

## Chapter 4

# Development of an on-farm welfare assessment protocol

### 4.1 Introduction

This chapter provides some background and detail on the steps taken during the development of the protocol, to finally arrive at the format which is presented in full in Appendix F. More information on this process is given in the presentation in Appendix D. While the protocol has been designed to function as a stand-alone document, some information on its gestation will be included here.

The ultimate objective was to integrate the indicators identified into a single, cohesive document that:

- met with the requirements of all the stakeholders;
- was reliable and valid, yet as brief as possible and easily and practically implemented;
- had an animal-based focus, yet incorporated the facilities-based indices that are prescribed by the legislation;
- was applicable across the full range of production systems currently in use in New Zealand;
- was in a format to be suitable for implementation by inspectors with a broad range of backgrounds.

It was clear that this was no straightforward task, for a number of reasons.

Most of the indicators identified during the first stakeholder meeting concerned animal-based outcomes, and in line with current best practice, there was consensus that the focus of the protocol should be on this. However, the Minimum Standards did need to be incorporated into the protocol, as this provides the current legislative standard against which welfare assessments must necessarily be tested. These Minimum Standards

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are predominantly facilities-based in nature. Also, the requirements and priorities of the stakeholders are inevitably somewhat diverse and not always directly comparable.

A further complication was one of assessment and interpretation of the animal-based indicators identified: what should be considered to be the appropriate level of detail, and how should these indicators be interpreted or assessed? In addition, there were a number of indicators that were consistently mentioned in the literature but which were not reviewed during the stakeholder workshop due to the limited time available.

Another output of the stakeholder meeting was a perception that the tool could attempt to emulate the series of observations that an experienced stockholder routinely make, as part of a mental checklist that would almost intuitively be followed. In effect, the protocol would then be capturing and 'transferring' the knowledge and expertise of an experienced observer so that a less experienced inspector could arrive at the same conclusion.

The project team made a concerted effort to combine all these requirements.

## **4.2 Approaches and steps taken**

It quickly became apparent that it would be very difficult to integrate all the indicators into a single, universal document while maintaining a manageable length, flexibility, and ease of use. The solution arrived at by the project team was therefore rather to disaggregate the assessment into a number of separate components. This was achieved by stratification into a series of levels.

### **4.2.1 Farm level**

The protocol consists of three parts, as summarised in the flow diagram in Figure 4.1.

#### **Questionnaire interview**

The first part of the assessment consists of a questionnaire interview with the producer / manager or personnel. This primarily aims to elicit information on practices relating to husbandry, stockmanship and management, as these cannot reliably be determined by inspection of the animals and farm premises alone. Delivery is via a short (10 to 15 minutes) face-to-face questionnaire with the owner, manager and / or stockmen. This section may also capture some background and production information. Another benefit is that this may serve as an 'icebreaker' and gives the inspector the opportunity to explain the methodology of the assessment.

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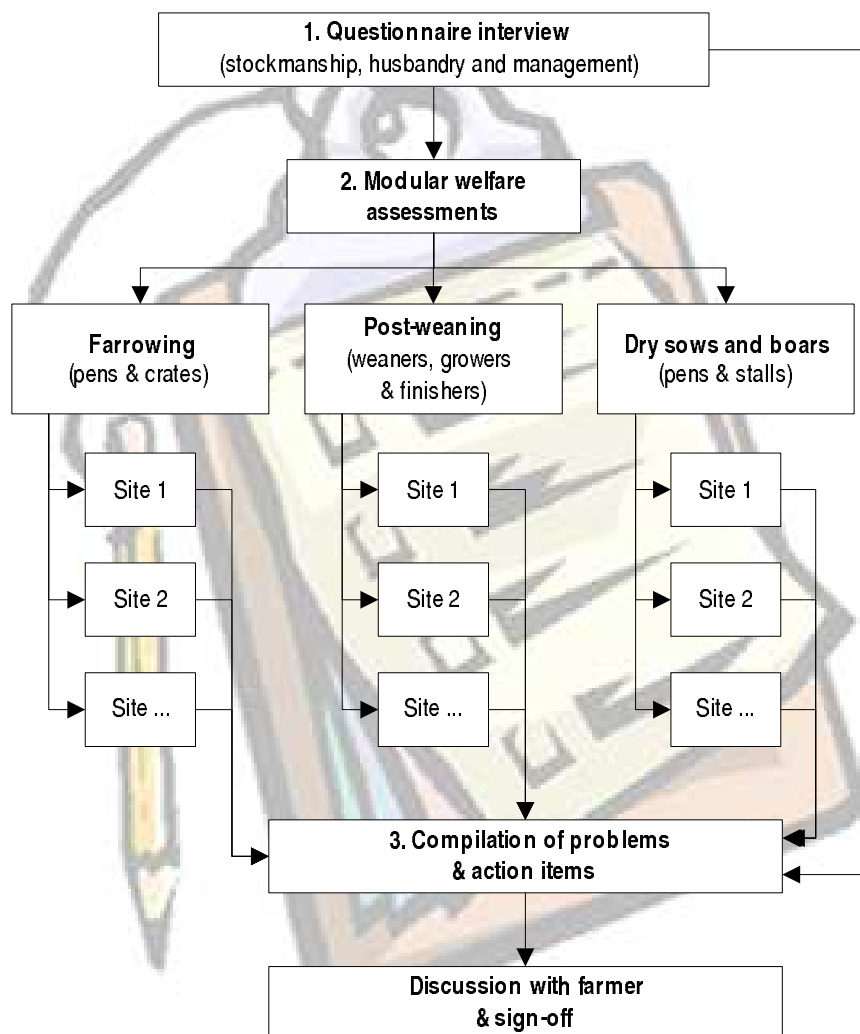


Figure 4.1: Flow diagram illustrating the three parts of the assessment protocol

### Systematic inspection of the farm

We decided to adopt a modular approach, i.e. assess all sites on-farm separately, where a site was defined as ‘a physically defined area including directly comparable production facilities / environment that are under common management’. Using this definition, one production section using different husbandry systems (e.g. group and individual housing) would be defined as different sites. Likewise, one production section with various buildings using the same husbandry system but having different persons responsible for its animals would be defined as multiple sites. Lastly, one production section under common management but encompassing differing environments (e.g. varying age and conditions of housing facilities) should be considered to be different sites. In this way, the assessment is

inclusive of all animals within the different production sections on-farm, and it is 'tailored' to the specific conditions existing on each farm.

As a consequence, we developed an assessment module that could be applied to all production sections. One protocol is to be completed for every site. The intention was to develop three specific protocols which were tailored to the specific production sections: *Farrowing*, *Post-weaning* and *Dry sows and mating*. However, time was too limited to carry this out.

#### **4.2.2 Assessment at the site level**

For this section, reference should be made to Appendix F. The fundamental distinction which has been applied is to separately assess animal-based outcomes and facilities-based outcomes. The methodology of the assessment is summarised as follows:

- If conditions permit, a 'peep test' should be performed at all sites: this allows the inspector to observe the animals from outside the housing, without intruding.
  - Then, the inspector quietly enters the housing facility, and forms a general impression of the reaction of the animals.
  - The entire site should be circulated. The emphasis of the protocol lies on observing the animals and recording the animal-based indicators; this is followed by assessment of the environment the animals are kept in, including taking measurements if required. The protocol is laid out in two columns, with animal-based indicators in the left column and the corresponding Minimum Standards (i.e. facilities-based indicators) in the right column.
  - The protocol consists of indicators subdivided into three parts: **Hunger and thirst; Interaction with the physical environment; Health, injury and disease.**
  - Per part, the animal-based indicators are captured using observations of a set of generic criteria, which in combination reflect the basic physical and emotional state of the animals. These are, respectively: vocalisation / noise; physical appearance; behaviour; mobility and faeces / discharges. The interpretation of these criteria varies for the three parts: for example, thirsty pigs will show different behaviour and vocalisation patterns than wounded or ill pigs. As this may be somewhat confusing for less experienced inspectors, supplementary information has been provided on the overside of the scoring sheet which gives extra detail to facilitate interpretation and assessment. This information has consciously been kept off the scoring section to 'unclutter' the page; it would be anticipated that inspectors who have used the protocol a number of times will not need to refer to the supplementary information.
  - Each of the generic criteria is scored via a 'traffic light' system. This system is receiving
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broader uptake in assessment protocols worldwide; it provides an extra shading of detail beyond the binary 'good / bad' score without requiring too high a level of detail to enable discernment. In this case, interpretation would be as follows:

Green: no action required

Amber: indication of a welfare problem that could relatively easily be addressed

Red: indication of a more serious welfare issue that requires immediate attention

- The Minimum Standards corresponding to each of the three parts are evaluated in an adjacent column, using a simple 'pass / fail' score.
- To accommodate any observations that are not directly captured following the protocol, space for written comments has been included.

### **4.2.3 Assessment at the individual level**

The consideration of welfare at the individual level versus the group level is an important one, and one that merited considerable discussion. The protocol described above is structured in such a way that it requires the animals to be observed first, before inspecting the environment they are in. This implies that *all* animals should be individually 'seen' by the inspector.

It is inevitable that there will be a certain incidence or morbidity of different conditions irrespective of how good the welfare provision is. In other words, no farm will be free of animals that may be undergoing suffering, or whose welfare is compromised at the time of inspection. The relevant point is therefore to assess how grave the animal is suffering on the individual level, and what the prevalence is on the group and farm level. Quantifying such parameters, i.e. deciding where the limit of acceptability lies, is not an easy task. Moreover, this threshold is likely to be placed at a different level depending on the background and purpose of the assessment or assessor.

Setting such criteria was well beyond the brief of this project. However, some quantitative assessment may need to be performed by the inspectors. We have made use of the SWAP<sup>25</sup> handbook for this, which provides such relevant science-based quantitative information. This is provided as a separate document (see 4.3 below).

### **4.2.4 Compilation of findings and debriefing**

A summary sheet is included with the protocol document which should be used by the inspectors to summarise any notable findings, comments or problems arising from the interview and inspection of the farm sites. In particular, this is aimed at the 'amber' and 'red' scores, and instances where the Minimum Standards were 'not OK'. The inspectors may then discuss, address or share these issues with the owner, manager and / or

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stockmen.

It is anticipated that 'amber' outcomes will consist of points of attention indicating that welfare is not optimal, but may be relatively easily corrected by appropriate intervention. Possible actions to remedy the situation may be discussed. While these outcomes are recorded for reference in relation to future assessments, they will not result in penalties and repercussions.

On the other hand, 'red' outcomes indicate more serious welfare problems that require direct intervention. Likewise, failure to meet the Minimum Standards represent infractions of the Animal Welfare (Pigs) Code of Welfare<sup>24</sup>, which should be addressed. If any such problems are identified, the farm personnel should be notified. The exact consequences and course of action may need to be centrally decided on, and need not be discussed with the farm personnel.

Note that in the current format, there is no emphasis on production parameters and criteria; it should not be necessary to consult these. However, as such data do reflect the level of management and performance, these are informative, the inspectors may request to discuss these, should this be useful.

### **4.3 Supplementary information**

The supplementary information, which is provided in a separate sheet, has been put together to enable common problems to be assessed in a more quantitative way. A typical scenario for its use might be when an inspector observes a greater than expected amount of a certain condition, but is not sure whether this is unacceptably high. The tables may then be consulted to come to a decision. A scoring sheet has been included to make the calculations.

### **4.4 Validation of the protocol: farm pilot trials**

A first pilot trial was undertaken by Ian Barugh and Daan Vink, prior to the second stakeholder workshop; the findings were discussed in this workshop. On the basis of this discussion, the protocol was revised.

A pig veterinarian who participated in the workshops, Selwyn Dobbison, offered to trial the revised protocol over the duration of a month or so, by performing assessments on farms they visited over the course of their work. His comments are included on the following page.

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### Comments on the assessment protocol

The protocol is most useful as a 'pure' welfare assessment tool, particularly for measuring animal-based outcomes. The assessment of the facilities is limited to the requirements of the Code, and a lot of the detail is not implicit. Hence this protocol would work well as a supplement to the more detailed facilities-based inspections and requirements demanded by industry.

Having said that, scoring of the Minimum Standards took a lot of time, due to the obligation of discussing each of the listed items separately with the producer before being able to sign off on it. As every farmer does things slightly differently, this necessitated many comments, for which the allotted space was too limited. It is appreciated that the focus lies on the animal-based outcomes, therefore it would be suggested to simplify or remove some of the wording of the Minimum Standards. This should not be a problem as it may be assumed that the inspectors will be familiar with, and have a copy of, the Code at the time of inspection. An alternative would be to remove the scoring boxes ('OK / not OK').

In terms of usability, development of production section-specific modules would be preferable. In the current 'generic' protocol, there is no option to separately score different age- or production groups (e.g. dry sows, unmated gilts, boars and growing animals of different ages) within one site. And the separate traffic lights for new-born piglets, boars and all other animals was somewhat confusing. However, scoring of the animal-based observations was effective using the traffic lights system. Some alterations in the categories were suggested: for example, the 'Vocalisation / noise' category was considered to be less relevant under the **Interaction with the environment** part; whereas 'Other discharges' (e.g. blood, as a consequence of injuries) would be relevant. This would also be picked up under the **Health** section though.

The compilation of outcomes section was not particularly useful and could be omitted. Summarising the findings in this way could actually lead to a loss of the information captured in the assessment.

An important observation was that "All-in-all the process was very useful but is very dependent on the knowledge and experience of the auditor; subjectivity in auditing will be a problem." This again highlights the training needs for the inspectors, and validation of the protocol. Selwyn commented that he would have liked to see a comment characterising aesthetics: "Many farms could get a satisfactory pass on the welfare parameters but could be embarrassing to the industry because of the farm's appearance. The traffic light system for aesthetics could be very helpful" – and that public perception would inevitably be influenced by farm presentation. The project team's reply was that, while the facilities are not scored on overall appearance, deficiencies should be recorded regardless of this. Farms could have a poor overall 'look', with some makeshift or improvised facilities, but provide good welfare for the animals. Conversely, other farms may be well-presented, but due to poor design or stockmanship, actually provide poor welfare.