

Hand Weaving Supplies

A Guide to Choosing, Designing, and Weaving with Yarn

WEAVING TODAY™

How Much Yarn Do You Need?

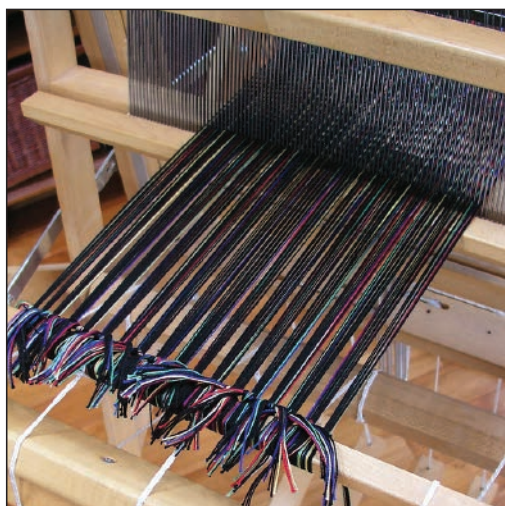
Madelyn van der Hoogt

There is nothing worse than happily weaving along and suddenly realizing that you are about to run out of warp (or weft) before you've reached the woven length you need. You call *everywhere* to order more yarn (you'd pay for Next Hour) but—oh, no!—that yarn no longer exists. A much better MO for your weaving life is to know how

much yarn you need before you start weaving and make sure you have that much or more.

Loom waste

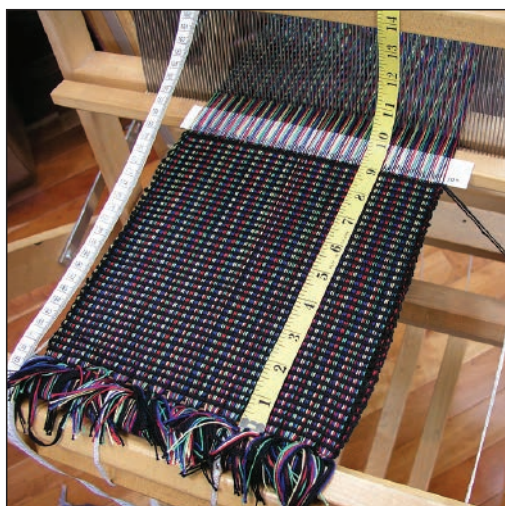
The first factor to think about is loom waste. Loom waste is the length of warp you use that is not part of the actual woven cloth. The amount depends on your



a. Loom waste at beginning of weaving



b. 10" warp length before weaving



c. 10" warp length becomes 9" woven length.



d. Loom waste at end of weaving

From *Handwoven*, May/June 2008; p. 15.

loom and the method you use to tie the warp on to the front and back apron rods. Tying knots, like those in Photo a, takes about 5" of warp length.


The remaining loom waste is the warp length between the back apron rod and the place in front of the shafts where you cut the project from the loom; see Photo d. With some looms, you can weave with the apron rod fairly close to the shafts, even if you have to struggle to open those last sheds. In Photo d, that distance is 19", so total loom waste for this "project" is 29" (5" + 5" + 19").

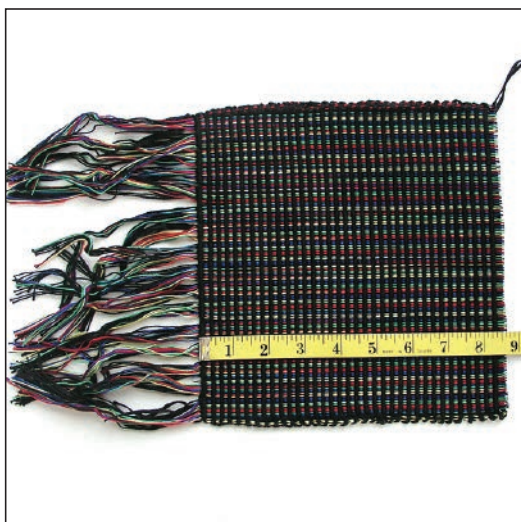
If you use scrap yarn to spread the warp, you must add the warp length used for that, too. It seems to be a standard in our craft to allow about 27" for loom waste—I always allow at least a yard.

Take-up

Warp length "takes up" as the fabric is woven. A line marks 10" of unwoven warp in Photo b. Photo c shows that 10" of warp length became 9" of woven length (measured with tension released), a take-up of ten percent. Even more take-up occurs as the cloth relaxes (Photo e). Because this cloth is warp faced, its take-up is greater than that for a balanced weave (usually about five percent).

The weft takes up, too. As you place the weft in an angle or curve, it becomes longer than the width of the loom. For *Handwoven* projects, we allow at least five percent weft take-up.

To be safe, add about ten percent for warp and weft take-up. 



e. Length becomes 8½" off the loom; the "fringe" is the amount used to tie on (5").



f. A fine weft and heavy warp can produce weft take-up of more than five percent.

2-Shaft Project or 4-Shaft Project

A Guide to Designing for Weaving With a New Yarn

Marilyn Murphy



<-< ABOUT THIS YARN ->>

75% yak, 25% bamboo

Yak down supplies the extremely soft hand of this yarn. Bamboo adds a bit of shimmer (more visible in person than in a photo) and strength and stability, making it easy to use as warp. The yak blooms with wet-finishing but without fulling the way a wool yarn would. To be safe, calculate 15–20 percent shrinkage. In contrasting warp and weft colors, twill would be a lovely structure for a winter scarf.

From *Handwoven*, September/October 2010; pp. 38–39.

You're in a yarn shop stroking a soft skein. The gauge—6 stitches per inch—is helpful for knitters, but you want to weave with this yarn. What next? One of the first things you need to know is sometimes the last thing you find out—and it can be a disappointing surprise: How does the yarn behave during wet-finishing? It's a good idea to start there.

To do that, I first washed a strand of the yarn. Comparing it with an unwashed strand, I found that it bloomed rather than fullled, and it shrank close to 20 percent.

Make a wrap

Wrap the yarn around a ruler. For this yarn, I counted 17 wraps per inch. The appropriate sett for plain weave would therefore be between 8 and 9 ends per inch. Both the washed and unwashed strands of yarn produced the same wraps per inch, confirming that fulling is minimal.

Weave a sample

Sampling with this yarn taught me something very interesting. I wanted an open effect so decided to alternate plain weave and basketweave, hoping for a lacy look in the basket-weave areas. I first tried a sample at 12 ends per inch (thinking that the close plain weave would help keep the basketweave areas

open). Too close! I sett my second sample at 8 ends per inch.

Wash the sample

The unexpected result of wet-finishing was that the open spaces I had hoped for in the basketweave areas did not occur in *either* sample. The yarn tended to shrink to fill in whatever space was available to it.

With these observations in mind, I decided on a sett of 10 ends per inch for the final scarf and a goal of textured stripes rather than lacy ones.

TIP

Instead of waiting to wet-finish a sample, first wash strands of a yarn you've never used before. Measure two strands of, say, 20" length. Wash one by hand or machine (the way you plan to wash the finished project). Compare the two strands to assess fulling and measure shrinkage.

PROJECT at-a-glance

Structure

Plain weave and a variation of basketweave.

Equipment

2-shaft or 4-shaft loom, 13" weaving width; 10-dent reed; 1 shuttle.

Yarns

Warp and weft: 4-ply 75% yak down, 25% bamboo (180 yd/2 oz skein, 1,440 yd/lb, Bijou Spun Lhasa Wilderness, Bijou Basin Ranch), 700 yd, 4 skeins.

Warp Length

122 ends 3 yd long (allows 6" for take-up, 30" for loom waste).

Setts

Warp: 10 epi (1/dent in a 10-dent reed).

Weft: 12 ppi.

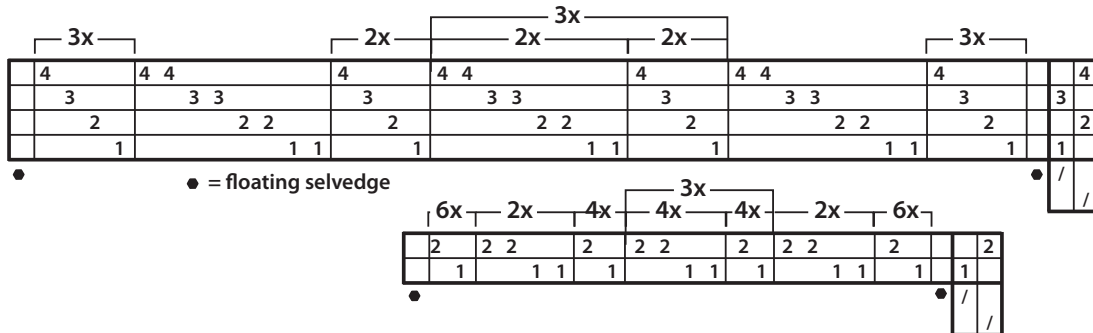
Dimensions

Width in the reed: 12 $\frac{1}{5}$ ". Woven length (measured under tension on the loom): 72".


Finished size after washing (allow up to 20% for shrinkage in width, at least 10% in length): 9" × 65" including $\frac{1}{2}$ " hems.

Steps for Weaving a Scarf

1. Draft for scarf



- 1 Wind a warp and thread the loom following the draft in Figure 1. If you have four shafts, use all four to allow the threads room to move. (I put the yarn on a swift to wind into balls. Be sure not to wear black, or small fly-away hairs will cling to you during this process. This was not a problem during weaving.)
- 2 Weave following the draft for 72". The bamboo adds a slippery quality to the yarn and makes placing the weft evenly very important. Streaks in the weft direction will not disappear during finishing.

- 3 Remove the scarf from the loom and prepare a twisted fringe if desired. I felt the fringe was so soft that a hem would wear better. I hemstitched the ends with sewing thread and turned them twice for a narrow hem.
- 4 Soak in warm water about 15 min. Rinse, squeeze out water, and lay flat to dry. Steam-press. 



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A Weaver's Guide to Yarn

Yarn samples shown here are **Handwoven Editor's choice**—the yarns we love to use!

Silk

30/2 silk, 7,850 yd/lb; 24, 32, 40

20/2 silk, 5,000 yd/lb; 20, 25, 30

2-ply silk, 1,725 yd/lb; 12, 15, 18

Linen

8/1 linen
 2,400 yd/lb; 15, 20, 24

tow linen singles
 4,300 yd/lb; 20, 24, 28

16/2 linen
 2,400 yd/lb; 15, 20, 24

20/1 linen
 6,000 yd/lb; 24, 30, 36

14/2 linen
 2,100 yd/lb; 12, 16, 20

10/2 linen
 1,600 yd/lb; 10, 15, 18

8/3 linen
 800 yd/lb; 8, 10, 12

8/4 linen
 600 yd/lb; 8, 10, 12

8/5 linen
 480 yd/lb; 6, 8, 10

Wool

20/2 wool
 5,600 yd/lb; 20, 24, 30

18/2 wool
 5,040 yd/lb; 20, 24, 30

12/2 wool
 2,980 yd/lb; 12, 15, 20

2-ply Shetland wool
 1,800 yd/lb; 12, 15, 20

3-ply fingering-weight wool
 2,800 yd/lb; 15, 18, 20

100% 2-ply spelsau wool
 1,245 yd/lb; 10, 12, 15

8/3 wool
 1,490 yd/lb; 10, 12, 15

Blends

14/2 alpaca/silk
 80% alpaca, 20% silk
 3,472 yd/lb; 18, 20, 24

22/2 nialin
 60% cotton, 40% linen
 2,740 yd/lb; 15, 20, 24

22/2 cottolin
 60% cotton, 40% linen
 3,000 yd/lb; 15, 20, 24

18/2 wool/ silk
 50% wool, 50% silk
 5,040 yd/lb; 20, 24, 30

10/2 merino/Tencel
 50% merino, 50% Tencel
 2,800 yd/lb; 12, 15, 18

75% yak, 25% bamboo
 1,440 yd/lb; 8, 10, 12

Cotton

20/2 cotton, 8,400 yd/lb
 30, 36, 48

16/2 cotton, 6,720 yd/lb; 24, 30, 36

10/2 pearl cotton, 4,200 yd/lb; 20, 24, 28

10/4 cotton, 2,100 yd/lb; 12, 15, 18

5/2 pearl cotton, 2,100 yd/lb; 12, 16, 18

3/2 pearl cotton, 1,260 yd/lb; 10, 12, 15

Rayon

Tencel

Bamboo

10/2 rayon, 4,200 yd/lb; 20, 24, 28

10/2 bamboo, 4,200 yd/lb; 20, 24, 30

5/2 Tencel, 2,100 yd/lb; 12, 16, 18

5/2 bamboo, 2,100 yd/lb; 12, 15, 18

rayon chenille, 1,450 yd/lb; 12, 15, 18

Numbers after yd/lb indicate ends per inch (open for lace, medium for plain weave, close for twill). These will vary according to desired fabric hand.

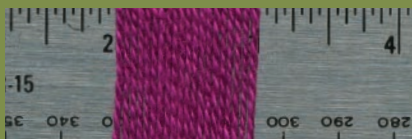
From *Handwoven*, September/October 2010; pullout section.

A Weaver's Guide to Yarn

Build your stash! Take this guide to your local yarn store to help you choose new yarns to love plus identify weavers' all-time favorites.

Using wraps to determine sett

Wind the yarn around a ruler for one inch. Wind firmly and evenly without stretching; don't overlap and don't leave spaces. Count the number of wraps.



- Balanced plain weave** wraps per inch ÷ 2 = epi
- Warp-faced plain weave** wraps per inch × 2 = epi
- Weft-faced plain weave** wraps per inch ÷ 3 = epi
- Balanced 2/2 twill** wraps per inch × 3/2 = epi



To mix yarns, wrap the ruler with each yarn in the proportion it will appear in the cloth. Wind more than one inch and divide by the number of inches you wind for an average of all the yarns.

Conversions

MEASUREMENTS (rounded off)

Linear

- 1 in = 2.54 cm
- 1 ft = 30.5 cm
- 1 yd = .91 m
- 10 cm = 4 in
- 1 m = 39 in, 1.09 yd
- 100 cm = 1 m

Weight

- 1 oz = 28.4 gm
- 1 lb = 454 gm
- 1 g = .035 oz
- 50 g = 1.75 oz, .11 lb
- 100 g = 3.5 oz, .22 lb
- 500 g = 17.6 oz, 1.1 lb
- 1,000 g = 2.2 lb, 1 kilo

To convert knitting-yarn skeins to yd/lb

- m/50 g multiply by 8.3 to get m/lb
- multiply by 9.14 to get yd/lb

- m/100 g multiply by 4.15 to get m/lb
- multiply by 4.57 to get yd/lb

- m/250 g multiply by 1.66 to get m/lb
- multiply by 1.83 to get yd/lb

Knitting-yarn directory

SUPERFINE (LACEWEIGHT)

	wpi	yd/lb	plain-weave sett
wool	30-40	5,000-6,000	18-28
cotton	25-68	2,000-8,000	15-40
linen	28-54	2,100-4,200	14-30
silk	30-100	2,800-17,000	15-65
bamboo, Tencel, etc.	30-84	3,360-12,600	15-48

FINE (FINGERING OR SPORTWEIGHT)

wool	14-22	1,500-2,800	8-14
cotton	15-24	1,000-2,000	8-12
sock	18-20	about 2,000	8-15
silk	14-22	1,100-2,000	8-12

DK (DOUBLE KNITTING)

wool	11-16	900-1,500	6-8
blends	15-16	1,000-1,250	8-10
silk	14	1,500	8-10
bamboo, Tencel, etc.	12-22	1,000	10-12

MEDIUM (WORSTED)

wool	10-12	640-1,000	6-8
wl/blends	10-13	800-1,200	4-8
cotton	10-13	630-900	5-8
cot blends	12-16	840-1,000	7-9
alpaca, angora blends, etc.	12-18	1,200-2,200	6-8

BULKY

wool	6-10	250	4-6
wl/blends	6-10	280-800	4-6
alpaca	7-8	490-600	4-6

SUPER BULKY

wool and wl/blends	4-7	260-420	4
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Reed chart

Order of sley in the reed	Dents per inch					
	6	8	10	12	15	20
0-0-1	2	3	3	4	5	7
0-1	3	4	5	6	7½	10
0-1-1	4	5	7	8	10	13
0-1-1-1	4½	6	7½	9	11½	15
1	6	8	10	12	15	20
1-1-1-2	7½	10	12½	15	19	25
1-1-2	8	11	13	16	20	27
1-2	9	12	15	18	22½	30
1-2-2	10	13	17	20	25	33
1-2-2-2	10½	14	17½	21	26	35
2	21	16	20	24	30	40
2-2-2-3	13½	18	22½	27	34	45
2-2-3	14	19	23	28	35	47
2-3	15	20	25	30	37½	50
2-3-3	16	21	27	32	40	53
2-3-3-3	16½	22	27½	33	41	55
3	18	24	30	36	45	60
3-3-3-4	19½	26	32½	39	49	65
3-3-4	20	27	33	40	50	67
3-4	21	28	35	42	52½	70
3-4-4	22	29	37	44	55	73
4	24	32	40	48	60	80
4-4-5	26	35	43	52	65	87
4-5-5	28	37	47	56	70	93
5	30	40	50	60	75	100

Sett (ends per inch)

Determining yardage

Count system There are several methods for designating yarn size from which yardage per standard weight can be derived. The system most used for spun yarns is the *count* system. It is based on the number of yards in a pound of a single standard strand. Size 1 is the lowest count. Here are the yardages for size 1 of some common fibers:

Cotton, spun silk	840
Linen, hemp, jute, ramie	300
Woolen	256
Worsted	560

To find the yardage of a yarn of a higher count than size 1 (finer), multiply the count times the yardage of size 1. For a size 20 (20/1) cotton: $840 \times 20 = 16,800$ yd/lb

To find the yardage of a plied yarn, multiply the count times the yardage of size 1 and divide by the number of plies. For example, for 20/2 cotton: 840×20 divided by 2 = 8,400 yd/lb.