## Swatching Stranded Vertical Stripes

## Notes

So the places in my Deplorable Scarf that had straight vertical lines were, shall we say, less than ideal. Part of the problem is simply my inexperience with stranding, and then I think I compounded the problem by working much too loosely the trick from It's Not About the Hat. Again, my problem using the technique, not the technique itself.

It's really hard to search for information about this problem, because all the words you'd use to search can mean multiple things. So I'm swatching to see what I can find out.

My stranding technique does need practice. BUT! Why do my swatches look perfectly fine when the color changes run on the diagonal??? It's only when the color changes run dead vertical that the fabric pulls in and humps up.

## Magic Loop

I used magic loop for the first time to make swatch 1. It was much easier than I thought, once I realized that I needed to push the empty tip into the next group of stitches before I pull the full tip out of the just-made stitches. Duh!!!

## Charts

Swatch charts and evaluations are on my website's project page and should eventually be in the FOs section.

## Swatch 1

The one- and two-stitch wide columns on the scarf were mostly OK. It was when they were three and four stitches wide that there was a puckering, pulling-in issue.

So I set up a little color pattern that had runs of one to four stitches. I duplicated the row several times, then I offset the columns by one stitch to put them on a diagonal. Then I did the offset the other direction, just to test my stranding in, er, both directions.


Swatch 1: Diagonal lines lie flat and smooth, the verticals are humped up (hard to tell in the pic, but quite obvious in real life)

That went very well indeed. Surprisingly so. My tension was nicely even. The only issue was that I didn't leave any slack in the floats that went across the "edges" of the swatch, so the edges are almost sewn together. This would be a useful thing in a scarf, for example, if you work in the round and want it to stay flat. It's hard to describe in words, so just look at the WS pics.


Swatch 1: Floats cutting across the "corner" sort of "sew" the edges together, a useful trick if you want a scarf worked in the round to "lie flat" and essentially have two sides.
Once I completed the zigzag, I switched to keeping the lines vertical. My first thought was doing a YO with the carried color if there were three or four stitches in a row. On the next round, I dropped the YO. I also tried doing two YOs in the carried color if there were four stitches worked in a row. It sort of worked, but the yarns seemed to get twisted, as seen in the pic (though I can't be sure that I didn't keep the red yarn always above and the white yarn always below).


Swatch 1 WS
I only did the YOs for about three or four rounds, then I did the rest of the swatch by really stretching the new stitches out before switching colors. I also tried to be mindful of not pulling too much when working the second stitch of the new color, which would remove some of the slack I was so carefully trying to leave.

The two-stitch checkerboard along the edges didn't work well (as mentioned in the Deplorable Scarf ideas at the bottom of the notes). I may not have kept the white under the red the whole time, or my float length may not have been very good. Hard to tell.

## Theory

The floats all exert tension on the stitches that they join. When the design is diagonal, the floats on adjacent rows/rounds all fight against one another. Since they don't all start pulling in the same place, they balance one another out and the piece stays flat.

When the floats start and stop on dead-straight vertical lines, though, they can all work in unison instead of fighting amongst themselves, so the FO humps up.

## Swatch 2

Since I can work diagonal patterns OK, I'll concentrate totally on vertical columns for try \#2. Instead of doing a carried color YO in the middle of a run, I'm going to do a YO in the to-be-carried yarn when I switch colors, if the new color will be three or four stitches long, then I'll drop the YO on the next round. Hopefully that will translate to some extra slack in the float. If the color was carried four or more stitches, I'll do a YO in it when the carry ends.

OK, the whole YO idea just is difficult to do. So I stopped doing it and tried really exaggerating pulling the stitches before bringing up the new color. But it’s hard to keep them stretched, perhaps because of the same dynamic that pulls the vertical columns in in the first place.

I'm considering doing a double wrap in the first and/or last stitch of a color, then dropping the extra wrap on the next row. That would allow me to just do the normal amount of stretching before changing colors while also giving some extra length to the floats.

Off to add a new section to the chart...
Well, double wraps didn't work either. All that happened is that the stitches got bigger and looser while the floats stayed the same length and made the fabric still pull in. I couldn't even pull the slack out of the stitches to lengthen the floats, because the yarn wouldn't stay in the floats. It simply moved back into the stitches. It's 11 pm , so I'm calling it for the night. Sigh.

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So, pics of swatch 2. Very disappointing results. In the first part, I did, well, technically backward loops instead of true YOs, so that they would both stay in place better and make the floats slightly longer. Did not work.


Swatch 2 RS


Swatch 2 WS
In the second bit, switched to doing the final stitch of each color as a double-wrap, hoping the excess would go into the float. Did not work. It only made the stitches super loose and sloppy. Even when I went back and pulled the excess yarn out of the stitches and into the floats, if I then stretched out the WIP, the yarn worked itself back into the stitches, again leaving the floats too short.

Or else, the problem is that stacked floats only reinforce their pull, compared to offset floats which fight against themselves and so can't pull the fabric into humps.

One more attempt, and I'll work as usual except for simply pulling more slack into the float after I make the first stitch in the new color. Yeah, that won't make me slower than I already am.

## Swatch 3

So I pulled the floats deliberately long, this time on a swatch with 32 sts, with 4-st wide columns in alternating colors. No need to fiddle with narrower columns at this point.


Swatch 3: Deliberately very long floats on round 1
As I worked each additional round, I could feel the stitches in the previous rounds getting looser and flimsier, because the extra length in the floats was clearly getting worked or moved into the surrounding stitches.


Swatch 3 round 5: Still doing deliberately long floats on round 5, but why are those earlier rounds’ floats no longer sticking out???


Swatch 3 WS: Where'd all the extra float length go?
Well.
So then I switched the vertical columns to a diagonal stripe, remembering only at the end of the first round to decrease a stitch so there would be no jog.

Diagonal Stripes Stitch Count Magic When I made the eight four-stitch stripes zig to the left, I had to work on 31 stitches. When I made them zag to the right, I had to work on 33 stitches. In both cases, there is no BOR jog!!!! I first saw this idea in the Spiral Yoke sweater from Handknitting with Meg Swansen but had forgotten all about it. But with needles and yarn in hand, it was actually pretty obvious what was needed to avoid any jog.

I shortened the float length to what I guess would be called "normal": just slightly longer than the width of stitches they were behind. Around and around I went, shifting each stripe over one stitch every round. The first few rounds are fairly ugly, because the vertical-column fabric was so loose, and of course now the vertical columns are severely humped up, because the diagonal stripes are back at the normal gauge.


Swatch 3 after switching to diagonal stripes
Clearly the vertical stripes' stitches are larger, even though I used the same needle, so the extra float length simply migrated into the stitches as I continued to manipulate the WIP.

So the question remains: Is there a way to do vertical lines of color changes in stranded knitting? I guess there's a second question: Would I get different results if I worked flat instead of in the round?

## Conclusions

I really don't think it's my stranding technique at all, because I get good results when the color changes run diagonally instead of vertically. If it truly was my technique that was lacking, I'd have trouble even with diagonal stripes.

I think it's just the nature of floats stacked all in the same vertical place that's the issue, and I'm guessing that's why the Nordic countries' colorwork has mainly diagonal motifs.

