HOPPERS, BUSHELS AND MULTURE BOWLS

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Can you help me with any of the following:-

1) Words for HOPPER in other dialects and languages, especially Welsh and any of the Scandinavian languages? I am trying to follow up the etymological split between the names from movement (e.g. hopper) and those from container (e.g. Polish kosz; = basket) and those from funnel (e.g. German trichter). The latter perhaps suggests the existance of bins and the decreased size and role of the hopper by the time the word was coined.

Language	Word
Nederlands	Kaar
Dansk	Kube
Cymraeg	Hopran
Francais	Tremie
Gaelic	"Hopper"
Provencal	Tremeuja
Norsk	Kornbeholder; Overvien.

2) Which craftsmen traditionally made the miller's BUSHEL and MULTURE BOWL? and were they officially assessed and stamped by the local J.P. or by the mayor's deputy for weights and measures? For the utensils I assume wheelwright (or carpenter) and smith (or were they ever turned bowls in wood?

Where (museum or mill) can such items, dating back at least a century, be seen? (Photo in JKM/MW Victorian & Edwardian Wind- & Watermills)

3) Do you know of any hoppers, probably without bins, that have capacity marks, perhaps in bushels, on the inside?

Likewise MULTURE BOWLS, for taking toll of parcels smaller than two bushels? I assume a standard 8 lb / 1 gallon bowl for taking a 1/16 toll from every two bushels to be ground. Freese (p.113) is surely wrong?

4) Is there an etymological connection between HOPPER and the measure of oats; HOBBED, 2.5 bushels?

5) I have weights for the accepted burden of donkeys, varying from 120 lb to 246 lb; of mules from 100 lb to 550 lb, of camels (single humped) from 400 lb to 1000 lb. The packhorse burden might be the 240 lb pack or the 340 lb sack of wool (those weights surely ought to be halved and balanced, for ease of carriage?), or the 280 lb man load of English mills, or the ca 330 lb suggested at TIMS 2 by David H Jones. Can you suggest any authenticated variations? Any parcel of grain to supply a family's flour needs for three weeks - one would surely not want to keep wholemeal flour for much longer? - is likely to be considerably less than the economical figures cited above. The horse that was spared for mill duty once every three weeks could not be used for other agricultural tasks that day. Beasts of burden were (and still are) valuable to the peasant farmer.

6) Surely the French bushel BOISSEAU was standard by ca 1900? Rivals gives 10 litres and 20 litres, for wheat, at this date, within the space of a few paragraphs (p.284, 'Le Moulin et le Meunier'). The large dictionary gives 13!
Moreover the French word, of similar derivation to our own, represents a

very different volume: more like one to three pecks depending on the litre equivalent accepted.
This leads me to wonder whether the French BOISSEAU is connected with the Latin measure for grain, MODIUS: about 1/4 of our bushel. This would lend substance to one etymological theory for TREMIE - French hopper - which suggests TRES MODII (c.f. Italian TRAMOGGIA) and a traditional hopper small by our standards; no more than a bushel. However, it suits admirably the volume of the basket hopper used in Moroccan Atlas mills.

7) How much did the BUSHEL (of wheat, for example) still vary in the British Isles a century ago? The Isle of Axholme STRIKE in 1868 equalled two bushels, which fits a 1/16 (mediaeval style) toll, of course. John Stow's version of the miller's toll suggests that the 1558 bushel was only half the usual one, or that the toll was only 1/32 - which seems unlikely.

8) The Darsham (Suffolk) TOLL of 1809 quoted by Freese as reading 'one shilling per comb' (p.113) and by Rex Wailes (p.153, "The English Windmill") - they both reproduce the notice in full. Surely Wailes is correct? Freese's version, judging by contemporary wheat prices, would suggest a 1/32 toll for grinding and dressing, taken together.

9) Do you know the date of the Melin y Bont (Anglesey) tolls quoted by Wailes (p.154)? "6 quarts for grinding and dressing one quarter of wheat or barley". This seems low: it represents 1/42 or 1/37.5. Unless of course the Welsh (but I assume the notice is in English?) quart or quarter at that time (when?) differed greatly from their English equivalents.

10) The income of a small country mill from TOLLS surely seldom covered more than the wages paid to the miller or the rent he paid to the owner. If the miller received the tolls, there would have been none left to pay for maintainance, for dressing the stones (what did this cost, if an outsider came in?) or for simple profit, surely? I have been working on the basis suggested by Lawrence Turner (MRG Proceedings 1984) of one mill to every 300 - 500 people; so far it seems to me that milling pre ca 1750 paid poorly and that mills then are unlikely to have been worked anywhere near their capacity: that was unnecessary because of the limited custom and the limited flour consumption of that custom.

DISCUSSION

A few words for hopper in other European languages were offered, and have been included in the main text. Capcity marks in hoppers were once common in Denmark; the only British report was from Wales. It was stressed that some of these measures were of volume, and others were of weight. Comparison between these two groups was only possible for a specific material. In the past, volumetric measurment was used because it was easier. On loads; it was suggsted that a 200 lb bag of flour was about as much as a strong man could carry, on the level. And yet, before the 1950's the standard flour sack was 280 lb, and D.H.Jones reported that he had seen men carry and stack them against a wall, five sacks high, climbing ladders with them to lay the upper layers! For a pack horse, a sack of wood was 364 lb. Were there any authenticated variations relating to mills?