranstaltungen.
- Nutzung des Markenzeichens „BIO AUSTRIA“.
- Interessenvertretung gegenüber Öffentlichkeit und Politik.
- Herausgabe der Zeitung „BIO AUSTRIA“.
- Unterstützung bei der Vermarktung.
- Konsumentinformation

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Bio-Beratung in Österreich (1)



	Bundesweit	B	NÖ/Wien	OÖ	Stmk	Ktn	Sbg	Tirol	Vbg
LK		X	X	X	X		X	X	X
BIO AUSTRIA	X	X	X	X	X		X		
Arge Huhn & Co				X					
Biozentrum K.						X			

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Bio-Beratung in Österreich (2)



Pflanzlicher Bereich

Ackerbau, Grünlandwirtschaft, Kartoffelbau, Gemüsebau, Wein- und Obstbau

Tierischer Bereich

Rinder-, Schweine- und Geflügelhaltung

Allroundberatung

In Summe arbeiten 24 VZAK in der Bio-Beratung österreichweit; 12,3 AK sind bei BIO AUSTRIA, 8,9 AK sind bei den Landwirtschaftskammern beschäftigt

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Tiergesundheit in der österreichischen Landwirtschaft (1)



Bisherige Aktivitäten:

- viele Bildungsangebote (Seminare, Praxistage in Ställen)
- kontinuierliche Information in der BIO AUSTRIA-Zeitung
- Status quo Analyse zur Tiergesundheit bei Bio-Mastschweinen an der Vet.med. Universität
- Qualifizierungsprojekt zur Erstellung von Beratungsbroschüren und begleitenden Seminaren
- Projekt „Wiederkäuergesundheit im Biolandbau“ – Projekt von BIO AUSTRIA und FiBL Österreich

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Tiergesundheit in der österreichischen Landwirtschaft (2)



Bisherige Aktivitäten:

- Projekt „Offene Fragen der Tierbehandlung am Bio-Betrieb“ – Projektträger infoXgen
- Vernetzung der Schweineberater mit den MitarbeiterInnen des Projektes „BEP Schweine“ über die Beraterdatenbank „Bios“

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Tiergesundheit in der österreichischen Bio-Landwirtschaft (3)



Schwächen/Engpässe:

- in der österreichischen Bio-Beratung ist kein/e ausgebildete/r Tierarzt/-ärztin tätig
- Tierärzte sind teilweise noch immer wenig informiert über Bio-Tierhaltung, Richtlinien usw.
- Einzelbetriebliche Beratung im Bereich Tiergesundheit ist auf Projekte beschränkt => keine Kontinuität nach Projektende

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Tiergesundheit in der österreichischen Bio-Landwirtschaft (4)



Schwächen/Engpässe:

- interdisziplinäre Zusammenarbeit zwischen Bio-Beratung und Tierärzten ist personenbezogen, nicht strukturell verankert
- Bio-Bauern arbeiten noch zu wenig in der Gesundheitsvorsorge, im Gesundheitsmanagement; direkte Maßnahmen sind „greifbarer“
- Ergebnisse von Projekten werden zu wenig an die Praxis (Bauern und Beratung) transferiert

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Erwartungen an ein Modell für Tiergesundheits- und Wohlbefindenspläne (1)



- Tiergesundheitspläne sind ohne Status quo-Analyse, Tierbeobachtung und Dokumentation (Mehraufwand für Bauern) nicht umsetzbar – das sind Hindernisse in der Umsetzung in der Praxis
- Dokumentation auf wesentliche tierbezogene Parameter, die für Tiergesundheit wirksam und aussagekräftig sind, beschränken, um Akzeptanz bei Bauern zu erhöhen
- In der Laufzeit von Pilotprojekten Information (Zwischenberichte, usw.) von Beratung und Bauern und Meetings zur Umsetzung in der Nachprojektphase

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Erwartungen an ein Modell für Tiergesundheits- und Wohlbefindenspläne (2)



- Pilotprojekte sollten ein Arbeitspaket zur Konzeptentwicklung für Implementierung in der Praxis enthalten – daran sollten ProjektmitarbeiterInnen, Bio-Beratung und Tierärzte mitarbeiten
- Entwicklung von Checklisten mit Ausfüllanleitungen, damit Betriebsleiter nach kurzer Einschulung mit diesen Werkzeugen arbeiten können

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Erwartungen an ein Modell für Tier- gesundheits- und Wohlbefindenspläne (3)



- neben Pilotprojekten sollten Implementierungsprojekte gefördert werden – Struktur im Umsetzungsprojekt:
 - Projektkoordinatoren
 - Multiplikatoren (Bauern, Bio-Beratung, Tierärzte)
 - Bauern
- Praxisorientierte Schulung der Multiplikatoren, die in der Umsetzung von Tiergesundheitsplänen tätig sind (z.B. in Arbeitsgruppen)

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Erwartungen an ein Modell für Tier- gesundheits- und Wohlbefindenspläne (4)



- Umsetzung von Tiergesundheitsplänen soll in Gruppen (8 - 12 Teilnehmer) erfolgen, die über einen Zeitraum von ca. 2 Jahren laufen;
die Arbeitsgruppen werden von Multiplikatoren betreut – hier lernen die Betriebsleiter mit den Checklisten umzugehen, Tiere zu beobachten; sie setzen im Anschluss das Gelernte am eigenen Betrieb um und erstellen einen Maßnahmenplan zur Verbesserung der Tiergesundheit;

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Erwartungen an ein Modell für Tier- gesundheits- und Wohlbefindenspläne (5)



- bei weiteren Meetings stellen die Betriebsleiter ihre Betriebsentwicklungspläne vor und diskutieren sie mit Berufskollegen – die Multiplikatoren moderieren die Gruppen und sind Bindeglied zu Bio-Beratung, Tierärzten und Projektkoordination
- die Evaluierung der (kurzfristigen) Maßnahmen erfolgt in der Gruppe

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Zusammenfassung - Erwartungen an Umsetzungsmodelle



- Dokumentation durch Bauern muss sich auf das Wesentliche beschränken
- Modell muss die geringen Ressourcen (personell und finanziell) bei Bio-Verbänden berücksichtigen
- Die Teilnahme der Bio-Betriebe an Tiergesundheits- und Wohlbefindensplänen ist in der Anfangsphase freiwillig und nicht Teil der Bio-Kontrolle

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Expectations of Austrian organic dairy farmers towards herd health and welfare planning

Gratzer Elisabeth

University of Natural Resources and Applied Life Sciences
Vienna/Austria, Department of Sustainable Agricultural Systems

Expectations

- improvement of management
- improvement of animal health
- overcome „routine-blindness“
- early identification of problems
- self-monitoring (regarding management)
- analysis of critical points

What did they like ...

- assessment (looking at the animals)
- critical areas of the farm/ management are identified
- „counselling session“

Suggestions for improvement ...

- higher frequency of farm visits
- including external experts for certain health and welfare areas (e.g. feeding, milking, ...)
- consideration of financial aspects

Future applications ...

- inclusion of AHWPs in existing structures:
 - animal health service (TGD)
 - farmer groups (Milchvieharbeitskreise)
 - cattle breeding organisations
 - milk recording scheme (LKV)
 - national advisory service (chamber of agriculture)



› Rahel Kilchsperger,
FiBL Switzerland

Qualitative Research

www.fibl.org

FiBL



9. Individual Orientation e.g., visions, aspirations	8. Family Orientation e.g., ancestors, caste, social status	7. Collective Orientation e.g., religion, tradition, world-views, education
6. Inner Human Space e.g., integrity, identity, self-worth, compassion	5. Family Space e.g., gender relations, solidarity	4. Socio-economic Space e.g., systems of cooperation, community, organization
3. Emotional Base e.g., memories, attachments	2. Knowledge and Activity Base e.g., technology, experience, skills	1. Physical Base e.g., natural resources, assets

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ECON Welfare

Austria, 12.5.2009 2

Timetable

- › 8:30 **Qualitative research – an introduction**
- › 9:00 **Discussion about main objectives and questions** of this task in your project
- › 9:30 **Possible methods for investigation of objectives** with special focus on group discussions
- › 10:00 **Workshop – define research question and design topic guide**
- › 12:00 **Conclusion**

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Austria, 12.5.2009 3

Qualitative Research – an Introduction




› Rahel Kilchsperger
FiBL Switzerland

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Empirical social research

Describes, explores and tries to understand social life

1. **Quantitative methods** - quantify social phenomena, collect and analyze numerical data, focus on links among a smaller number of attributes across many cases
2. **Qualitative methods** - personal experiences, interpretation over quantification, understanding meanings of social phenomena, focus on links among attributes, relatively few cases
 - › **Both approaches involve a systematic interaction between theories and data**

Key elements of quantitative research

- › **Isolation** of cause and effects
- › **Operationalisation** of theoretical interrelations
- › Measuring and **quantifying** of phenomena
- › **Representative** samples
- › **Controlled** test conditions
- › **Excluding influence** of researcher

=> Produce objective and universally valid results

Key elements of qualitative research

- › Providing in-depth **understanding** of social world
- › Samples small and purposively selected
- › Close and interactive **contact** between researchers and participants
- › Data extensive, **information rich** and detailed
- › Analysis may produce detailed description and classification, develop typologies and **explanations**
- › Outputs **re-presenting** social world and meanings of participants


Aim

=> Qualitative researchers aim to gather an **in-depth understanding of human behavior** and the **reasons** that govern it. The discipline investigates the **why** and **how** of decision making, not just what, where, when.

Source: Wikipedia 2009


Comparison Source: Reuber & Paffenbach, 2005


Quantitative methods	Qualitative methods
Testing of a priori - Hypotheses	No a priori - Hypotheses but guiding research questions
Representativeness through random and large samples	No representativeness in statistical sense. Particular cases captured in detail → Representation
Suitable for investigation of hard facts that can be categorized	Suitable for investigation of individual cases and its particularities, detailed info about opinions, attitudes
„Schematization“	„Individualization“
Analysis with normed mathematical-statistical tools	Analysis through interpretation and understanding, subjective influences possible

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Qualitative research today


- › **Significant type of research** in the fields of education, gender, consumer studies and others
- › **High acceptance** by journal publishers and editors
- › Variety of **formalized methods** with different aims
- › Popular and **integrated** into different research processes, often in combination with quantitative research


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Functions of qualitative research

- › **Contextual** Describing the form or nature of what exists „**unpack issues**“
- › **Explanatory** Examining the reasons for, or associations between, what exists „**why phenomena occur**“
- › **Evaluative** Appraising the **effectiveness** of what exists
- › **Generative** Aiding the **development** of theories, **strategies or actions**

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Research questions



Contextual questions

- › How would a farmer define AH planning?
- › What are the different models of AH planning?

Explanatory questions


- › Why did farmers decide to participate in the AH planning?
- › How did different systems for managing herds evolve?

Evaluative questions

- › How did the AH planning change behaviour of the farmer?
- › What factors contributed to a successful reduction of medicine use on participating farms?

Generative research

- › How can AH planning be made more efficient?
- › How can we encourage AH planning on organic farms?

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Example 1

- › „What are the principles of organic farming?“
- › Organic Revision Project
- › Switzerland, 2004
- › Group discussions with farmers



IFOAM Principles of organic farming:
 The principle of health
 The principle of ecology
 The principle of fairness
 The principle of care

Why qualitative research 1?

- › Developed to **overcome perceived limitations** of quantitative methods used to study human behaviour
- › **Particularly well suited** to explore **complex** issues and to **study processes** that occur over time
- › Focus: **Interrelatedness of different aspects** of people's lives



Why qualitative research? 2

- › **Many appropriate methods** to approach the very individual life-worlds (e.g. of farmers)
- › People's **understanding of their world**: Psychological, social, historical and cultural **factors** recognised as important
- › **Own theories are deduced from empirical observations**, no examination of existing theories



Combination of qualitative and quantitative methods

- › Purpose is to yield **different types of intelligence** rather than simply to fuse the outputs
- › Both together can offer a **powerful resource** to inform and illuminate policy and practice
 - › Qualitative methods to explore and understand...
 - › Quantitative methods to determine...



Qualitative methods as **follow-up** to statistical enquiry

- › Where findings of quantitative methods need **further explanation**
- › Where more **depth** about a phenomenon is needed
- › Provide extended understanding of the **factors** underlying a problem
- › Offer a **different way of knowing** about the world: Two approaches might not replicate each other

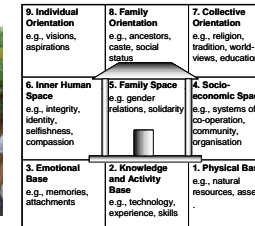
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Example 2

- › „How did the livelihood of female coffee farmers change through organic farming?“
- › Nicaragua, 2007
- › Qualitative approach
- › In-depth individual interviews and group discussions



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Project stages and planning issues

1. Framing the research question
2. Choosing the research method
3. Choosing research population, samples and sites
4. Contacting potential participants
5. Designing research instruments
6. Preparation of fieldwork, pretest
7. Fieldwork including recording and notes
8. Transcription
9. Analysis
10. Reporting + Project administration

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> **More than visiting a farm and having coffee with the farmer**

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Scientific criteria for qualitative research

- › Conclusions deduced from **empirical material**
- › Selection of **appropriate methods**
- › **Correct application** of methods
- › **Relevance** of findings
- › **Reconsidering** procedure



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Minimum time 10 in-depth interviews or 1 group discussion

	Indiv.	G.D.
Research question, method, samples	x	x
Contacting potential participants	2 d	2 d
Designing research instruments	5 d	5 d
Preparation of fieldwork, pretest, adjustments	3 d	3 d
Fieldwork including recording and notes	2-3 interviews per day	1 d
Transcription	1 interview per day	1 group discussion per day
Analysis	3 we	1 we
Reporting	1 we	1 we

d = days, we = weeks

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- Good qualitative research study design**
- Clearly defined *purpose*
 - *Coherence* between research questions and methods
 - *Realistic* for practical constraints of time and money and the reality of the research context and setting
 - Eventually flexible, strong involvement of unknown elements
 - Continuing process calls for constant review of decisions and approaches
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Aniplan - Main objectives and research questions for qualitative research



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- Three questions to you**
- What do you think could qualitative research contribute to you project?
 - *If you are looking for subject- and situation-specific conclusions, this fits very well to qualitative research methods*
 - How big is the motivation for the application of such methods?
 - *More than visiting a farm and drinking coffee with the farmer*
 - Will there be money available for this task?
 - ...
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Project stages and planning issues

1. **Framing the research question**
2. Choosing the research method
3. Choosing research population, samples and sites
4. Contacting potential participants
5. Designing research instruments
6. Preparation of fieldwork, pretest
7. Fieldwork including recording and notes
8. Transcription
9. Analysis
10. Reporting + Project administration

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Objectives of qualitative research part

- › **Silvia, Michael, Mette**
 1. "Evaluation of animal health and welfare planning on farms (how well did the process work?)"
 2. "What were the effects of the animal health and welfare planning (acceptance and implementation of measures for better animal welfare and health)"
 - › **Newsletter**
 1. to describe the farmers' perceptions of the animal health and welfare planning process
 2. to describe the farmer's own process and view on the farm process (?)
 3. capture the farmers view on farming (?) and the uptake of animal health and welfare planning
- Are they still valid?**

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Research questions

- › **How did the animal health and welfare planning process work** from the point of view of participating farmers?
- › **What were the effects of the animal health and welfare planning process** observed by participating farmers?

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Now

- › Objectives must be defined more precisely
- › Formulation of detailed core questions later in workshop



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Research questions must be

- › Relevant and useful
- › Focused, but not too narrow
- › Of interest to the researchers
- › Clear, intelligible and unambiguous
- › Capable of being researched through data collection, not too abstract Informed by and connected to existing research with the potential to make an original contribution
- › Feasible, given the resources available



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Some examples

- › What were the expectations of scientists and farmers towards the AH planning?
- › Where do farmers see strengths and opportunities, threats and weaknesses of the AH planning?
- › How did farmers experience the AH planning?
- › What effects have been observed by scientists and farmers?
- › Have there been any unintended effects?
- › What are the requirements of farmers to implement AH planning successfully?
- › Were there other factors that had an influence on the health of the animals in the respective period?

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Research questions

Contextual questions

- › How would a farmer define AH planning?
- › What are the different models of AH planning?

Explanatory questions

- › Why did farmers decide to participate in the AH planning?
- › How did different systems for managing herds evolve?

Evaluative questions

- › How did the AH planning change behaviour of the farmer?
- › What factors contributed to a successful reduction of medicine use on participating farms?

Generative research

- › How can AH planning be made more efficient?
- › How can we encourage AH planning on organic farms?



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Qualitative Research - Methods



› Rahel Kilchsperger
FiBL Switzerland

Project stages and planning issues

1. Framing the research question
2. *Choosing the research method*
3. Choosing research population, samples and sites
4. Contacting potential participants
5. Designing research instruments
6. Preparation of fieldwork, Pretest
7. Fieldwork including recording and notes
8. Transcription
9. Analysis
10. Reporting
11. Project administration

Functions and methods 1

- › Many of the methods used in qualitative research were developed to allow *investigation of phenomena in their natural settings*
- › Naturally occurring data
 - › Participant observation
 - › Observation
 - › Documentary analysis
 - › Discourse analysis
 - › Conversation analysis



Functions and methods 2

- › Generated data: The *experience is mentally re-processed* and verbally recounted by participants specifically for the study
 - › Biographical methods
 - › Individual interviews
 - › Paired or triad interviews (2-3 persons)
 - › Group discussions (4-10 persons)



Mixing methods

- › Methods can be mixed,
 - › for example individual interviews in combination with observation
 - › for example in-depth documentary analysis and group discussion



Generated data

- › Allow people to *describe personal contexts*
- › Give participants an explicit opportunity to convey their *own meanings and interpretations* through their explanations
- › The key types of generated data in qualitative research are *in-depth interview* and *group discussions* with various sub-types
 - › Selection according to
 - › Type of data
 - › Subject area
 - › Nature of study group

Differences

In-depth interviews

- › To understand the personal *context*
- › For exploring issues in *depth and detail*
- › To *understand complex processes and issues* e.g. motivations, decisions, impacts, outcomes

Group discussions

- › To display and discuss *differences within the group*
- › To tackle *abstract and conceptual* subjects
- › Where there is some shared background or relationship to the research topic

Practical aspects

In-depth interviews

- › Max. 2 hours
- › 1-2 participants
- › Participant can choose date and location
- › Much raw data
- › Very detailed data
- › Much time for transcription and analysis
- › Every participant can contribute

Group discussions


- › 1-2 hours
- › 4-10 participants
- › Central location required
- › Gather much information in little time
- › Less detailed data
- › Less work for transcription
- › Shy participants are not heard
- › Really important aspects are discussed intensively
- › Needs more moderation skills

Minimum time 10 in-depth interviews or 1 group discussion

	Indiv.	G.D.
Research question, method, samples	x	x
Contacting potential participants	2 d	2 d
Designing research instruments	5 d	5 d
Preparation of fieldwork, pretest, adjustments	3 d	3 d
Fieldwork including recording and notes	2-3 interviews per day	1 d
Transcription	1 interview per day	1 group discussion per day
Analysis	3 we	1 we
Reporting	1 we	1 we


d = days, we = weeks

It's up to you to discuss and choose!

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Project stages and planning issues

1. Framing the research question
2. Choosing the research method
3. *Choosing research population, samples and sites*
4. *Contacting potential participants*
5. Designing research instruments
6. Preparation of fieldwork, Pretest
7. Fieldwork including recording and notes
8. Transcription
9. Analysis
10. Reporting
11. Project administration

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Invitation, timing and location

- Invitation personally, by phone or mail
- Important:
 - Informed consent about content
 - Anonymity and confidentiality
- How to select right point in time?
 - Depends on research topic
 - Evaluation of AH planning -> Experience necessary

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Project stages and planning issues

1. Framing the research question
2. Choosing the research method
3. Choosing research population, samples and sites
4. Contacting potential participants
5. *Designing research instruments*
6. *Preparation of fieldwork, Pretest*
7. Fieldwork including recording and notes
8. Transcription
9. Analysis
10. Reporting
11. Project administration

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Research instrument

- › Create guideline with core questions and topic guide
- › Probing questions
 - › Consult literature, project partners and eventually experts
- › Pretest with similar group for group discussions or 2-4 interviewees for individual interviews
 - › Adjustment of questionnaire/guideline

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Stages of discussion in interviews and group discussions

1. Introduction
 - › Easy opening questions; more surface level
 - › Background and contextual information
 - › Definitional questions
2. Core part
 - › Core part of interview or group discussion – questioning and discussion is more in-depth
 - › Move from circumstantial to attitudinal/evaluative/explanatory questions
 - › Move from general to more specific
 - › Follow chronological order
3. Winding down
 - › Questions looking to the future, suggestions

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Framing of interview

- › Beginning
 - › Researcher presents himself
 - › Recall research topic and objectives of interview
 - › Underline confidentiality and anonymity
- › End
 - › Thank the interviewee for the informative talk and the relevant contribution to the project
 - › Explain the further proceeding of the project

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Project stages and planning issues

1. Framing the research question
2. Choosing the research method
3. Choosing research population, samples and sites
4. Contacting potential participants
5. Designing research instruments
6. Preparation of fieldwork, Pretest
7. *Fieldwork including recording and notes*
8. Transcription
9. Analysis
10. Reporting
11. Project administration

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Project stages and planning issues

1. Framing the research question
2. Choosing the research method
3. Choosing research population, samples and sites
4. Contacting potential participants
5. Designing research instruments
6. Preparation of fieldwork, Pretest
7. Fieldwork including recording and notes
8. *Transcription*
9. *Coding and Analysis*
10. Reporting
11. Project administration

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Coding

- › Categorizing data
- › Coding
 - › Inductive coding out of raw data
 - › Deductive coding using structure found in literature

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Analysis of data

- › No clearly agreed rules or procedures
- › Different traditions
- › Grounded theory: generation of analytical categories and their dimensions, identification of relationships between them
 - › Raw data are reviewed, labelled, sorted and synthesised
 - › Generating themes and concepts out of raw data (Atlas.ti)
 - › Refining and distilling more abstract concepts
 - › Iterative process

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Literature

- › Ritchie, J., Lewis, J. (2003): *Qualitative Research Practice - A Guide for Social Science Students and Researchers*. First edition, Sage publications, London.
- › Flick, U. (2004): *Qualitative Sozialforschung - Eine Einführung*. Second edition, Rowohlt Taschenbuch Verlag, Reinbek bei Hamburg.
- › Helfferich, C. (2005): *Die Qualität qualitativer Daten – Manual für die Durchführung qualitativer Interviews*. Second edition, VS Verlag für Sozialwissenschaften, Wiesbaden.
- › Mayring, P. (2003): *Qualitative Inhaltsanalyse – Grundlagen und Techniken*. 8. edition, Beltz Verlag, Weinheim and Basel.

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Workshop



- › Rahel Kilchsperger
FiBL Switzerland

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Design a topic guide

- › Considerations about the broad structure required will inform the design of the topic guide
- › A well designed topic guide will provide flexible direction to field-work progress and essential documentation of central aspects of the research
- › Careful design is needed

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- › Core questions
- › What range of topics must be discussed under those questions?
- › Structuring
- › Bringing into the right order

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What is an interview guideline?

- › Detailed topic guide
- › Contains core aspects that have to be covered in discussion
- › Designed on the basis of literature and own existing research on the topic, own questions

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Guideline

- › Suggested wording for opening and closing and introducing particular topics
- › Specific subjects to be covered within broad topic areas
- › Suggestions for prompts (ask your questions) and directions for probing (make people talk more)
- › Suggested wording for questions addressing sensitive topics

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Group discussions



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Group interviews

- › Possibility of structured or more open guideline
- › Observing and helping group to cover all aspects of the topic discussed in a non-directive way
- › **Strengths of method:** group ensures that wrong or extreme opinions do not show up. Can gather much information, makes emotions visible, cheap, group helps to remember better what was important
- › **Weaknesses of method:** small number of questions that can be discussed, people may be influenced by others not to give their own opinion.

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During group discussions

- › Create a **relaxing** atmosphere
- › Follow topic guide
- › **Control** the discussion (allow as much relevant discussion as possible)
- › **Pace** the debate by asking non-directive questions
- › Avoid the discussion to divert into irrelevant tangents
- › Make **widen** the range of response
- › Create space for **everyone** to contribute
- › Focus on participants **personal view**

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Probing questions – make participants talk

- › **Repeating** the questions or parts of it
- › **Highlighting** particular comment and asking for thoughts on it
- › Asking the group if it can say more about a specific aspect
- › Highlighting differences in views and asking group to discuss and explain them

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After group discussions

- › Write down your **first impressions** right after the interview or discussion together with your assistants
 - › Highlights, problems
 - › Influences of views, interactions
 - › Feelings
 - › Group dynamics
- › Make a **drawing** that shows where people were sitting

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Experienced problems in group discussions

- › Dominant participants -> „let's hear some other opinions“
- › Shy and anxious persons -> reassure that anything people say is useful
- › Simultaneous dialogue -> Stop participants talking over each other

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Personal recommendations for both methods

- › Put **candies** on the table to create nice atmosphere
- › **Reflections** over own technique help to do it better next time
- › Never make a group discussion without somebody **taking notes**
- › Put audio-recorder on a **towel** in the middle of the table
- › **Dress** in a way you feel comfortable

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Checklist for group discussions

- › **Timing** (time of day, day of week, time of year)
- › **Venue**
 - › Building, location (access)
 - › Room (size, comfort, privacy, ambience, quiet)
 - › Physical arrangement (seating, table)
- › **Hosting the group**
 - › Transport
 - › Refreshments
 - › Incentives
- › **Observers and co-moderators**
 - › Role, Seating
- › **Recording**
 - › Quality of equipment (2 small digital audio-recorders), familiarisation
 - › Checking before and after group discussion

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*Thank you
for
your attention*



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Individual interviews



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Proceeding

- › **Audio-record the interview**
- › **Avoid note-taking**
- › **Ensure that both feel comfortable**
- › **Write down your impressions right after interview**
 - › Highlights
 - › Feelings
 - › Problems

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Preparation of in-depth interview

- › Develop detailed guideline
- › Schedule appointment (max. 2 hours)
- › Choose participants and tell them about content
- › Let participant choose location for and date of interview
- › Organize audio-recorder
- › Organize compensation

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During in-depth interview

- › Express *interest and attention*
- › There are no right or wrong answers
- › Be sensitive to tone of voice and body language
- › Allow the participant time to reply
- › Ensure that all topics can be covered
- › *Never assume*
- › Don't comment on an answer
- › Don't summarize answers yourself
- › Don't finish off an answer
- › Don't comment with „right, okay, yes, I see“

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Probing questions – make interviewee talk

- › Make people talk *Why is that? What makes you say...?*
- › Repeat statements to be sure that all participants understand the same meaning, ask for clarification, explanation if necessary
 - › *Why did you think it was important to...*
 - › *What did you feel when...*
 - › *What makes you say that...*
- › Avoid leading questions like „You must have been furious when...“ better: „*How did you react when...*“

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Personal recommendations for both methods

- › Put *candies* on the table to create nice atmosphere
- › *Reflections* over own technique help to do it better next time
- › Never make a group discussion without somebody *taking notes*
- › Put audio-recorder on a *towel* in the middle of the table
- › *Dress* in a way you feel comfortable

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Thank you
for
your ***attention***



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Quantitative analysis of health and welfare data in ANIPLAN project



Silvia Ivemeyer
Michael Walkenhorst

ANIPLAN project meeting
Reichenau, Austria, May 2009

Contents

- > quantitative analyses in ANIPLAN and possible methods
- > experiences from pro-Q project
- > potential difficulties or challenges
- > afterwards: discussion

What analyses do we have to do?

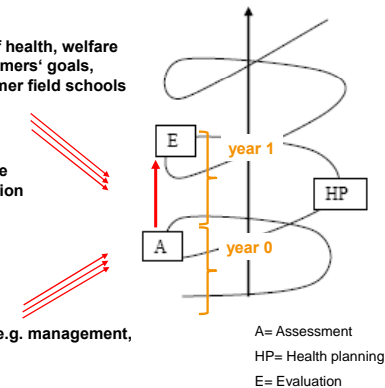
- > extracts from ANI-WORK-PLAN
 - > „evaluation of animal health and welfare and development “
 - > “effect of minimised use of medicine through animal health promotion”
 - > “epidemiological analyses based on data, observations and recordings in the herds will be studied”
- > ...in other words...
 - > analyses of factors influencing health and welfare → epidemiological analyses
 - > analyses of health development, of welfare, and of use of medicines
 - > And perhaps: correlations between welfare and health

Analyses in ANIPLAN

influences on development of health, welfare and use of medicines, e.g. farmers' goals, farmers' satisfaction with farmer field schools

development of health, welfare and use of veterinary medication between first and second assessment

influences on basic situation e.g. management, resources

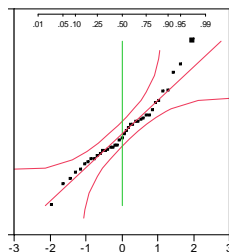


What kind of data do we have?

> **numeric data**

> **scores, ordinal data**

> **categories**



parametric methods

non-parametric methods or transformation, e.g. SCC in SCS for normal-distribution

mostly non-parametric methods, sometimes also handled as numeric data and if normally distributed parametric methods are possible

depending on whether it is a dependent or an independent variable in analysis

management, e.g. "deep litter" / "cubicles"

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What kind of data levels do we have?

> **cow level**

animal based data, individual scoring, e.g. BCS, SCC,...

calculation

> **herd level**

average, median, % of herd,... (depending on kind of data)

farm data, e.g. management, resources, herd behaviour

for most analyses data has to be on the same level.
exception: multi-level-analysis

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Methods for analyses of influences – univariable

$x \rightarrow y$

> example-question: Does the farmers' satisfaction with project process influence the development of medicine use (treatments/100 cows and year)?

> If dependent variables are numeric and normally distributed and the influencing factors are categories:

ANOVA + post-hoc test (if more than 2 categories, e.g. Tukey-Kramer-Test)

> If dependent variables are numeric and NOT normally distributed and influencing factors are categories:

Wilcoxon/ Mann-Whitney (2 categories) or Kruskal-Wallis-Test (>2 categories) + post-hoc test (e.g. Tamhane-Test)

> If dependent AND independent variables are numeric and normally distributed:

linear regression

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Methods for analyses of influences – multivariable

$x \rightarrow y$

> All (e.g. management-) factors with a **hypothetic influence** on the dependent numeric variable (e.g. health: average herd SCS in year 0; use of medication: amount of treatments per 100 cows,...)

Reduction of factors with univariable analyses (ANOVA or Wilcoxon-Test (if not normally distributed))

If numeric AND categorical factors -> sometimes useful to transform all factors into categories

> **Reduced number of factors** showing a significant or tendential effect (e.g. $p < 0.20$) on dependent variable in univariable analyses

Multivariable Linear Regression Model, with (e.g. backwards) stepwise elimination of non-significant factors, under consideration of model assumptions (e.g. distribution of residuals) and model fit (e.g. R^2 adjusted)

> **Factors with significant influence** on dependent variable

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CORE organic

Methods for analysis of development

> example-question: Did the medical use (treatments/100 cows and year) change significantly from year 0 to year 1?

> If variables are numeric and normally distributed:

T - test for paired samples

> If variables are numeric and NOT normally distributed:

Wilcoxon-test for paired samples

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CORE organic

project aims...

pro-Q



ANIPLAN

> minimising use of antibiotics in udder

> minimising medicine use in general

> constant or improved udder health

> constant or improved health in general

> promotion of longevity

> constant or improved welfare



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CORE organic

results from pro-Q I



management influences on udder health

> 29 management and general farm factors with a hypothetical influence on udder health (77 farms, year 0)



Reduction of factors with univariable analyses (all factor-data were categories => ANOVA and posthoc-Tukey-Kramer-test)

> 8 factors showing a significant or tendential effect ($p < 0.20$) on udder health (average over one year of theoretical bulk milk cell count) in univariable analysis



Multivariable linear regression model with stepwise backward elimination of non-significant factors

> 5 factors remaining in the final model as significant

- > breed (Swiss Fleckvieh better than Swiss Brown and other breeds)
- > alpine summer pasturing as risk factor
- > feeding calves with milk from mastitis diseased cows as risk factor
- > hard bedding worse than soft bedding
- > manual machine postmilking better than no postmilking

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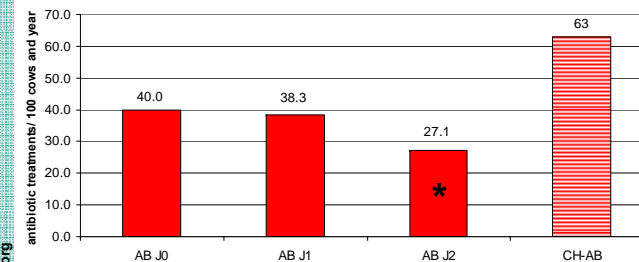
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results from pro-Q II



development of antibiotic treatments in 88 farms



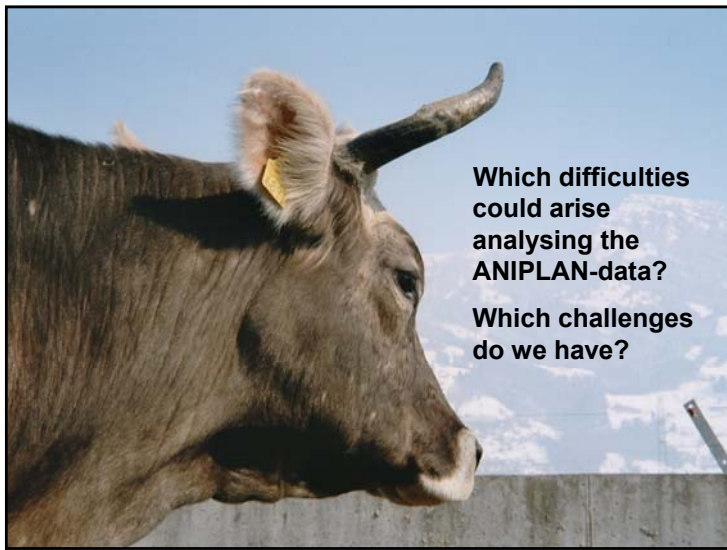
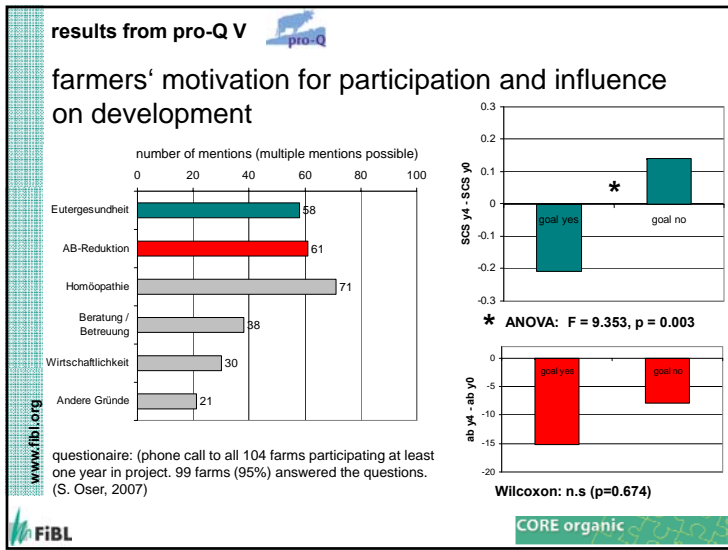
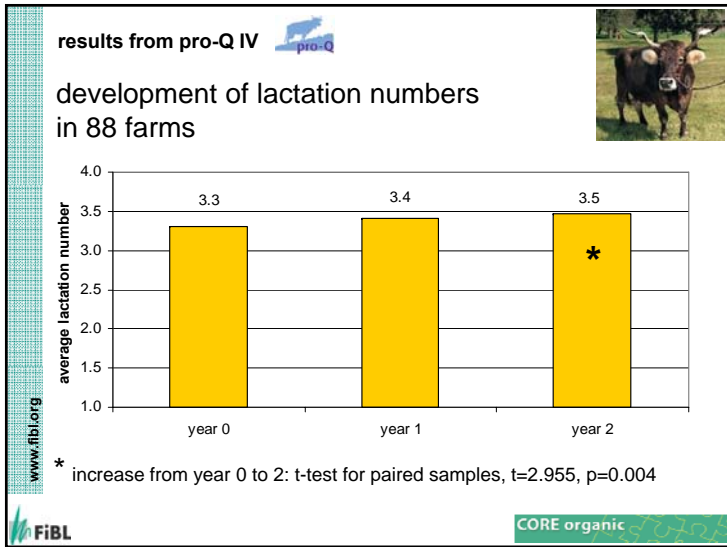
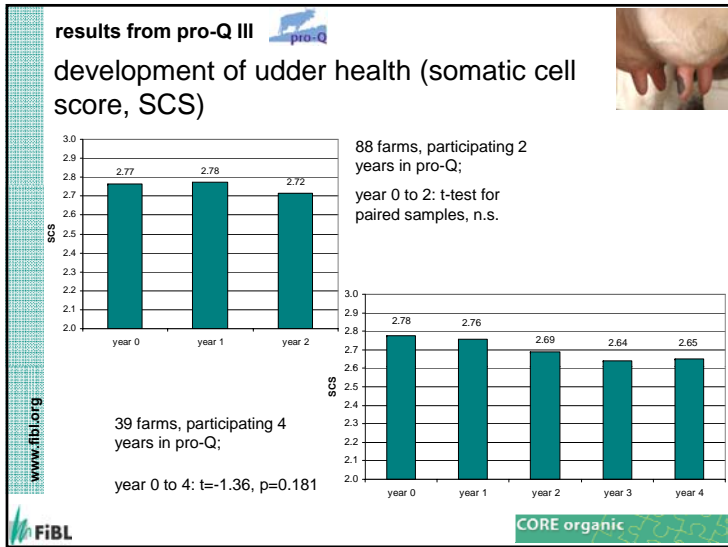
* 32 % reduction from year 0 to year 2, Wilcoxon: $p = 0.028$

comparative study CH: Schaeren, 2007, 76 farms (mainly IP)

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national differences



- > differences in national milk recording data (e.g. in NL no urea records are done)
- > treatment data recording: do we have comparable data in all countries? same definition of “cases”?



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project duration and possible changes

- > Will we see changes after one year? and if not, what is our interpretation?

- > We discussed this already and some countries will perhaps continue for a second year. Thus, in some countries it is possible to analyse longer developments.
- > What are the results of development in other comparable projects in the different countries? Are they also showing effects after more than 1 year?



“Find the ten differences...”

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Reasons of development

- > Although we can describe or count our advising or health planning on the farms, it is difficult to bring the intensity of the process into figures.
- > Due to the fact that the investigated farms are involved in different local research programmes a real comparison is questionable, because they have different advising histories and in some cases other interactions with the farms took place parallel to ANIPLAN project.

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A little definition problem in welfare assessment

- > horned and dehorned cows show differences in their characteristic of agonistic behaviour, concerning the number of displacements with or without body touch



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Thanks for
your attention!
Discussion is
open...

Summary of results from the working group discussions - ANIPLAN Workshop Reichenau, Austria, May 11th-14th, 2009

DATA ANALYSES AND RESPONSIBILITIES

Topic	Kind of data	Responsibilities	Work package	Data 1. assessment due	Data 2. assessment due	Responsible for getting data
Quantitative analyses						
Development of health situation and medicine use	milk recording data, treatment data	S. Ivemeyer, M. Walkenhorst, G. Smolders	5	31st July 2009	1st June 2010	S. Ivemeyer
Development of behaviour measures	social behaviour, herd scan, qualitative behaviour assessment, avoidance distance, lying down...	C. Winckler, L. Whistance, E. Gratzer	3	31st July 2009	1st June 2010	E. Gratzer
Development of other animal-based parameters	individual scoring	C. Winckler, L. Whistance, E. Gratzer	3	31st July 2009	1st June 2010	E. Gratzer
Development of management and resources		C. Winckler, L. Whistance, E. Gratzer, S. Ivemeyer, M. Walkenhorst	5	31st July 2009	1st June 2010	L. Whistance
Calves protocol		B. Hendriksen, C. Mejdell, B. Hansen	3	31st July 2009	1st June 2010	C. Mejdell
Content analysis of health planning process	database on farmers' plans and farmers' actions	J. Brinkmann, S. March, M. Vaarst, C. Leeb	4	1st June 2010		J. Brinkmann, S. March
Qualitative analyses						
"6 questions"		P. Nicholas, M. Vaarst	4	1st June 2010		P. Nicholas
Health planning process - interview of facilitators		M. Vaarst, S. Roderick	4			
Health planning process	planning advisories, farmers' plans and farmers' actions	M. Vaarst, S. Roderick, P. Nicholas	4	1st June 2010		
Concept paper		M. Vaarst, all partners	2			