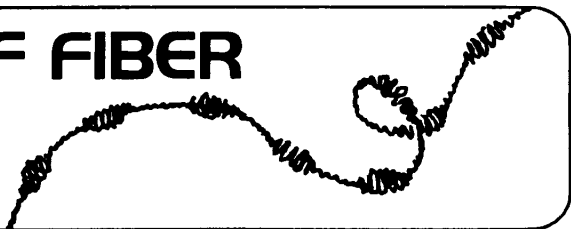


# OF FIBER



by Cathy Ingebretsen

There are many things that affect the appearance and durability of fibers and fabrics. The sett is the one I'd like to discuss this month.

The **SETT** of the warp yarns

How many warp ends per inch? (e.p.i.)

There are three categories of setts that people commonly refer to:

**WEFT FACED** - usually 4 - 8 e.p.i.

the warp yarn is spaced far enough apart so that the weft yarn(s) completely cover the warp yarns; only the weft shows on the face of the fabric i.e. tapestry, Rya, Soumak

**BALANCED** - usually 8 - 40 e.p.i.

equal number of warp and weft yarns per inch i.e. plaids ...

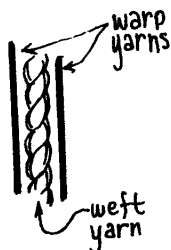
**WARP FACED** - usually 30 - 70 e.p.i.

the warp yarns are spaced so close together that the warp yarns completely cover the weft i.e. card woven and inkle woven bands...

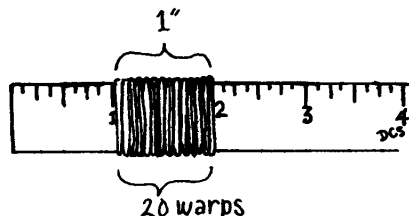
Between these categories there are many weaves and weavings. In general, the greater the distance between the warp threads, the more the weft can pack in (and cover the warp); the less the distance between the warp threads, the less the weft can be packed in (the more the warp shows).

## Figuring the Sett

For Weft Faced Weaving, the distance between the warp threads must be a little wider than your weft's yarn diameter. (You could wrap a sequence of warp yarn, weft yarn, . . . , around an inch of a ruler, leaving about 1/16 inch space between each yarn and then count the number of warp yarns in that inch for your e.p.i.)



For Balanced Weaves, wrap (wind) warp yarn around a ruler until you have firmly packed 1 inch of the ruler. Count the number of warp ends (wraps of yarn) in that inch. Divide by 2 (for the e.p.i.), i.e. 20 wraps ÷ 2 = 10 e.p.i.



For Warp Faced Weaving, wind warp yarn around a ruler until you have firmly packed 1 inch of the ruler. Count the number of ends. Multiply by 2, 20 wraps x 2 = 40 e.p.i.

This way of figuring will get you close to your desired sett. It is not meant to be exact, because other factors, like the width of your weaving, the softness of your yarn(s), and how hard you beat, all effect how your yarns actually work up. Narrower weaving widths often need a closer sett, because the fewer the warp threads, the less the resistance to packing in the weft. Also the softer the yarn, the more easily it packs in.

## Effect of Sett on Appearance

Warp faced and weft faced weaving have only one of the two elements (of warp and weft) showing on the surface of the fabric. Balanced weaves have the inter-weaving of both warp and weft obvious. Many people feel its easier to control the color in a warp or weft faced weaving. Others feel that it's more interesting and challenging to be able to work with both elements visible.

All three weaving sett: (and the setts that fall somewhere between these, i.e. where both elements are visible, but not in equal proportions), have limitless possibilities. The appearance of the weaving done on one particular sett can be drastically changed by varying the yarns, their color(s), size(s), texture(s), proportion(s) and fiber content(s). The structure of the weave, the technique(s) used, the design, the beat (packing the weft), and the finishing process(es) all affect the appearance, even within one sett.

## Effect of Sett on Durability

In general, Warp faced and weft faced weaving is more durable than Balanced weaving. Most rugs are either warp or weft faced. But this is not to imply that balanced woven fabrics are not durable. You choose the sett depending upon the affect desired, and the intended function. Balanced woven clothing is very durable to wear, but wouldn't last too long as a rug. Durability has to be considered in light of the suitability.

## Effect of Sett on Weaving Time

	to set up (warping)	to weave
slowest	warp faced (more threads to wind and warp)	weft faced (more weft shots per inch)
fastest	weft faced (less threads to wind and warp)	warp faced (less weft shots per inch)

Since more time is usually spent in weaving (especially if you put on a long warp), the slowest type of weaving is weft faced, the then comes the balanced weaves, and then warp faced.

Whatever type of sett you choose to use, I hope this will help you to understand, and decide on, **HOW MANY ENDS PER INCH**.

Cathy Ingebretsen

## NOTICE

All items submitted to the Minnesota Weaver should be in writing and sent to the Guild office or to Karen Searle, 3036 N. Snelling, St. Paul, MN 55113. Material is due on the 10th of each month.