

Subjective On-Farm Monitoring

Subjective monitoring is one way of measuring the impact of your farm on neighbours and other nearby sensitive land uses. This can help to avoid complaints and demonstrate social responsibility within the local community.

Attempt to resolve disputes by participating and cooperating in any dispute resolution mechanisms available. Gather relevant evidence and identify and implement strategies to remedy the problem, then contact the complainants to inform them of the outcome of any investigations and any actions taken to avoid future associated problems.

The main method for measuring the community amenity impact is the number of complaints received. While this is an imperfect measure (i.e. some people won't complain when there is a problem and others will complain when there is no problem) it does aid in identifying when neighbours perceive that a farm is having an unreasonable impact on their enjoyment of life.

Record full details of any known complaints received, along with the results of investigations and corrective actions taken in a "Community Feedback/ Complaint Register" (included in this factsheet). For more details see the *Egg Industry Environmental Guidelines* (Edition II – McGahan et al., 2018). Also consider examining complaint data to identify trends in complaints received such as the time, date, weather and on-farm activities.

Monitoring should focus on the main causes of off-farm amenity impacts such as odour, dust, noise and light. These should be performed at potential high impact times (manure and spent litter clean-out, shed cleaning or manure/spent litter application) at the most sensitive land uses (e.g. near neighbours). Regular subjective monitoring can also help to identify the effects of changes in management practices on amenity impacts. Examples of blank monitoring forms are included in this fact sheet.

Odour Intensity Assessments

Odour intensity is best assessed at a series of designated assessment points around the property boundaries. A designated staff member responsible for monitoring environmental impacts should regularly undertake odour assessments (i.e. every three months). The assessments need to occur when odour is most likely to create a nuisance. The assessments can be undertaken using the German Standard VDI 3940: Determination of Odorants in Ambient Air by Field Inspection as a guide. The VDI scale and procedure are provided in the odour monitoring record included in this fact sheet.

To ensure accuracy in assessments it is important that the assessor is not desensitised to odours. Hence, the assessments can only occur if the assessor has not been in or around the sheds for at least three hours. During the assessment, record the following in the odour monitoring record:

- The number of fans operating (if mechanically ventilated).
- The number of hens on farm.
- Prevailing weather conditions, including wind direction, estimated wind speed and shade temperature.

This data forms the basis of the monitoring program to be maintained over time.





Dust Assessments

Dust intensity should also be measured at designated assessment points, following a regular monitoring program (i.e. every three months). Dust levels are assessed by visual criteria. A designated person should always undertake dust intensity evaluations to ensure a consistent approach. Dust assessments need to occur at the most likely time of peak dust emissions, such as when traffic volumes are high. During the assessment, the following data need to be recorded in the dust monitoring record (included with this fact sheet):

- The number of fans operating (if mechanically ventilated).
- Prevailing weather conditions, including wind direction, estimated wind speed and shade temperature.
- Vehicle movements (i.e. number/hr).

Similar but more frequent assessments and recordings should be made during prolonged dry periods or after a complaint, when the wind speed is moderate to strong and the wind is blowing from the poultry sheds towards the dust monitoring point. The results of the visual assessments should be kept in the dust monitoring record.

Noise Level Assessments

Noise levels should also be measured at designated assessment points following a regular monitoring program (i.e. every three months). These assessments should be carried out by a designated staff member. The assessments are to occur:

- After 6:30pm.
- When the wind is light to moderate.
- During a period of high activity, such as the loading of eggs, manure or spent hens.

The assessment characteristics must be recorded in the noise assessment record (included in this factsheet). The designated monitoring staff member should also monitor the level of rattling noises from storage silos, augers, fans and feeder lines at a set interval (i.e. every three months).

Light Intensity Assessments

Light intensity is less likely to change over time than odour and dust. However it is suggested that a designated staff member should undertake periodic field assessments of light impacts at designated light monitoring points. This is to confirm that farm external lighting levels remain

acceptably low and that vehicle lights do not cause light related nuisance. The assessment can be recorded in the light monitoring record included in this fact sheet. Increased monitoring will be needed if there is a significant change in the potential light impact (e.g. loss of vegetative screens, modification to lighting at the facility).

Summary

Regularly monitoring potential sources of nuisance and recording the findings of these assessments provides information to assess changes in the level of impact over time. If increases in impacts can be linked to particular management practices then ways of minimising impacts on receptors can be investigated and implemented before problems arise.

References and Further Reading

McGahan, E., Wiedemann, S. G. & Gould, N. (2018) *Egg Industry Environmental Guidelines*, Edition II. Australia, Australian Eggs Limited.

Queensland Government (2008) *Environmental Protection (Noise) Policy 1997*. Brisbane, Australia: Queensland Government.

VDI-RICHTLINIEN (1993) *Determination of Odourants in Ambient Air by Field Inspections*. Dusseldorf: Kommission Reinhaltung der Luft im VDI and DIN.

Community Feedback/ Complaint Register

Community Feedback/Complaint Register	
Date	
Time	
Details	
Distance and direction to complainant	
Name of person advising of complaint	
Method of delivery of complaint	
Name of complainant	
Complainant contact details	

Investigation Details						
Temperature at time of complaint (select)	Cold	Cool	Mild	Warm	Hot	Very hot
Wind strength at time of complaint (select)	Calm	Light	Moderate	Fresh	Strong	Gale
Wind direction at time of complaint						
Person responsible for investigating complaint						
Investigation method						
Findings of investigation						

Action Taken	
Corrective actions	
Communications with complainant	

Noise Assessment Record

Name	Date & Time	Noise Monitoring Points (Level of Noise Nuisance)		
		MP1	MP2	MP3

Noise Monitoring Points (Level of Noise Nuisance)

- | | |
|--------------------------------|---|
| 0 Not audible | A Sound pressure level |
| 1 No annoyance | B Its duration |
| 2 Very little annoyance | C The rate at which it happens |
| 3 Some annoyance | D It audibility |
| 4 Annoying | E Whether it is continuous at a steady level or whether it has a fluctuating, intermittent, tonal or pulsing nature. |
| 5 Quite annoying | F Whether it has vibration components |
| 6 Very annoying | |
| 7 Extremely annoying | |

NOTE: Characteristics as described in Part 1 of the Environmental Protection (Noise) Policy (Queensland Government, 2008)

Odour Monitoring Record

STEP 1: Using the German VDI 3882 (VDI-RICHTLINIEN, 1993) odour intensity scale (shown in the Table to the right), record odour intensity every 30 seconds over a 10 minute period.

STEP 2: Enter the highest intensity level experienced during the 10-minute period into the record below.

STEP 3: When an odour intensity of A-D is experienced, corrective action is required.

Odour intensity	Intensity level
Extremely strong	A
Very strong	B
Strong	C
Distinct	D
Weak	E
Very weak	F
Not perceptible	G

Name				
Date				
Time				
Wind direction				
Wind strength				
Any farm details (No. hens, No. fans operating)				
Ambient Temperature				
Odour Monitoring Point (Intensity Scale)	MP1			
	MP2			
	MP3			

Dust Monitoring Record

Name				
Date & Time				
Wind direction				
Wind strength				
Any farm details (No. fans operating, Vehicle movements/hr)				
Ambient Temperature				
Dust Monitoring Point (Dust levels)	MP1			
	MP2			
	MP3			

Light Monitoring Record

Monitoring point		MP1	MP2	MP3			
Name							
Date & Time							
Light source visible (yes/no)							
Strength of visible light and details	Weak						
	Moderate						
	Strong						