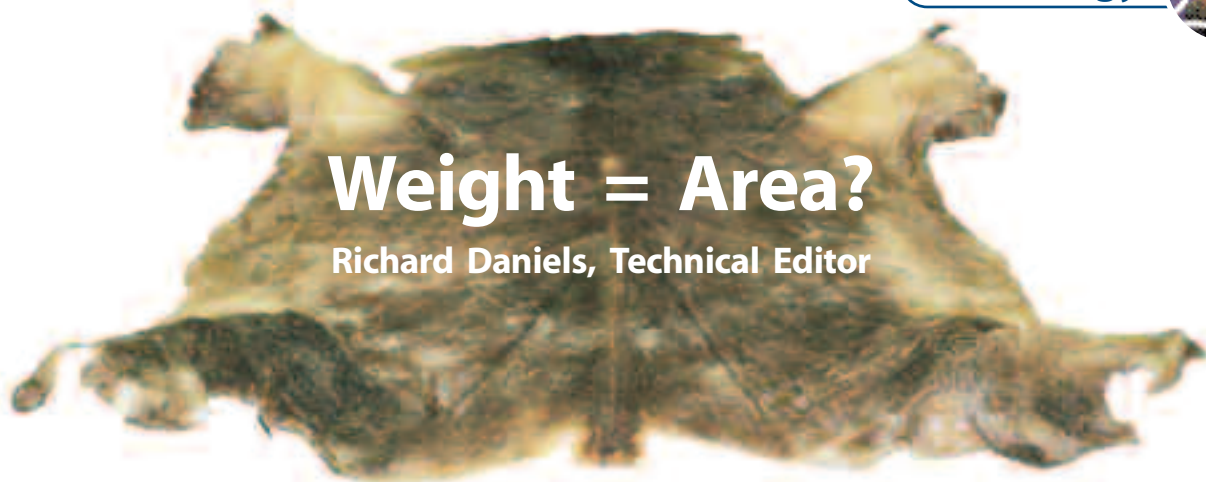


Weight = Area?

Richard Daniels, Technical Editor



It may appear illogical that the yardstick for hide trading is based on weight, whereas leather sales and purchases are by area. To the footwear manufacturer, this may be seen as a masking of the value of hides within the costs of leather making; somewhere along the line the unit shifts from weight to area, but the conversion constants are not clear.

Even within the leather making sector the preference for hide purchases based on area instead of weight have been the subject of debate and investigation. However, neither measurement by weight nor area provides a truly accurate yardstick for predicting either yields or costings. So why weight?

Practicalities of hide collection

Where the meat-processing sector is rationalised, then hides, being a by-product within a well managed organisation may be readily categorised. In this situation, an area assessment of each hide could be made before proceeding with preservation, or passing rapidly into leather manufacture. However, in practice it is easier to weigh a flayed hide, than to open out, feed onto a conveyor for area measurement and unload. The measurement option is thus slower and more expensive - and the hides do not lay flat. Dung and fat permitting, weight is the easier option.

In smaller sectors, that is the majority of the global hide collection, choice is not even a consideration. In the simplest form animal slaughter is local, with hide collection through well established networks of dealers and traders. Area measurement is too difficult to manage through each transaction, so weight is the long established norm.

However, the information provided by this measurement is far from perfect from the purchasers points of view. The goods may be categorised, and the weight of each hide identified. But what does this really mean?

Variations in moisture content

Normally, when a commodity is purchased by weight the moisture content becomes a prime factor in assessing true value. Measurement is easy, with composite samples available for analysis. However, this does not occur in the sale of hides and skins.

When the hide is removed from the animal the water content changes. Hides are often washed to reduce the skin temperature or to remove blood, and the hide holds much of this water. However, if the hides are preserved by salting, then this is accompanied by a dewatering. Often the brine runs away from the hide, but if the piles are high, then hides at the bottom of the pile will retain more moisture. Examples can even be found where high moisture retention is encouraged, with a maximising of preserved weight. On the other hand, if air movement is high

in curing or storage, then extra dewatering can take place. Taking matters a stage further, in hot climates hides are often dried out after salting to reduce the weight, thus costs of transport, and to provide extra security against putrefaction. In other words the moisture content changes: the weight at slaughter can never be verified, and practices within preservation throw different values.

Contamination and allowances

Other factors can also mask the true hide weight. Particularly in temperate climates, hides can become dung-clad in the winter periods, and in practice, it is very difficult to remove all of this contamination. Although attendance to good animal husbandry and meat hygiene may minimise this problem in some parts, the problem has not vanished. In this event allowances might be made for the extra weight, but these are difficult to quantify.

Effects of hide and leather characteristics on yields

Yield is another factor that is not fully addressed by either hide weight or area measurement. For example, if an ox hide is compared to a cow hide of the same weight, then the potential yields are very different. The ox hide is comparatively thicker in the parts carrying most muscle and requiring most protection, whereas the cow hide is thinner and more extended in the belly areas.

This means that the potential area of a grain leather is less from an ox hide than a cow hide of the same weight. If the thickness of the final upper leathers were based on the lower substance potential of the cow hide, then the area obtained from the ox hide would be less, but the substance and area of the (lower value) flesh split would be greater.

However, when hides are sorted, the selection takes both quality and potential substance into account. Ox hides go for higher substance leathers, demanding a greater selling price because of the extra weight of hide per unit of area and generally superior quality, whereas cow hides are designated for lower substance leathers of greater area, being of lesser unit value.

The hide area also affects yield. In practice splitting and shaving causes damage to the shanks and other peripheral areas, with a greater percentage loss with pieces of smaller area. Similarly, pleating associated with vacuum drying or toggling is proportionately greater with smaller pieces. This is trimmed away to minimise subsequent machine damage, and as part of acceptable customer presentation.

The yield also varies according to customer needs and the processing used by the tanners. As a general rule softer leathers, because of the relaxation within the leather structure, do not produce such high area yields as an extended, firmer leather. ➤

**Panel I****Tanners: commodity or niche manufacturers?**

The value of raw hides is subject to the pressures of supply and demand. In this event, when demand exceeds supply, the rising values are often coupled with a marked decrease in quality. Nevertheless, much of the value of a raw hide lies in the fact that it offers considerable flexibility to the tanner, and this is essential when meeting specific customer demands.

However, as the leather industry has evolved, the development of specific leather properties has largely moved from pre-tannage and tannage to dyeing/retanning/softening, and mechanical/drying areas. Where chrome tannage prevails, specialised wet blue properties are no longer required. The wet blue simply needs to be versatile and consistent.

Tanners processing from the raw to finished state have therefore acquired two conflicting in-house objectives:

The demands of a commodity manufacturer

Wet blue is available as a commodity in the global market. Success is therefore based on uniformity of supply and flexibility of use, coupled with high volume throughput to minimise manufacturing costs. Furthermore, the value of a manufactured commodity can only progress from this stage if linked within a genuine adding value structure. This means meat processing-wet blue linkages with associated advantages and incentives.

The demands of a niche manufacturer

Typically, the niche market means highly focused production with fine attention to detail. This is especially so when serving the fashion sector, where textures and colour requirements are subject to rapid change, and production runs are relatively small. In this event margins can be high, but these are only effective if the potential of the raw material is as required and fully utilised. Variable raw hides do not fit easily into this equation; the need is for a closely defined wet blue.

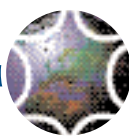
Conflicting values

Neither the philosophy of manufacture, nor the optimum plant size suits the manufacturing objectives of the commodity supplier and the niche provider. From this viewpoint it is very difficult to see how they can fit together in a single production plant. Perhaps this is another reason for a lack of profitability and closures in the raw to finished sector of the tanning industry in the past, especially when supplying the footwear sector.

Hidden factors revealed

Other factors that are not first apparent can also affect the prediction of values based on either hide weight or area assessment. This includes the effects of infestations, poor animal husbandry, post-slaughter practices (such as the use of contaminated salt) and low level putrefaction - as these affect the grain quality. These potential losses in terms of area and value cannot be fully revealed until the hair is removed.

Moreover, defects due to poor flaying practices, such as flay cuts or gouges, might not be apparent initially, but restrict splitting and shaving to low substances. This is to avoid these defects carried within in the inner (flesh) parts of the grain leather, and thus provide acceptable cutting coefficients in clicking. Nevertheless, these practices are coupled with a loss in substance potential, hence value. Over and above these issues,



Panel 2

Values detrimental to grain quality

In addition to quality and price fluctuations - largely a function of demand - occasions arise where the market demands in one leather sector cause distortions in "normal" values. A example can be seen where the demand for double face sheepskins led to such an increase in production within Türkiye that the value of raw sheepskin increased around four times previous values. These increases caused the high quality garment clothing leathers to become grossly outpriced. The combination of reducing quality available at the top end of the market - the grain is not important when obscured by wool - coupled with the need for sales prices that were unrealistic in terms of fashion leather garments, leading to closures within this sector.

In a similar way, the increase in demand for automotive leathers has worked against the footwear sector. The demands of the automotive sector have supported hide prices, but coupled with this is the fact that much of this leather is very heavily finished for the lower/middle automobile. The quality of the grain - so important to top quality shoe upper, leather goods and orthopaedic sectors - has been diminished in importance. The pressure appears to have been taken off the need for a clean and defect-free grain, as there is another outlet for hides of lower grain quality other than lesser value "traditional" printed upper leathers.

the reduced value of the flesh splits need taking into account. They now carry the flesh cuts that have become holes, and gouges identified as areas of low substance.

In addition, fringe grain damage such as low level putrefaction may not be apparent in the wet blue stage, and not revealed until the dry pre-finished state. In the worst situations, the leathers might be fully finished before the damage is clear, with subsequent rejection or downgrading.

Clearly, the arena of hide classification and quantification, area yield, substance potential and ultimate value are largely determined before commencing leather manufacture, with little chance of verification. However, where linkages have been formed between meat processors, hide merchants and wet blue units, rationalisation is possible. This is particularly so where close attention is given to the value-added chain with integrated responsibilities and incentives.

In this event matters can be better controlled and the hide becomes 'less unknown.' With wet blue purchases the grain can be seen, quality reasonably assessed, potential substance evaluated and measurement by area readily managed for the first time.

Security from known values

With the value of hides being traditionally based on weight, and purchases from known and trusted sources, the experienced tanner has long converted weight and category into yield and sales value for a known type of leather. Moreover, understanding the market and predicting shifts rather than following the classic value adding exercise has often generated good profits.

On the other hand, many tanneries have vanished through poor judgement and bad purchases rather than lack of in-house technique or management abilities. Perhaps the stability offered by the more transparent wet blue state is of longer term benefit to both leather manufacturers and their customers. 