

# PRODUCTIVITY IMPROVEMENT TIP

August 2020



Asian dairy farmers deserve not only high-quality equipment, service and support, but also to benefit from increasing knowledge that will help them become even better farm operators, providing more for their families and communities through improvements in cow productivity and farm success. With this knowledge-transfer goal in mind, DairyPRO is pleased to share “PRODUCTIVITY TIPS” on management topics vitally important to dairy farm success. We invite and welcome the opportunity to engage with farmers and industry stakeholders in dialogue on these capacity-building matters.

## AIMING TO IMPROVE MILK PRODUCTION AND FARM PROFITABILITY? SATISFY YOUR COWS’ ESSENTIAL NEEDS, IN EVERY PHASE OF THEIR DAY

With 30+ years of experience serving dairy farmers around the world, DairyPRO’s founders and staff have seen a wide variety of management approaches intended to maximize productivity. Those that we see delivering the most powerful and lasting results have one important thing in common: a focus on satisfying cows’ essential needs in every phase of their day, to allow them to achieve their natural productive potential.

What makes the focus of ‘satisfying your cows’ essential needs in every phase of their day’ such a powerful management tool? It’s this: adopting it creates a ‘lens’ through which each farmer can analyze their farm operation to identify the specific factors constraining productivity and profitability – that is, the aspects of their operation where cows’ essential needs are not being satisfied, and which are therefore causing performance below your cows’ natural potential.

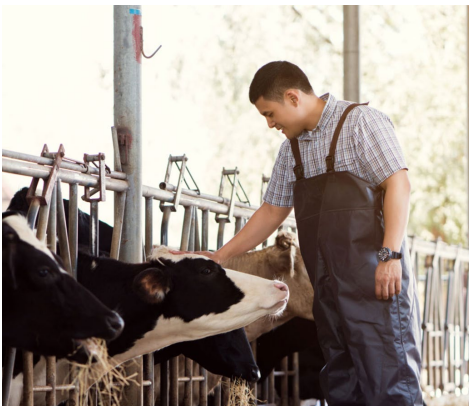
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*“Focus on satisfying cows’ essential needs in every phase of their day, to allow them to achieve their natural productive potential.”*

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Once the constraints on your farm are identified, they can be prioritized and eliminated – or at least significantly reduced – through planned investment coupled with amended operating procedures, achieving productivity and profitability gains in the process. Put simply: gains are realized by removing constraints to performance.

This is a focus DairyPRO encourages all dairy farmers to adopt and use to improve performance on their farms, because the results of decades of dairy research are so clear: cows produce more milk, and therefore greater return on investment, when their essential needs are satisfied. And it’s easy to get started! An assessment checklist can be developed just by considering the specific physical environments your cows spend time in every day, the natural behaviors they perform in each, and – given those behaviors – what needs it will be essential to address in those specific environments to allow your cows’ natural productive potential to be realized.



Below is a sample starting point that our staff use.

<b>Environment</b>	<b>Natural Behaviours</b>	<b>Essential Needs</b>	<b>Current Constraints?</b>
Stall (or housing pen)  (Note: In hot, humid environments as in southeast Asia, free stall housing is highly recommended)	<ul style="list-style-type: none"> <li>• Lying down/rising up</li> <li>• Resting</li> <li>• Rumination</li> <li>• Respiration</li> <li>• Expelling waste (urine and manure)</li> </ul>	<ul style="list-style-type: none"> <li>• Stall access and availability</li> <li>• Natural Lying/Standing movement (stall dimensions and design)</li> <li>• Comfort: Shock Absorption, Softness, Traction/no slip-no stress</li> <li>• Cooling / Avoidance of heat stress</li> <li>• Ventilation: Fresh Airflow in headspace</li> <li>• Clean and Dry: Stall Slope and depth (for waste exit), loose Bedding</li> <li>• Udder Hygiene (not in waste)</li> </ul>	
Alleys/Walkways	<ul style="list-style-type: none"> <li>• Walking</li> <li>• Congregating, social dynamics</li> <li>• Respiration</li> <li>• Expelling waste (urine and manure)</li> </ul>	<ul style="list-style-type: none"> <li>• Clean Surface, waste removal (clean hoofs)</li> <li>• Traction/no slip-no stress</li> <li>• Correct Dimensions for herd, breed size</li> <li>• Ventilation/Cooling (avoidance of heat stress)</li> </ul>	
Water Station	<ul style="list-style-type: none"> <li>• Drinking</li> <li>• Congregating, social dynamics</li> <li>• Respiration</li> <li>• Expelling waste (urine and manure)</li> </ul>	<ul style="list-style-type: none"> <li>• Clean bowl, clean cool water</li> <li>• Sufficient water volume</li> <li>• bowl height, positioning/ergonomics</li> <li>• sufficient bowl-edge per cow</li> <li>• sufficient traffic area behind drinkers</li> <li>• Location (&lt; 12m from any cow)</li> <li>• Traction/no slip-no stress, clean flooring/no water pooling (clean hoofs)</li> <li>• Ventilation/cooling (avoidance of heat stress)</li> </ul>	
Feedrail	<ul style="list-style-type: none"> <li>• Eating</li> <li>• Congregating, social dynamics</li> <li>• Respiration</li> </ul>	<ul style="list-style-type: none"> <li>• clean bunk, fresh feed</li> <li>• Feed delivery and push-up</li> <li>• bunk height, positioning/ergonomics</li> <li>• Sufficient space, safeguards against competition at rail</li> <li>• Sufficient traffic area behind cows at rail</li> <li>• Traction/no slip-no stress, clean flooring/no water pooling</li> <li>• Ventilation/cooling (avoidance of heat stress, evaporative?)</li> </ul>	
Veterinary Service area(s)	<ul style="list-style-type: none"> <li>• Receiving Care and Treatment</li> </ul>	<ul style="list-style-type: none"> <li>• A location for low-stress caregiving:               <ul style="list-style-type: none"> <li>○ Insemination</li> <li>○ Palpation</li> <li>○ Treatments: Udder, Hoof, Digestive/Rumen, Eye, etc...</li> </ul> </li> <li>• Low-stress physical restraints</li> <li>• Traction/no slip-no stress</li> <li>• Ventilation/cooling (avoidance of heat stress)</li> </ul>	
Hospital/ Maternity Pen	<ul style="list-style-type: none"> <li>• Delivery and Convalescence</li> <li>• Congregation (?)</li> <li>• Lying / rising up</li> <li>• Eating</li> <li>• Drinking</li> <li>• Respiration</li> <li>• Expelling waste (urine and manure)</li> </ul>	<ul style="list-style-type: none"> <li>• Pen dimensions, design</li> <li>• Comfort: Shock Absorption, Softness, Traction/no slip-no stress</li> <li>• Cooling / Avoidance of heat stress</li> <li>• Ventilation: Fresh Airflow</li> <li>• Clean and Dry: waste removal, loose Bedding</li> </ul>	

Environment	Natural Behaviours	Essential Needs	Current Constraints?
Milking Centre	<ul style="list-style-type: none"> <li>• Milking</li> <li>• Walking</li> <li>• Congregating, social dynamics</li> <li>• Respiration</li> <li>• Expelling waste (urine and manure)</li> </ul>	<ul style="list-style-type: none"> <li>• Udder preparation and hygiene (pre and post milking)</li> <li>• Effective udder preparation process to stimulate let-down</li> <li>• Gentle milk harvesting with correct settings and equipment size, no overmilking/teat abuse</li> <li>• System cleanliness and physical condition (end to end: liners to tank/collection point)</li> <li>• System sanitation and maintenance processes</li> <li>• Stress free cow traffic (entry/exit with ID and sorting capacity?), gentle operator handling</li> <li>• Traction / no slip-no stress, no injury drivers in transit route</li> <li>• Ventilation/cooling (avoidance of heat stress)</li> <li>• Monitoring performance of each cow</li> </ul>	

As is clear from this checklist, satisfying essential needs is significantly about providing optimal environmental conditions and inputs for your cows. Ultimately, cows transform water, nutrients and air inputs into milk, and they deliver the greatest level of production in stress-free environments where they are cool, clean, and comfortable.

Nutritional and breeding improvement programs are key additional elements of successful dairies. But the importance of the physical environments in which your cows spend every minute of their lives is a huge factor in determining their productivity. It's a factor that is often overlooked, but holds significant potential for step-change gains in productivity and farm profitability. Indeed, any investments in nutrition and breeding can only deliver full results when the constraints present in cows' housing environments are removed/minimized. This is why DairyPRO encourages all farmers to adopt the focus of 'satisfying your cows' essential needs in every phase of their day'!

We would welcome the opportunity to discuss the application of this powerful concept in more detail. As well, subsequent posts from DairyPRO will zero in on approaches to improve your cows' performance by addressing the essential needs identified in this first Productivity Tip!

DairyPRO also invites and warmly welcomes farmer feedback and topic suggestions for future posts. With this initiative, and our other outreach and capacity-building efforts, DairyPRO is keen on establishing a productive and helpful dialogue across the dairy farmer community in southeast Asia. DairyPRO is committed to supporting dairy farmers across the region.

Readers are invited to contact, and share their views with us:

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