

Questions and Answers

by MARY M. ATWATER

Question: How can I calculate the quantity of material for a coverlet, in overshot pattern weaving, to be made in two strips, each 42" wide, and three yards long? I want to use Egyptian cotton 24/3 for warp and tabby, and Shetland yarns for pattern weft.

Answer: To calculate the quantity of material for your warp you must first determine the yardage to the pound of the warp-yarn to be used. This can be calculated from the "count" of the yarn. Calculations for cotton and woolen yarns are based on the very inconvenient figure 840, which is taken as the yardage per pound of a #1 thread. To get the yardage of a 24/3 cotton multiply 840 by 24 and divide by 3. Or divide 24 by 3 and multiply 840 by the result—8. This gives a yardage to the pound in cotton of this count at 6,720.

Now calculate the linear yardage required for your warp and divide by 6,720. For two strips, each three yards long, finished, the warp should be made eight yards long to allow for shrinkage and wastage. The warp-setting of 30 ends to the inch is best in this material, and as the warp is to be 42" wide multiply 42 by 30, and then multiply this result by 8. This gives a result of 10,080, if my arithmetic is correct. (I do not guarantee it.) Dividing 10,080 by 6,720 we get 1.5 or 1½ pounds, exactly. However, it must be borne in mind that if the warp is on spools an allowance must be made for the weight of the spools. There is no yardage in the spools, unfortunately.

To calculate the quantities of pattern weft and tabby it is necessary, for exact results, to have a sample—woven as you expect to weave your coverlet. A loosely woven fabric takes much less material than a closely woven one, naturally. A coverlet, however, should be quite closely woven—not less than 26 shots of pattern and 26 shots of tabby to the inch. Taking this as a foundation, calculate the linear yardage of weft in a similar manner to the warp calculation. Multiply 26 x 6 x 42. The result is 6,552. As Shetland yarn runs 2,000 yards to the pound, divide this result by 2,000. The result will be 3 and a little over

a quarter. To allow for wastage and shrinkage, say three and a half pounds of Shetland yarn. A pound of cotton like the warp will be sufficient for tabby.

In ordering materials it is always wise to allow generously for emergencies. It is far less costly to have a little material left over than to run a trifle short. The left over material can always be used in other weaving, but to run short means delay in getting a re-order, and the material when received may not exactly match the first lot in shade.

Quantities of material for other fabrics may be determined in a similar way. For a tweed fabric the calculation is simpler as the same material is used for both warp and weft. The home spun yarn used for tweeds is usually warped at 15 ends to the inch, and woven 15 weft shots to the inch. Suppose you wish to figure for ten yards of tweed, 36" wide: Multiply 36 x 15 x 10, which gives you the yardage in the warp. Multiply by 2, as there will be the same yardage in the weft. Divide by 2,000, and the result will be the number of pounds of yarn required.

Wool yarns are calculated on the same base, — 840 — as cotton yarns, and the yardage may be determined from the count, when that is given. However many yarns go by trade names, such as "Saxony" or "Fabri", and the count is not stated. Fortunately the Bernat price-list gives the yardage to the pound of all the yarns supplied, which saves a lot of arithmetic.

Linen yarns are calculated on a base of 300. A #14 singles linen therefore has 14 x 300 yards to the pound, and a 40/2 linen runs 40 x 300 yards, divided by 2, or the same yardage as a #20 singles, — 20 x 300 yards to the pound.

The base figures from which the calculations are made are traditional and come down to us from very ancient times. It seems remarkable that a decimal system of counts has not been adopted long before this. But the old usage still prevails.