



Phone: +1-800-752-1332 / 843-569-6888
Fax: +1-843-569-0835

Email: info@claredontextiles.com
Website: www.claredontextiles.com

What is the story behind the yarn count?

The thickness of cotton yarns is usually referred as a "Count". A fixed number is assigned for this thickness. E.g., cotton yarns are identified as 10 count, 12 count etc. Surprisingly, a yarn of higher count DOES NOT mean that the yarn is thicker. It is the other way around. A 12-count yarn is actually THINNER than a 10-count yarn. It has been this way for a long time and the textile professionals said "We have always done it that way". It certainly did not make sense to us! We researched and found that there indeed is a method to this madness!

There are 3 different types of system to express the yarn counts:

- Fixed weight system (British or American)
- Fixed length system
- Tex system

In the cotton textile industry, mostly the fixed weight system is used. In its simplest form, when 1 Lb of a raw cotton fiber bale (called **Hank**) is spun, it will yield exactly 840 linear yards of a single ply yarn. In this case, the yarn count is assigned as 1. A 6-count yarn will yield, $6 \times 840 = 5040$ linear yards of a single ply yarn (total weight = 1 Lb) & 10-count yarn will yield $10 \times 840 = 8400$ yards of a single ply yarn (total weight = 1 Lb). So, irrespective of how coarse or thin the yarn count is, the **yield** is always 1 Lb. Makes sense now?

Why use the "#" sign on number ducks?

The only plausible explanation we can think of - The symbol indicates at least two yarns running in the warp and fill directions. A 12 oz fabric can be made with single ply yarns or double ply yarns. To avoid the confusion & to differentiate one from the other, the professionals may have assigned a "#" sign to the #12 duck (note that the # sign has 2 plied yarns on warp and fill). Same concept applies for #10, #8 and the other # ducks (even if the warp and/or fill has more than 2 yarns plied together).

Why the weight of a # duck fabric goes down when its number goes up?

We believe that the numbering system on heavy ducks (# ducks) & the yarn count system stemmed from this fixed weight concept. Our forefathers simplified the whole system to just numbers so that it is easy to remember. Higher the number duck, lower the weight and vice versa! To keep symmetry between the # ducks and yarn counts, they may have wanted the individual yarns in these #ducks to follow the fixed weight system as the frame of reference.

In the # ducks, though they used plied yarns, the concept is still the same. A #10 duck has 2 yarns, each of 7-count twisted and used in the warp and fill. A 7/2 yarn is the same as ONE 3.5-count yarn each strand. As explained above, 1 Lb of a 1-Count yarn will yield 840 linear yards. So a 3.5-count yarn will yield $3.5 \times 840 =$ exactly 2940 yards. For the fill, the yarn count is the same. The yield is exactly 2940 yards. The total yield on #10 duck $2940(\text{warp}) + 2940(\text{fill}) = 5880$ yards. When measured individually, the 5880 linear yards in each 7-count yarn will weigh exactly 1 Lb.

A #4 duck has 5 yarns, each of 7-count twisted and used in the warp and fill. A 7/5 yarn is the same as ONE 1.4-count yarn. Using the same concept as above, each strand of 1.4-count yarn will yield $1.4 \times 840 =$ exactly 1176 yards. For the fill, the yarn count is the same. The yield is exactly 1176 yards. The total yield on #4 duck is $1176(\text{warp}) + 1176(\text{fill}) = 2352$ yards. When woven, the yield in terms of yardage per 1 Lb of cotton is less in a #4 duck & high in a #10 duck. So, now it makes sense why a #4 duck is actually heavier than a #10 duck. Since the frame of reference used here is a "fixed weight system", the heavier the # duck gets, lesser the yield is and vice versa^Ω.

Why use the funny word "duck" on a cloth?

Derived from the Dutch word "doek" meaning a linen canvas that was used for sailors' clothing. There are now many types of duck or fabrics referred to as duck. A very tightly woven cotton fabric made with double warp threads and double fill threads in plain weave. The duck family includes: number duck, army duck, flat duck, ounce duck, sail duck, belting duck, hosepipe duck, boat or bootleg duck, linen duck, shoe duck, plimsoll duck (used for sneakers, track shoes or tennis shoes), wagon cover duck, tent duck and naught duck^Φ

^Ω Some folks in the industry also use a fixed length system, especially when it comes to the # ducks. They weigh a linear yard (36") of a 22" wide duck cloth and assign the number. In this case, the weight keeps changing, but the length remains 36" x 22". It is just an isomeric view of the fixed weight concept. Again, aren't we supposed to call a two dimensional length as "area"? That's a whole different argument! We have always done it this way for well over a few centuries now! 😊

^Φ There is another version of the story. Ages ago, the first company that sold such heavy cloth fabrics in the market had a trademark (you guessed it right – a duck) and people started to use the word duck from there on.