

*Like any analysis, it comes in specific steps. All steps must be defined and known to the trainers and may be subject to detailed criticism.*

## EQUIPMENT

See the folder « Galettes de bouse/crottes » on [www.obsalim.com](http://www.obsalim.com)

*Use only equipment (press and strainer/sieve/ in particular) distributed or referenced by Obsalim.*



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**SAMPLING**

EQUIPMENT		GENERAL METHOD	GOAL	CAUTIONS
For the evaluation of the flock		Mix of 5 to 10 cow-pats	Assess the degree of fodder degradation	Pat of the same type Avoid abnormalities (pats too liquid or too haard)
Individual follow-up or comparison between individuals		Collection in the rectum at the same time as the statement of symptoms or other elements. Eg: milk control day	Make links with Obsalim symptoms, feed lots or production levels.	Intermediate storage of the fresh samples in a cool place.

**SAMPLE**

EQUIPMENT		GENERAL METHOD	GOAL	CAUTIONS
Long handled spoon		Service tablespoon	Determined volume withdrawal	Ensure your comfort and safety behind animals, speed, safety
Mix in a collection bucket		Homogenization in the bucket	Limit individual variations related to animals, milk volume.	

**SAMPLE PREPARATION**

EQUIPMENT		GENERAL METHOD	GOAL	CAUTIONS
Press		Mark and reference model Obsalim for volume	Extract juices and small particles	Grid type, shape of the pressure plate (raised edges), resistance of the handle.
Standard volume		Filling from the homogenised sample	Definition of the starting volume.	

CAKE MAKING

EQUIPMENT		GENERAL METHOD	GOAL	CAUTIONS
Sieve			Reference volume to be washed to extract the microscopic fibers.	Mark and reference model Obsalim for volume
		<p>Rinsing and brewing on the grid,</p> <ul style="list-style-type: none"> <li>• with bottom of the press</li> <li>• a drop of soap</li> <li>• pressurized jet</li> </ul> <p>stop as soon as clear juice after phase change</p>	<p>Elimination of very short fibers            Estimation of fibers insufficiently degraded mechanically (jaw: ingestion rumination, and microflora or non-degradable</p>	<p>3 phases:</p> <ul style="list-style-type: none"> <li>• viscous dung consistency</li> <li>• non-viscous, brown juice</li> <li>• clear juice</li> <li>• spring water juice</li> </ul> <p>Determination of the end of washing.</p>
Effect wash time		Time too short, "Brown juice" just after the phase change (viscous to non-viscous)	Over-rated cake	

EQUIPMENT		GENERAL METHOD	GOAL	CAUTIONS
Effect of the washing time		Time too long. Brewing 1 min beyond the clear juice.	Undervalued cake	Variation observed up to 7 mm
Juice extraction		Strong pressure and evacuation of juices by successive turns	Extract the juices	Make by successive pressures
Numerical measurement				Do not deform
Extraction of the cake		Direct reading on the press scale. Take the alignment between the two sides of the press as a reference	Make comparisons	Measure without additional pressure
Extraction of the cake				Do not deform it

REFERENCIAL

EQUIPMENT		GENERAL METHOD	GOAL	CAUTIONS
Examination of the cake		<p>The examination of the cake can refer to some Obsalim symptoms</p> <ul style="list-style-type: none"> <li>• Short fiber dung, if more than 2.5 cm</li> <li>• 2 cm fiber dung</li> <li>• Grain + fibers</li> <li>• Grain without fibers</li> </ul>		
Around the reference of 2 cm		<p>Class comparison:</p> <ul style="list-style-type: none"> <li>• Low limit: pasture 1cm</li> <li>• Average hay or silage: 2 to 2.5 cm (but everyone can do better than the average ...)</li> <li>• Progress zone 2.5 to 3 cm</li> </ul> <p>Excess : more than 3 cm</p>		
Interpretation of excess / 2 cm		<p>Ex 2,5 cm: 20% losses and projection on</p> <ul style="list-style-type: none"> <li>• the valuation of forage,</li> <li>• forage areas,</li> <li>• work time,</li> <li>• the sale of milk, the transfer of forage/fodder stocks,</li> <li>• sale of cereals, forage</li> <li>• turnover ...</li> </ul>		
Herd Reference			This can show an evolution of rumen fiber degradation	
Reference between individuals			With the different classes of individuals (level of production, Obsalim symptoms ...)	

**INTERPRETATION OF THE COMPOSITION OF THE CAKE**

EQUIPMENT		GENERAL METHOD	GOAL	CAUTIONS
Residue measured by the cake: measurement of the fibers not passing the sieve. Photo of ingested meatball, before rumination.		Fibers more than 2 mm (relative to the sieve !)	It is the activity of the jaw and rumen that degrade the size of the fibers. Part of these fibers is still visible in the dung (reference to the pasture)	Attention, depends on <ul style="list-style-type: none"> <li>• The size of the particles ingested</li> <li>• The amount ingested</li> <li>• The rumination time</li> <li>• The residence time in the rumen</li> <li>• The stability and the balance of the contributions Energy, Nitrogen</li> </ul>
		Fibers more than 2 cm	Easy recognition on the surface or by opening the cake	
		Grains 	Easy recognition on the surface or by opening the cake	Economic impact depends on the quantity of grain and fiber degradation.
Residue eliminated by washing		Juice. Soluble residues. Fibers less than 2 mm.	These fibers and fine particles or the soluble ones were a priori accessible to the rumen biochemical cellulolysis activity	If the rumen is <ul style="list-style-type: none"> <li>• stable (Ph and intake)</li> <li>• has sufficient residence time (before refeeding)</li> <li>• effective for rumination (cumulative time and specific phases / hours)</li> </ul>

**PRESERVATION OF SAMPLES**

EQUIPMENT	GENERAL METHOD	GOAL	CAUTIONS
In dry condition.	On the farm, accessible during the next visit for comparison.	Keeping cake with the date information.	Make comparisons in dry conditions