

Weaving Tips and Tricks

This document captures ways to address some challenges which occur when weaving, making them manageable. It came about from a Tips and Tricks presentation at a MWFA 2023 meeting.

DETERMINING SETT

Sett determines fabric density. The heavier/greater your EPI and PPI, the denser your finished fabric will be. For example, if planning a plain weave scarf and you determine that your yarn has 24 wraps per inch, your starting point for the sett would be 12 EPI. If you want your scarf to be light and airy, you could open your sett to 10 EPI and weave your weft with a light touch so your PPI is also around 10. Alternatively, if you want a denser weave, you could take the same yarn and use a sett of 14 or 15 EPI, with a heavy beat of 14 or 15 PPI. The result will be a denser fabric.

Many projects benefit from a balanced weave, creating drape and softness. More information of weave types follows.

DEFINITIONS

WRAPS PER INCH (WPI): the number of times a yarn wraps around a 1" space on a ruler or pick-up stick.

ENDS PER INCH (EPI): the number of warp threads in one inch of woven fabric. EPI is often used interchangeably with sett.

Sett: the distribution of warp ends in your fabric, usually over one inch (EPI = sett).

PICKS PER INCH (PPI): the number of weft threads in one inch of woven fabric.

FINDING WRAPS PER INCH (WPI)

Using a ruler or smooth stick (like a pick-up stick with markings 1" apart), wrap the yarn snugly for one inch with no space between the yarn. Ensure you are not scrunching up or overlapping the yarn. Count how many times you wrapped the yarn in one inch. That's your WPI.

CALCULATING ENDS PER INCH (EPI) / SETT

If you look at your wrapped ruler, the threads are butted up against each other with no space between. However, to weave, your weft yarn needs space to pass over and under your warp threads. So, by definition, your WPI will always be greater than your EPI.

General Rule of Thumb for Calculating EPI

TABBY/PLAIN WEAVE: EPI is WPI divided by 2. For example, if your yarn wraps at 24 wraps per inch, you will want 12 ends per inch in your warp to give space for your weft to pass through.

TWILL WEAVE: EPI is approximately 2/3 or 60% of WPI. For example, if your yarn wraps at 24 wraps per inch, you will want 16 ends per inch in your warp.

SATIN WEAVE: EPI is approximately 80% of WPI. For example, if your yarn wraps at 24 wraps per inch, you will want 19 ends per inch in your warp.

IS YOUR PROJECT BALANCED, WARP-FACING, OR WEFT-FACING?

BALANCED WEAVE: both the warp and weft threads or yarns are equally visible. Typically, your EPI and PPI will be the same or close in number if you are using the same yarn in the warp and weft.

WARP-FACING WEAVE: the warp threads or yarns are most visible in the finished cloth. Your EPI will be significantly higher than your PPI if you are using the same yarn in the warp and weft.

WEFT-FACING WEAVE: the weft threads or yarns are most visible in the finished cloth. Your PPI will be significantly higher than your EPI if you are using the same yarn in the warp and weft.

REPAIR HEDDLES

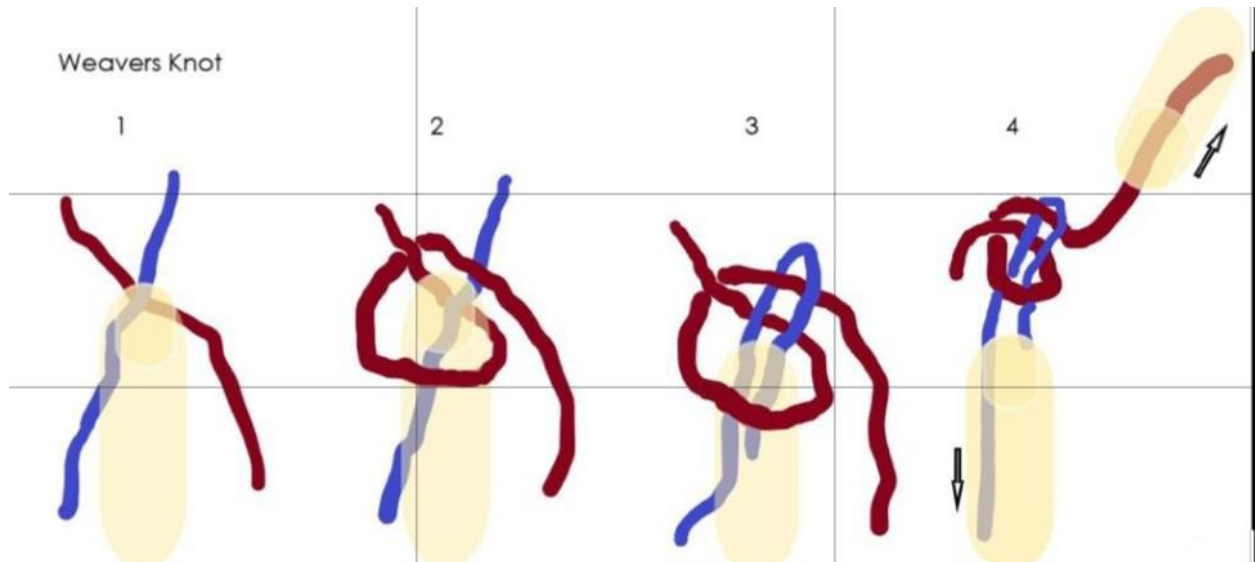
There are numerous ways to make temporary heddles that may be required to repair a threading error; all are easy and take less than 5 minutes. In addition to the two different ways demonstrated in these videos, there are others, like tying ladder yarn onto shafts and using a 'rung' as the heddle eye.

JST: https://youtu.be/YQ4sX7N9NPc?si=dR1Eiu_luQd_2XBs

Acton Creative: https://youtu.be/UD_oBJ0umsc?si=-QDvY8zqdnUN8-s9

WEAVER'S KNOT

A weaver's knot is a useful tool. It can be used to tie a new warp onto the end of an existing warp if threading is the same.



TEMPORARY BOBBINS

If you're running low on bobbins, consider one of the following ways to make your own (known as quills):

- Cut a drinking straw to length
- Use an empty thread spool
- Cut a piece of paper to 3" x 6", wrap it around bobbin winder until all paper wrapped snug, adhere with tape

DETERMINING YARDAGE

Before beginning a project you need to determine if you have enough fibre. The following is the process to calculate yardage when the yardage is unknown. There are charts available that provide an estimate based on weight that work for some types of fibre.

Use a McMorran Yarn Balance

Take a length of yarn from the cone and place centrally in the “V” of the balance arm. Add more yarn or cut off yarn ends until the balance arm is horizontal.

Remove the arm and measure in inches.

Multiply the number of inches (and fractions by 100).

NOTE: the accuracy will increase if equal amounts of yarn are at each side of the “V”.

Find out the yardage by the ounce by dividing by 16.

EG)

<p>BLACK SLUB ACRYLIC YARN:</p> <p>Measures 27.25” X 100 = 2725y / lb</p> <p>2725 y/lb divided by 16 = 170.3 y/ounce</p>

Use a digital scale to measure the cone of yarn MINUS the weight of the cone.

Take an empty cone and Tare the electronic balance before you weigh your cone of yarn OR subtract the weight of the cone after you have weighed it

Multiply yards per pound to get amount left on cone.

<p>BLACK SLUB YARN weighs 17 ounces or 1.0625</p> <p>1 x 2725y = 2725y</p> <p>1x 170.3 = 170.3 y</p> <p>} add together = 2895 yards</p>

PURPLE Acrylic Cone = 26” x 100 = 2,600 yards per Lb

2,600 / 16 = 162.5 yards per ounce

Cone weights 10.9 oz x 162.5 = 1,771 yards on cone

RUST =

29.5" x 100 = 2,950 yards / Lb

2950 / 16 = 184.38 yards / ounce

Cone weights 11.5 ounces x 184.38 = 2,120 yards

TURQUIOSE

16.5" x 100 = 1650 yards per Lb

1650 / 16 = 103.1 yards per ounce

Cone weights 7 oz x 103.1 = 721.7 yards on this cone