



Benchmarking: Part 1

A COMPARISON WITH THE BEST IN THE SECTOR

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Benchmarking: a process by which a business systematically measures itself against a better performing business, and then adopts and adapts any functions or procedures shown to be more effective.

Comparisons within a sector

The usual reaction by a tanner to the idea of benchmarking is that it is simply not feasible: the principle of comparing “apple to apple” cannot be applied since each tannery is unique, the only one of its kind. To enforce the point it is added that there is hardly anything enlightening in comparing the performances (*including yields*) of, say, a giant automobile leather producer and a manufacturer of high quality upper shoe leather.

The overall business environment influences the performance of any tannery. Quite understandably, its management will develop strategies with the view of optimising the balance of factors such as tax regulations, cost of labour (*including contribution towards health and pension benefits*), power and chemicals. There are also sometimes rather complex systems of export and/or import incentives to be taken into account, duties and strictly financial aspects (*foreign exchange regulations, currency rates, etc.*).

Is it all possible and does it make sense to benchmark activities like marketing, public relation and social corporate responsibility otherwise so important for the general perception and image of the company? Should benchmarking be focused at financial indicators or include “technical” production parameters too?

The “environmental performance” i.e. the ability to meet increasingly stringent environmental legislation, is nowadays a question of very survival for many tanneries. Within that context possibly the three main constraints faced by many tannery effluent treatment plants, be it individual or common servicing tannery clusters, are sludge disposal, residual COD and Total Dissolved Solids (*TDS - colloquially the salinity*).

Similarly, reutilisation and disposal of solid wastes generated in the process, such as fleshings, shavings, and trimmings are crucial for profitability of many tanneries. Yet, how to compare the environmental performance of tanneries operating under very different conditions such as location, ultimate recipient of effluents, options for handling wastes, and climate?

There are also claims that price and profitability are the best and, as some put it, the only relevant comparison parameters.

How to measure performance

Tanning is a capital and material inputs—raw hides and chemicals—intensive industry, but cannot be regarded as highly labour intensive. The typical production cost structure shows approximately raw hides 50-70%, chemical 10%, labour 7%-15 %, energy 3 %, environmental protection 2% to 5%. This does not justify neglect of the scope for savings from optimisation of

chemicals or energy and, in particular, from undue pollution treatment costs.

Furthermore, poorly performed mechanical operations such as sammying, splitting and shaving downgrade the quality, decrease the yield, and ultimately the profitability. The cost of reworks—the reprocessing of batches that fail to meet customers’ specifications - augment the avoidable losses.

On the other hand, the ability to maximise the utilisation of the raw material (*e.g. by applying good finishing techniques, and producing a fashionable item from lower grades*) often makes the crucial difference in success and profitability of tanneries operating under similar conditions. It is certainly the case that investment in occupational safety and health at work (*OSH*), maintenance, continuous training, and social welfare pays off.

So, the question is how to measure or verify whether the present performance places a tannery at the highest level, or if its performance is slowly diminishing? Comparing with the best ones in a similar line of business might provide very useful answers, because benchmarking is the:

- Process of continuously comparing and measuring a company’s processes against other organisations world-wide to gain information on their practices, processes or methodologies that will help the company take action to improve its performance.
- Practice of being humble enough to admit that someone else is better at something, and being wise enough to learn to be as good as or even better than them.

However, since many of the vital performance parameters are kept confidential, this exercise in real life is often reduced to:

- Generic types of benchmarking or assessment—that is the company compares itself with itself. Usually its own performance during certain earlier periods or with certain (*predominantly financial*) targets.
- Self-assessment, where the company compares its performance with questionnaire-based parameters. These questionnaires are normally based on information obtained from a number of producers of rather different profiles and operating under rather different conditions. (*see Panels 1, 2, 3*).

The way forward

Every tannery aspiring to compete successfully in the international market needs to:



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- Conduct a regular financial audit, but also a thorough technical audit, including a detailed material balance of all inputs and outputs. Preferably, the audit should be carried out by an external competent, but fully independent, party.
- If viable, compare your own parameters with those of a successful competing tannery operating under very similar conditions.
- Alternatively, compare certain stages. This might be beamhouse and tanning processes, or specific operations such as liquid and solid waste management. This can include the work environment, the management of human resources including safety at work and training, with the internationally recognised best performers.
- Identify the scope for ambitious and yet achievable targets and set clearly defined performance indicators (*figures*) within a realistic timeframe.

- Regularly monitor all key parameters. Adjust and fine-tune targets and implement deadlines as required.
- After some time-lapse, update and refresh the whole issue in light of local and/or global technical, marketing or legal developments, and changes of the company's strategies.
- Develop a tailor-made system supplementing the usual generic system with your own specific performance indicators. Include steady critical evaluation and improvement methodology in this policy.

The questionnaire

The questionnaire is an essential part of self-assessment. An example as a typical Check List for evaluating production parameters is given as *Panel 1*:

Panel 1:

Evaluation of production parameters

Check List No.		Component: Production parameters: Input/Output	
Item		Unit	Value
1	Raw material input, origin/category/batch-wise, total	t/day/week/month/year	
2	Green hides vs. grain pelt weight	t/t, %	
3	Green hides vs. limed split weight	t/t, %	
4	Beamhouse output – per day/week/month/year	t/worker or t/work-hour	
5	The rate of capacity utilisation in terms of actual work-hours of individual machines vs. work-hours theoretically possible and/or target set	work-hours/work-hours %	
6	The rate of capacity utilisation in terms of actual input/output vs. theoretically possible and/or target set	t or m ² /t or m ² , %	
Wet Blue Leather			
7	Shaved weight, grain	t or kg	
8	Shaved weight, usable splits	t or kg	
9	Shaved weight (grain) vs. green and vs. pelt weight	t/t, %	
10	Shaved weight (usable splits) vs. green and vs. pelt weight	t/t, %	
11	Grain leather area yield	m ² /kg	
12	Splits area yield	m ² /kg	
13	Splits area vs. grain leather area yield	m ² / m ² , %	
14	Detailed breakdown of grading vs. origin, category, batch	% of I, II, III grade	
15	Tanyard output – per day/week/month/year	t or m ² /worker or work-hour	
Crust Leather			
16	Grain leather area yield	m ² /kg	
17	Splits area yield	m ² /kg	
18	Splits area vs. grain leather area yield	m ² / m ² , %	
19	Weight, grain	t or kg	
20	Weight, usable splits	t or kg	
21	Detailed breakdown of grading vs. origin, category, batch	% of I, II, III grade	
22	Crust leather output – per day/week/month/year	m ² /worker or work-hour	
Finished Leather			
23	Grain leather area yield	m ² /kg	
24	Splits area yield	m ² /kg	
25	Splits area vs. grain leather area yield	m ² / m ² , %	
26	Weight, grain	t or kg	
27	Weight, splits	t or kg	
28	Detailed breakdown of grading vs. origin, category, batch	% of I, II, III grade	
29	Finished leather output – per day/week/month/year	m ² /worker or work-hour	



An example of part of a self-assessment component of a typical Check List for evaluating the general chemicals component is given as *Panel 2*:

Panel 2: Evaluation of chemicals component

Check List No.		Component: Chemicals (general)	
Item		Yes	No
1	Material safety data sheets of all chemicals readily available		
2	Staff familiar with the basic content of data sheets		
3	All chemicals stored in orderly manner		
4	All containers correctly labelled		
5	Staff familiar with the meaning of signs & symbols, risks and first aid, especially concerning hydrogen sulphide (H ₂ S)		
6	Transfer and dosing of chemicals ideally in fully closed systems		
7	Concentration of (hazardous) chemicals levels below Threshold Limit Values (TLV) in terms of both Time-weighted Average (TWA) and Short-time Exposure Level (STEL)		
8	Hazardous/inflammable chemicals stored in proper, prescribed manner		
9	Limited access to areas with hazardous chemicals		
10	Residues disposed in prescribed manner		
11	Small empty containers returned or disposed in prescribed manner		
12	Use of personal protective equipment (PPE): gloves, goggles, aprons, boots etc.		

An example of part of a self-assessment component of a typical Check List for evaluating machines in the tannery is given as *Panel 3*:

Panel 3: Evaluation of machines

Check List No.		Component: Machines	
Item		Yes	No
1	Machine's position allows smooth work flow and maintenance		
2	Preventive/regular maintenance and spare management in place		
3	Active safety devices (pneumatic, ultrasonic, optical or electrical) installed and functioning		
4	Electrical installation in accordance with high safety standards in all respects (corrosion, earthing, water, gases, sparking, etc.)		
5	Passive safety devices (guards, fences) on moving parts (gears, belts etc.) installed, firmly anchored		
6	Noise, vibration, radiant heat, dust, gas/vapours levels in accordance with high legal standards		
7	Operation instructions, understandable to the operator, fixed at suitable place		
8	Operation control buttons/switches labelled in the language of operators		
9	Emergency OFF button/switch within easy reach of operator & helper		
10	Strict adherence to preventive checks & maintenance schedules		
11	Use of personal protective equipment (PPE)		

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