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Date: July 27, 2019
HAND SPUN YARNS FOR CROCHET

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submitted to Olds College

Date: April 30, 2013
SUMMARY:

The object of my study of 'Hand Spun Yarns For Crochet' was to find what method of spinning the selected fibres would make the best yarns to use for crocheting. I was trying to determine if one type of fibre was a better choice over another. By using different methods of spinning such as worsted or woolen, I was expanding on my choices to develop a good crochet yarn. Each fibre was spun both 'z' and 's' to give me visual samples of what was happening in the finished yarn.

The main conclusion that I came to from the study was that a yarn in which the singles were spun 's' and plied 'z' kept the plies together better than a yarn in which the singles were spun 'z' and then plied 's'. I also concluded that the yarn in which the singles were spun 'z' would become softer and duller when being crocheted, while the yarn with the singles spun 's' would become much firmer and show the lustre better.

I would recommend further study of 'Yarns for Crochet' by using singles yarn especially with the bast fibres of Flax, Hemp and Ramie. As these fibres are even stronger if wet spun, they would make a yarn with less bulk in the finished crocheted fabric.

I would also recommend a further study by comparing all the different wools to see what the finished crocheted fabric would result in and where it would be most effectively used.
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INTRODUCTION:

I am making my study on 'Hand Spun Yarns For Crochet'. I will endeavor to determine the best method of spinning fibre to create a well put together piece of crochet for multiple uses. I am looking for the final crocheted item to have a nice stitch with good strength and visual appeal to it. I am looking for what effects that the individual fibre, spin direction, fibre preparation and finishing have on the final crocheted samples.

I will use sixteen different fibres to see what variances there will be in the produced yarns. By using several different fibres I will see the difference of the handle, crispness of stitch and overall visual appeal of the finished yarn and crocheted material. This will give me a good resource on what fibre to use when looking for a special effect in a finished item.
CROCHET

Crocheting has always been fascinating to me. As a child I watched my grandmother with hook in hand busily creating crocheted fabric out of cotton thread. I learned to crochet as a young girl with the hope of caring on my grandmothers craft and this is the main reason that I chose crochet as my in depth study. Hand spinning my own yarn to use in my crocheted projects is very satisfying to me.

In searching for history of crochet, I found a study of crochet done by Ruthie Marks which is published on the Crochet Guild of America web site. In this study Marks gleaned her information mainly from Annie Potter who is known as a crochet expert and has written a book called 'A Living Mystery, the International Art and History of Crochet'. According to Annie Potter true crochet as we know it today was developed during the 16th century. It became known as crochet lace in France and chain lace in England. Potter also states that it 1916 Walter Edmund Roth visited descendants of the Guiana Indians where he found examples of true crochet.

In her study of crochet, Marks came across another writer/researcher, Lis Paludan of Denmark who limited her research of crochet to Europe. Lis' theory is that crochet originated in Arabia, spread to Tibet and to Spain from where it followed the Arab trade routes to other Mediterranean countries. Lis Paludan states that basically there is no convincing evidence as to how old the art of crochet is or where it came from and it is impossible to find evidence of crochet in Europe before 1800.

Marks also states that research suggests that crochet could have developed from Chinese needlework which is an ancient form of embroidery that is known in Turkey, India, Persia and North Africa and reached Europe in the 1700s. This work was known as tambour which was worked on a fabric which was stretched over a frame. In this work the
active thread was held under the fabric and was brought up through the fabric with a hooked needle, then inserted further down in the fabric where another loop was brought up and worked through the first loop forming a chain stitch. Tambour evolved at the end of the 18th century into what was known as crochet in the air by the French where the background fabric was discarded and the stitch was worked on its own.

In her study, Marks states that crochet was given a great boost by Mlle. Riego de la Branchardiere who was best known for taking old style needle and bobbin lace designs and turning them into crochet patterns for the use of millions of women and claims to have invented lace like crochet which is called Irish crochet today. Irish crochet was a lifesaver for the people of Ireland as it was used as a means to make money to help them survive during the potato famine. The Irish crochet was sold to buyers abroad who were unaware of the life conditions of the Irish. The earnings from the crochet helped the Irish save enough money to emigrate mainly to America and bring their crochet skills and newly developed patterns with them to start their new life.

Crocheting is a process of creating fabric by using yarn, thread, or other materials by using a crochet hook. There are many sizes of crochet hooks which can be made out of different materials such as aluminum, plastic, or wood.

Crocheting consists of pulling loops through other loops and also includes wrapping the material in use around the crochet hook. In most crochet there is usually only one active stitch at a time. There are a few exceptions to this such as Tunisian crochet, broomstick lace and cro-hooking. There is only one hook in use when crocheting, unlike knitting which uses two or more needles at a time when making a fabric.

The most used crochet hook has only one hooked end. When working with this hook the fabric is started by making a series of chains for the first
row. The work is turned and a stitch is brought up through each chain, working one at a time until you finish the row. Your work is then turned again to start the next row. Your fabric is developed by finishing each stitch as you go.

The cro-hook is a double ended crochet hook approximately 14 inches long. It is used to make a double sided crocheted fabric using two or more colours. The fabric is started by creating a basic row of chain stitches. Two steps are needed to create one row. With colour A pick up a loop in each chain stitch across keeping the picked up stitches on the cro-hook. Keep the cro-hook in the same position, change to colour B, but this time work the loops off the hook one at a time from left to right to complete the row. Now you turn the cro-hook around and use the hook at the other end. Still using colour B, draw up a loop in each stitch from right to left and keep the stitches on the cro-hook. Change to colour A and work the stitches off the row again going from left to right. This fabric has a woven look to it and is flexible, reversible and does not roll up on you.

There is also a crochet hook which has an elongated shaft with a stopper at one end to prevent the stitches from slipping off. This hook is used in Tunisian crochet which is also known as Afghan crochet. The term afghan is the Persian name for the Afghanistan people who are known worldwide for their textiles. These people raised karakul sheep and made blankets and shawls from the wool by knitting or crocheting. When creating fabric by using Tunisian crochet you are using elements from both knitting and crochet. It is done in a two step process. After the initial set up row of making a series of chain stitches, the first row is created by bringing up a loop from each chain stitch and keeping it on the elongated shaft working from right to left. At the end of the row you do not turn your work. The second step is done by consolidating the loops working from left to right by drawing a loop up and through each stitch and finishing the stitch before going on to the next stitch which is a lot like casting off in knitting.
At the end of the row there is only one stitch left on the hook. You proceed with the two step series of rows to create your crocheted fabric. Tunisian crochet, also known as afghan crochet, is always worked from the same side. Cro-hook crochet instructions are according to Rehfeldt (1999).

Crocheted fabric can be varied greatly by the fibre being used and also by the diameter of the yarn. The finished project or fabric is pre determined by the chosen hook size, choice of fibre and method it is spun.

When you use a smaller hook, it generally makes a tighter, stiffer and more rigid fabric. When you use a larger hook, your fabric will become looser, softer and more flexible.

When choosing a fibre to spin for crochet, consider that when you use a bast fibre such as flax or hemp, your crocheted fabric will be stiffer and more rigid. Bast fibres would be best for table linens where a firmer finish is desired.

When creating a fabric for both warmth and drape, fibres such as alpaca, angora, cashmere, camel, mohair, wool and yak would be good choices. To create a crocheted fabric with nice lustre, drape and strength bamboo, Lyocell and silk would work well.

If you are looking for a halo effect to your crocheted fabric try using either angora or mohair. These fibres make a nice cozy feeling fabric.

When you are planning a light fabric with good drape, spin your yarn finer. If a heavier, chunkier fabric is needed spin your yarn thicker or make a yarn that has more plies in it.

Your choice of spinning method of your yarn will also alter the finished crocheted fabric. A worsted spun yarn will give you a smooth finish and will wear well. A woolen spun yarn will give a fuzzier finish that may pill more but will be lighter and warmer than the worsted spun yarn.
MATERIALS AND METHODS:

In my search to make a good crocheted yarn I started by choosing sixteen different fibres for my study. I wanted a good variety of fibres so I would have a reference base that I could use when creating a crocheted fabric. My findings will help me with the selection of the type of fibre to use when applied to a particular pattern with a pre-determined end use.

The fibres that I chose to use for my study are: Alpaca, Angora, Bamboo, Camel, Cashmere, Corn, Cotton, Flax, Hemp, Lyocell, Mohair, Nylon, Ramie, Silk, Wool, and Yak. I chose protein, cellulose and man-made fibres to see what the difference would be in the handle, finishing effects and the ease of their use in a crocheted fabric.

The fibre preparation was determined by the type of fibre being used as well as the length of the fibre. I used some fibres that were prepared ready for spinning, and some that needed to be prepared by hand. I purchased the fibres from a variety of suppliers as well as some that were home grown by myself or were a part of my stash. I chose a selection of protein, cellulose and man-made fibres. My object in choosing fibres from these three categories was to see what the difference in hand would be between them as well as the ease or difficulty of working with the different fibres in a crocheted fabric. These particular fibres are ones that I felt I would most likely use in future crocheted fabrics.

With each fibre I spun two sample yarns. Sample one was spun with the singles spun in an 'z' direction and plied 's'. Sample two was spun with the singles spun in an 's' direction and plied 'z'. When spinning the two samples for each individual fibre, I used the same wheel ratio, drafting zone and number of treadles to make the yarns as similar as possible, other than the direction of the twist. I also used the same size of crochet hook for each of the samples which was a 2.50 millimeter hook.
Materials and Methods cont:

Alpaca: This fibre was from a Huacaya alpaca which was raised on my farm. The average staple length was about four inches showing good crimp and a medium fineness. I spun this fibre worsted as I wanted my finished yarn to be smooth and have some drape to it. The yarn was finished by soaking in warm water and hung to dry to avoid any felting.

Angora: I do not know what type of angora rabbit this was from as it had been in my fibre stash for a few years. The average staple length was two and a half inches with some guard hair present. I spun the angora semi-woolen as this method lets the twist run into the fibre while spinning. I wanted the yarn to have a soft halo. The yarn was plied firmly as it loosens up when worked with. This yarn was fullled by alternating between being plunged into hot soapy water, then cold water several times. It was rinsed well at the end then rolled into a towel to absorb excess moisture. It was given a good hard snap on the counter to open up the fibres and let them bloom. This method of finishing helps to prevent shedding and felting.

Bamboo: This bamboo was purchased from Legacy Studio in Cochran, Alberta. The average staple length was three and a half inches. It was a straight fibre with a medium lustre to it. I spun the bamboo worsted with a firm twist in the spinning and plying to hold the fibre together well. It was finished by washing in hot soapy water, rinsed, then hung to dry.

Camel: This baby camel down was in my stash for several years and was purchased from Wild Rose Fibres in Lousana, Alberta. The staple length is one and a half inches, very fine with good crimp to it. I spun the camel in a woolen method as I wanted the yarn to be light weight and warm. I washed the yarn in hot soapy water, alternating with a cold rinse several times. It was given a hard snap on the counter. I used this finishing method to help the yarn wear better and to stop felting.
Materials and Methods cont:

Cashmere: This cashmere came from my fibre stash and the supplier or farm is unknown. The staple length is under one inch and has good crimp to it as well as being very fine. I dehaired the cashmere by hand then spun it woolen as I wanted the finished yarn to be light weight and warm. The yarn was finished by plunging it into hot soapy water, alternating with a cold rinse several times. Excess moisture was squeezed out, the yarn was given a good snap on the counter and laid flat to dry. This method was used to help stop felting and to give the yarn strength.

Corn Silk: This fibre was purchased from Wild Rose Fibres in Lousana, Alberta. The staple length is about three inches long, straight and has lustre. I spun this fibre worsted to help keep the slick fibres together and make a more stable yarn. I spun the fibre from the fold as it made it easier to draft out and keep the diameter of the yarn fairly even. I finished the yarn by washing it gently in hot water, then hung it to dry.

Cotton: This fibre was purchased from Pam's Woolly Shoppe in Stony Plain, Alberta. The staple length of this cotton was one inch. This cotton was purchased as a prepared roving and spun up easily by using the woolen long draw. Woolen spinning lets the twist go into the fibre to hold the short staples together. To finish the yarn I simmered it in hot water with a little laundry detergent for about 30 minutes. When cool, the cotton was rinsed, then hung to dry. Cotton has to be finished this way in order to get the oils and waxes out of it.

Flax: This super fine flax top was purchased from Legacy Studio in Cochrane, Alberta. The staple length was around eighteen inches. The fibre was fine, smooth and had good lustre for a bast fibre. It was wet spun in the worsted style. I had to keep my hands far apart because of the length of the staple. I tried to spin it fine so that the finished yarn would be more flexible for crocheting. It was finished by simmering in hot water for thirty minutes with a little laundry detergent, then rinsed well. This was done twice. This finishing method takes the oils out.
Materials and Methods cont:

Hemp: I purchased this hemp from Legacy Studio in Cochrane, Alberta. The staple length was between three to four inches. It was wet spun in the worsted style. I found the hemp difficult to spin because of the varying lengths of the fibre and it had a grabby feel while spinning. I simmered it in hot soapy water for 30 minutes to take the oils out, then rinsed it well. The rinse water was fairly clear so did not process it again.

Lyocell (Tencel): I purchased this fibre from Legacy Studio in Cochrane, Alberta. The staple length was five inches. This was a straight fibre with lots of lustre to it. I spun the lyocell in a worsted method with good twist in the singles and plying to keep the slick fibre together well. I finished the yarn by washing gently in hot water, then hung it to dry.

Mohair: I purchased this fibre from Legacy Studio in Cochrane, Alberta. It was adult mohair with a staple length of four and a half inches. This fibre had fairly good lustre but had some prickle to it. I spun it worsted and tried to keep it fairly fine as it is a warm fibre and I didn’t want it to be too heavy in the finished sample. I finished the yarn in hot water and hung it to dry.

Nylon: This nylon is also known as fake cashmere. I purchased this fibre from Paradise Fibres in Spokane, Washington. The staple length is four inches long and has an amazingly soft squishy feel to it. The fibre shows lots of crimp in it but has a flat, soft appearance. I spun this fibre worsted to add extra strength to it as it will probably be used in hosiery. This yarn was washed in hot soapy water, rinsed, then hung to dry.
Materials and Methods cont:

Ramie: I purchased this fibre from Legacy Studio in Cochrane, Alberta. It has a staple length of eight inches with some lustre. It looks like it should feel soft, but has a bit of a gritty feel to it. It was purchased as a prepared top and was spun worsted. I tried to spin this fibre finer to give it more flexibility in the finished sample. I finished this yarn by gently washing in hot soapy water, rinsed, blotted dry, then snapped on the counter top.

Silk: This tussah silk was purchased from Celeigh Wool in Millet, Alberta. The staple length of the silk is four inches. It was purchased as a prepared sliver. The silk has a nice lustre to it as well as being soft, but has a slight coarse feeling to it. I spun it in a worsted style to enhance the lustre and add extra strength to the yarn. The yarn was finished by washing gently in warm water then laid flat to dry.

Wool: This Polwarth wool fibre was purchased from Celeigh Wool in Millet, Alberta. The staple length of this wool is five inches. It has a soft hand to it with good crimp as well. The fibre shows some lustre to it. Because of its length, I spun it in a worsted style to create a smooth strong yarn that will wear well. I washed it in hot water to remove any remaining oils, then laid it flat to dry.

Yak: I purchased this yak down from Ancient Arts Fibre Crafts in Alberta. The staple length of this yak down is between one half to one inch. This fibre has a nice hand with lots of crimp. Because of the short staple length, this fibre was spun using the woolen long draw method. This fibre made up into a warm, light weight yarn. As with short stapled protein fibres, I finished it by fulling it. It was put into hot soapy water, alternated with a cool rinse and repeated several times, squeezed out excess water, then was given a good hard snap on the counter to strengthen the yarn. It was then laid flat to dry.
RESULTS:

1) Alpaca
   Sample 1: (zz,s) The yarn loosened while crocheting and fabric became softer. Hook did not move smoothly through stitches but caught up on separating plies.
   Sample 2: (ss,z) Plies stayed together while crocheting.
2) Angora
   Sample 1: (zz,s) Plies loosened a bit and fabric became softer.
   Sample 2: (ss,z) Plies stayed together making a firmer cloth.
3) Bamboo
   Sample 1: (zz,s) There was a slight loosening of the plies.
   Sample 2: (ss,z) Plies stayed together well.
4) Camel
   Sample 1: (zz,s) Plies untwisting as fabric was crocheted.
   Sample 2: (ss,z) Plies stayed together well.
5) Cashmere
   Sample 1: (zz,s) There was a slight undoing of the plies while worked.
   Sample 2: (ss,z) There was no untwisting of the plies.
6) Corn
   Sample 1: (zz,s) Plies were separating with the yarn getting softer.
   Sample 2: (ss,z) Plies seemed to stay together well.
7) Cotton
   Sample 1: (zz,s) Plies separated a little. Fibre was pliant.
   Sample 2: (ss,z) Plies stayed together.
8) Flax
   Sample 1: (zz,s) Plies separated a lot. Yarn was hard to work with.
   Sample 2: (ss,z) Plies stayed together with this yarn making a firm fabric.
9) Hemp
   Sample 1: (zz,s) Plies were separating a lot making it hard to crochet.
   Sample 2: (ss,z) Plies stayed together well resulting in a very firm fabric.
10) Lyocell
   Sample 1: (zz,s) Slight loosening of plies making a softer fabric.
   Sample 2: (ss,z) Plies did not untwist making a firmer fabric.

11) Mohair
   Sample 1: (zz,s) A lot of separation with plies, very frustrating.
   Sample 2: (ss,z) Stiff yarn to work with, with some separation.

12) Nylon
   Sample 1: (zz,s) Very slight loosening of plies.
   Sample 2: (ss,z) Firm twist to yarn with no loosening of plies.

13) Ramie
   Sample 1: (zz,s) Plies separating quite a bit making it hard to work with.
   Sample 2: (ss,z) Plies stayed together much better.

14) Silk
   Sample 1: (zz,s) There was a slight separation of the plies.
   Sample 2: (ss,z) Plies stayed together having a firmer feel to fabric.

15) Wool
   Sample 1: (zz,s) Plies separated somewhat giving a softer look to fabric.
   Sample 2: (ss,z) Plies stayed together giving a more crisp look to fabric.

16) Yak
   Sample 1: (zz,s) Slight loosening of plies.
   Sample 2: (ss,z) Firmer looking fabric.

The overall results that I found were that the sample 1 yarn that was spun 'z' and plied 's' always showed a loosening and separation in the plies. The fabric became softer, duller and more pliant as it was crocheted.

The sample 2 yarn that was spun 's' and plied 'z' seemed to stay together well and didn't show any separation between the plies. It is a firmer fabric showing more lustre in the finished product. This yarn had a more distinct stitch definition than sample 1.
Results cont:

In most of the sample 1 yarns that were spun 'z' and plied 's' there was evidence of the plies separating while being worked. This is a problem because it makes the finished crocheted fabric look a little sloppier and also makes the yarn harder to work with because it gets caught up on the crochet hook. While crocheting you want your work to progress smoothly and not to have to stop and keep readjusting the stitches. In particular yarns that showed the greatest amount of stitch separation such as flax, hemp and ramie I would definitely choose to spin them 's' and ply 'z' for a crocheted fabric that looks better and is easier to work with.

Analysis of fibres

Alpaca:
Sample 1 has a softer look and handle.
Sample 2 has better stitch definition and a firmer look to crocheted fabric.
I would spin the alpaca finer for a lighter fabric and a more delicate look.
Alpaca would work well for crocheted shawls, vests and hats.

Angora:
Sample 1 and 2 look and feel much the same.
I would spin the angora finer for a lighter weight fabric.
Angora would make nice crocheted accessories such as hats and scarves.

Bamboo:
Sample 1 looks heavier and feels much thicker than sample 2.
Both samples show good lustre.
I would spin the bamboo much finer.
Bamboo would work well for crocheted shawls and scarves.

Camel:
Sample 1 has a softer feel to the fabric but looks good.
Sample 2 has a firmer feel and a crisper looking stitch.
I would spin the camel finer for a more delicate looking fabric.
Camel would make cozy crocheted scarves, hats and shawls.
Results cont:

Cashmere:
Sample 1 and 2 both have the same soft feel to the fabric. The samples show good visual appeal. I would spin the cashmere a little finer as well to make a more delicate fabric. Cashmere would make a lovely crocheted shawl or wrap.

Corn Silk:
Both samples show good definition of stitch as well as a crisp look. Sample 2 is a more dense fabric than sample one. I would try to spin the corn silk quite a bit finer as it would work really well for a crocheted shawl, wrap or scarf.

Cotton:
Sample 1 has a softer look than sample 2, but both samples have good stitch definition. I would spin a little lighter weight if possible. This cotton would work well for dish cloths and hand towels. It would also work well for light weight tops and hats.

Flax:
Both samples made a firm and crisp fabric. There is a good sheen to the fabric as well. Sample 2 has a more crisp stitch definition. I would try for a finer yarn or perhaps use a singles yarn in my crocheted fabric. Crocheted flax would work well for table linens.

Hemp:
Both samples made a crisp fabric with good visual appeal. Sample 2 worked up into a heavier fabric than sample 1. I would spin a finer yarn and also try crocheting with a singles yarn. Hemp would work for table linens and with a much finer yarn could be used for some clothing.

Lyocell:
Both samples made a wonderful fabric with great sheen and stitch definition. Sample 2 worked up a little heavier than sample 1. Lyocell would make really nice shawls, wraps and scarves.
Results cont:

Mohair:
Both samples made a fairly firm fabric. Stitch definition isn't as good because the mohair gives a bit of a halo effect to the yarn.
I would spin this fibre a lot finer so that it wouldn't be so stiff.
I would use the mohair yarn for some outer wear garments.

Nylon:
Sample 1 is a fairly firm fabric but has a softer look to it.
Sample 2 is a fairly firm fabric and has good stitch definition.
I would spin this fibre finer for a lighter weight fabric.
I would use this nylon yarn for socks.

Ramie:
Both samples made a medium firm fabric with a nice sheen.
Sample 2 has a little better stitch definition.
I would spin this yarn finer and also try using it as a singles yarn.
I would use ramie for table linens and possibly a wrap.

Silk:
Both samples made a fairly pliable fabric with good stitch definition.
I would spin the silk finer to give it a lighter look.
Silk would work well for scarves, shawls, wraps, and vests.

Wool:
Sample 1 is a softer lighter looking fabric with good stitch definition.
Sample 2 is a bit firmer and heavier looking.
I would spin this yarn a little finer next time for a more delicate look.
This wool yarn could be used for most clothing items next to the skin.

Yak:
Both samples made a nice yarn with a good hand. Sample 2 has a little more stitch definition.
I would spin this yarn finer as well for a lighter fabric.
This yak yarn would work well for scarves, shawls, hats and vests.
1) Type/Style: Hua.
2) Source: Farm raised by Almar Alpacas'.
3) Preparation Method: 100% alpaca roving prepared by mill.
4) Spinning Method: 2 ply yarn spun worsted.
   Sample 1: Spun 'z', plied 's'
5) Tpi 4.5/ Wpi 12/ angle 30/ 4 yards/ 1.78 grams/ Worsted Count: 3's
   Finishing Method: Washed yarn in warm water, then hung to dry.
6) Crocheted Sample: Used size 2.50 mm hook.
   Crocheted motif was washed gently in warm water, then laid flat to dry.
1) Type/Style: Huacaya Alpaca
2) Source: Farm raised by 'Almar Alpacas'.
3) Preparation Method: 100% alpaca roving prepared by mill.
4) Spinning Method: 2 ply yarn spun worsted.
   Sample 2: Spun 's', plied 'z'
5) Tpi 5/ Wpi 12/ angle 30/ 4 yards/ 1.87 grams/ Worsted Count: 3's
   Finishing Method: Washed yarn in warm water, then hung to dry.
6) Crocheted Sample: Used size 2.50 mm hook.
   Crocheted motif was washed gently in warm water, then laid flat to dry.
4) Spinning Method: 2 ply yarn was spun semi-woolen.
   Sample 1: Spun 'z', plied 's'
5) Tpi 4/ Wpi 12/ angle 21/ 4 yards/ 1.64 grams/ Woolen Count: 7's
   Finishing Method: Washed yarn in hot soapy water alternated with cold rinse several times, given a hard snap on counter, then laid flat to dry.
6) Crocheted Sample: Used size 2.50 mm hook.
   Crocheted motif was washed gently in warm water, then laid flat to dry.
1) Type/Style: Angora
2) Source: Used from my fibre stash.
3) Preparation Method: 100% Angora hand carded into rolags.
4) Spinning Method: 2 ply yarn was spun semi-woolen.
   Sample 2: Spun 's', plied 'z'
5) Tpi 4.5/ Wpi 12/ angle 21/ 4 yards/ 1.56 grams/ Woolen Count: 7's
   Finishing Method: Washed yarn in hot soapy water alternated with cold rinse several times, given a hard snap on counter, then laid flat to dry.
6) Crocheted Sample: Used size 2.50 mm hook.
   Crocheted motif was washed gently in warm water, then laid flat to dry.
3) Preparation Method: 100% Bamboo purchased as a prepared Top.
4) Spinning Method: 2 ply yarn was spun worsted.
   Sample 1: Spun 'z', plied 's'.
5) Tpi 6/ Wpi 14/ angle 30/ 4 yards/ 2.45 grams/ Silk Count: 1's
   Finishing Method: Washed yarn in hot soapy water, rinsed, hung to dry.
6) Crocheted Sample: Used size 2.50 mm hook.
   Crocheted motif was washed gently in warm water, then laid flat to dry.
1) Description:

2) Source: Acquired from Cochran, Alberta.

3) Preparation Method: 100% Bamboo purchased as a prepared Top.

4) Spinning Method: 2 ply yarn was spun worsted.
   Sample 2: Spun 's', plied 'z'

5) Tpi 7/ Wpi 14/ angle 30/ 4 yards/ 2.10 grams/ Silk Count: 2's
   Finishing Method: Washed yarn in hot soapy water, rinsed, hung to dry.

6) Crocheted Sample: Used size 2.50 mm hook.
   Crocheted motif was washed gently in warm water, then laid flat to dry.
1) Type/Style: Baby Camel Down
2) Source: 'Wild Rose Fibres' in Lousana, Alberta.
3) Preparation Method: 100 % Camel purchased as prepared Top.
4) Spinning Method: 2 ply yarn was spun woollen.
   Sample 1: Spun 'z', plied 's'
5) Tpi 5/ Wpi 14/ angle 30/ 4 yards/1.49 grams/ Woolen Count: 8's
   Finishing Method: Washed yarn in hot soapy water alternated with cold rinse several times, given a hard snap on counter, then laid flat to dry.
6) Crocheted Sample: Used size 2.50 mm hook.
   Crocheted motif was washed gently in warm water, then laid flat to dry.
1) Type/Style: Baby Camel Brown
2) Source: 'Wild Rose Fibres' in Lousana, Alberta.
3) Preparation Method: 100% Camel purchased as prepared Top.
4) Spinning Method: 2 ply yarn was spun woolen.
   Sample 2 : Spun 's', plied 'z'
5) Tpi 5.5/ Wpi 14/ angle 30/ 4 yards/ 1.63 grams/ Woolen Count: 7's
   Finishing Method: Washed yarn in hot soapy water alternated with cold
   rinse several times, given a hard snap on counter, then laid flat to dry.
6) Crocheted Sample: Used size 2.50 mm hook.
   Crocheted motif was washed gently in warm water, then laid flat to dry.
1) Type, Style: 100% Cashmere
2) Source: From my stash. Supplier/Farm is unknown.
4) Spinning Method: 2 ply yarn was spun woolen.
   Sample 1 : Spun 'z', plied 's'
5) Tpi 6/ Wpi 14/ angle 33/ 4 yards/ 1.28 grams/ Woolen Count: 9's
   Finishing Method: Washed yarn in hot soapy water alternated with cold rinse several times, given a hard snap on counter, then laid flat to dry.
6) Crocheted Sample: Used size 2.50 mm hook.
   Crocheted motif was washed gently in warm water, then laid flat to dry.
1) Type/Style: 100% Cashmere

2) Source: From my stash. Supplier/Farm is unknown.


4) Spinning Method: 2 ply yarn was spun woolen.
   Sample 2: Spun 's', plied 'z'

5) Tpi 7/ Wpi 14/ angle 33/ 4 yards/ 1.08 grams/ Woolen Count: 11's
   Finishing Method: Washed yarn in hot soapy water alternated with cold rinse several times, given a hard snap on counter, then laid flat to dry.

6) Crocheted Sample: Used size 2.50 mm hook.
   Crocheted motif was washed gently in warm water, then laid flat to dry.
1) Style: Prepared Top
2) Source: 'Wild Rose Fibres', Lousana, Alberta.
3) Preparation Method: 100% Corn purchased as a prepared Top.
4) Spinning Method: 2 ply yarn was spun worsted from the fold.
   Sample 1: Spun 'z', plied 's'
5) Tpi 5.5/Wpi 16/ angle 30/ 4 yards/ 1.32 grams/ Silk Count: 3's
   Finishing Method: Washed gently in hot water, then hung to dry.
6) Crocheted Sample: Used size 2.50 mm hook.
   Crocheted motif was washed gently in warm water, then laid flat to dry.
1) Type/Style: Prepared Top
2) Source: 'Wild Rose' Farm, Taber, Alberta.
3) Preparation Method: 100% Corn purchased as a prepared Top.
4) Spinning Method: 2 ply yarn was spun worsted from the fold.
   Sample 2: Spun 's', plied 'z'
5) Tpi 6.5/ Wpi 16/ angle 30/ 4 yards/ 1.38 grams/ Silk Count: 3's
   Finishing Method: Washed gently in hot water, then hung to dry.
6) Crocheted Sample: Used size 2.50 mm hook.
   Crocheted motif was washed gently in warm water, then laid flat to dry.
COTTON

2) Source: From 'Parl's Yolley Shoppe' in Stony Plain, Alberta.
3) Preparation Method: 100% cotton purchased as a prepared roving.
4) Spinning Method: 2 ply yarn was spun woolen long draw.
   Sample 1: Spun 'z', plied 's'
5) Tpi 6.5/ Wpi 16/ angle 27/ 4 yards/ .98 grams/ Cotton Count: 4's
   Finishing Method: Simmered yarn in hot water on stove for 30 minutes with a little laundry detergent. Let cool, then rinsed. Hung to dry.
6) Crocheted Sample: Used size 2.50 mm hook.
   Crocheted motif was washed gently in warm water, then laid flat to dry.
COTTON

1) Type/Style: Pima Cotton
2) Source: From 'Pam's Woolly Shoppe' in Stony Plain, Alberta.
3) Preparation Method: 100% cotton purchased as a prepared roving.
4) Spinning Method: 2 ply yarn was spun woolen long draw.
   Sample 2: Spun 's', plied 'z'
5) Tpi 6/ Wpi 16/ angle 27/ 4 yards/ 1.07 grams/ Cotton Count: 4's
   Finishing Method: Simmered yarn in hot water on stove for 30 minutes with a little laundry detergent. Let cool, then rinsed. Hung to dry.
6) Crocheted Sample: Used size 2.50 mm hook.
   Crocheted motif was washed gently in warm water, then laid flat to dry.
1) Type Style: Super Fine Top
2) Source: 'Louet North America' supplied by 'Legacy Studio' in Cochrane.
3) Preparation Method: 100% Flax purchased as a prepared Top.
4) Spinning Method: 2 ply yarn was wet spun, worsted style.
   Sample 1: Spun 'z', plied 's'
5) Tpi 4.5/ Wpi 16/ angle 27/ 4 yards/ 1.49 grams/ Linen Count: 8 lea
   Finishing Method: Simmered yarn in hot water on stove for 30 minutes
   with a little laundry detergent and washing soda, then rinsed. Simmered
   another 30 minutes, rinsed, then hung to dry.
6) Crocheted Sample: Used size 2.50mm hook.
   Crocheted motif was washed gently in warm water, then laid flat to dry.
1) Type/Style: Super Fine Top
2) Source: 'Louet North America' supplied by 'Legacy Studio' in Cochrane.
3) Preparation Method: 100 % Flax purchased as a prepared Top.
4) Spinning Method: 2 ply yarn was wet spun, worsted style.
   Sample 2: Spun 's', plied 'z'
5) Tpi 4.5/ Wpi 16/ angle 21/ 4 yards/ 1.51 grams/ Linen Count: 8 lea
   Finishing Method: Simmered yarn in hot water on stove for 30 minutes with a little laundry detergent and washing soda, then rinsed. Simmered another 30 minutes, rinsed, then hung to dry.
6) Crocheted Sample: Used size 2.50 mm hook.
   Crocheted motif was washed gently in warm water, then laid flat to dry.
Type/Style: Hemp Top

2) Source: 'Legacy Studio' in Cochrane, Alberta.
3) Preparation Method: 100% Hemp purchased as a prepared Top.
4) Spinning Method: 2 ply yarn was spun wet, worsted style.
   Sample 1: Spun 'z', plied 's'
5) Tpi 3/ Wpi 14/ angle 21/ 4 yards/ 1.54 grams/ Linen Count: 7 lea
   Finishing Method: Simmered yarn in hot soapy water for 30 minutes, then rinsed and hung to dry.
6) Crocheted Sample: Used size 2.50 mm hook.
   Crocheted motif was washed gently in warm water, then laid flat to dry.
Style: Hemp Top

Source: 'Legacy Studio' in Cochrane, Alberta.

3) Preparation Method: 100% Hemp purchased as a prepared Top.
4) Spinning Method: 2 ply yarn was spun wet, worsted style.
   Sample 2: Spun 's', plied 'z'
5) Tpi 3.5/ Wpi 16/ angle 21/ 4 yards/ 1.65 grams/ Linen Count: 7 lea
   Finishing Method: Simmered yarn in hot soapy water for 30 minutes,
   then rinsed and hung to dry.
6) Crocheted Sample: Used size 2.50 mm hook.
   Crocheted motif was washed gently in warm water, then laid flat to dry.
LYOCELL (TENCEL)

1) Type/Style: prepared
2) Source: 'Legacy Studio', Cochrane, Alberta.
3) Preparation Method: 100% Lyocell purchased as a prepared Top.
4) Spinning Method: 2 ply yarn was spun worsted from the fold.
   Sample 1: Spun 'z', plied 's'
5) Tpi 6.5/ Wpi 20/ angle 30/ 4 yards/ 1.15 grams/ Silk Count: 3's
   Finishing Method: Washed gently in hot water, then hung to dry.
6) Crocheted Sample: Used size 2.50 mm hook.
   Crocheted motif was washed gently in warm water, then laid flat to dry.
1) Type/Style: Prepared Top
2) Source: 'Legar· Studio', Cochrane, Alberta.
3) Preparation Method: 100% Lyocell purchased as a prepared Top.
4) Spinning Method: 2 ply yarn was spun worsted from the fold.
   Sample 2 : Spun 's', plied 'z'
5) Tpi 6.5/ Wpi 20/ angle 30/ 4 yards/ 1.42 grams/ Silk Count: 3's
   Finishing Method: Washed gently in hot water, then hung to dry.
6) Crocheted Sample: Used size 2.50 mm hook.
   Crocheted motif was washed gently in warm water, then laid flat to dry.
MOHAIR

2) Source: 'Legacy Studio', Cochrane, Alberta.
3) Preparation Method: 100% Mohair purchased as prepared roving.
4) Spinning Method: 2 ply yarn was spun worsted.
   Sample 1: Spun 'z', plied 's'
5) Tpi 3/ Wpi 12/ angle 21/ 4 yards/ 2.25 grams/ Worsted Count: 2's
   Finishing Method: Washed yarn in hot water, then hung to dry.
6) Crocheted Sample: Used size 2.50 mm hook.
   Crocheted motif was washed gently in warm water, then laid flat to dry.
1) Type/Style: Adult Mohair

2) Source: 'Legacy Studio', Cochrane, Alberta.

3) Preparation Method: 100% Mohair purchased as prepared roving.

4) Spinning Method: 2 ply yarn was spun worsted.
   Sample 2: Spun 's', plied 'z'

5) Tpi 3.5/ Wpi 12/ angle 21/ 4 yards/ 2.79 grams/ Worsted Count: 2's
   Finishing Method: Washed yarn in hot water, then hung to dry.

6) Crocheted Sample: Used size 2.50 mm hook.
   Crocheted motif was washed gently in warm water, then laid flat to dry.
1) Preparation Method: 100% Nylon purchased as a prepared roving.

2) Spinning Method: 2 ply yarn was spun worsted.
   - Sample 1: Spun 'z', plied 's'

3) Tpi 6.5/ Wpi 17/ angle 27/ 4 yards/ 1.10 grams/ Silk Count: 3's
   - Finishing Method: Washed yarn in hot soapy water, rinsed, hung to dry.

4) Crocheted Sample: Used size 2.50 mm hook.
   - Crocheted motif was washed gently in warm water, then laid flat to dry.
1. Type/Style: Nylon (Ivory or White Shimmer)
3. Preparation Method: 100% Nylon purchased as a prepared roving.
4. Spinning Method: 2 ply yarn was spun worsted.
   Sample 2: Spun 's', plied 'z'
5. Tpi 8/ Wpi 16/ angle 27/ 4 yards/ 1.11 grams/ Silk Count: 3's
   Finishing Method: Washed yarn in hot soapy water, rinsed, hung to dry.
6. Crocheted Sample: Used size 2.50 mm hook.
   Crocheted motif was washed gently in warm water, then laid flat to dry.
1) Type/Style: Ramit
2) Source: 'Legacy St 1' Cochrane, Alberta.
3) Preparation Method: 100% Ramie purchased as a prepared Top.
4) Spinning Method: 2 ply yarn was spun worsted.
   Sample 1: Spun 'z', plied 's'
5) Tpi 3.5/ Wpi 18/ angle 21/ 4 yards/ 1.47 grams/ Linen Count: 8 lea
   Finishing Method: Gently washed in hot soapy water, rinsed, blotted dry, then snapped skein on counter top.
6) Crocheted Sample: Used size 2.50 mm hook.
   Crocheted motif was washed gently in warm water, then laid flat to dry.
1) Type/Style: Ramie Top
2) Source: 'Legacy Studio' in Cochrane, Alberta.
3) Preparation Method: 100% Ramie purchased as a prepared Top.
4) Spinning Method: 2 ply yarn was spun worsted.
   Sample 2: Spun 's', plied 'z'
5) Tpi 4/ Wpi 16/ angle 21/ 4 yards/ 1.38 grams/ Linen Count: 8 lea
   Finishing Method: Gently washed in hot soapy water, rinsed, blotted dry, then snapped skein on counter top.
6) Crocheted Sample: Used size 2.50 mm hook.
   Crocheted motif was washed gently in warm water, then laid flat to dry.
4) Spinning Method: 2 ply yarn was spun worsted from the fold.
   Sample 1: Spun 'z', plied 's'

5) Tpi 7/ Wpi 16/ angle 27/ 4 yards/ 1.23 grams/ Silk Count: 3's
   Finishing Method: Washed gently in hot water, then hung to dry.

6) Crocheted Sample: Used size 2.50 mm hook.
   Crocheted motif was washed gently in warm water, then laid flat to dry.
SILK

1) Tuscan, Raleigh Wool, 100% asphaltic, Alberta.

2) Preparation Method: 100% silk purchased as a prepared sliver.

3) Preparation Method: 2 ply yarn was spun worsted from the fold.

Sample was spun 's', plied 'z'

5) Tpi 6.5/ Wpi 17/ angle 27/ 4 yards/ 1.04 grams/ Silk Count: 4's

   Finishing Method: Washed gently in hot water, then hung to dry.

6) Crocheted Sample: Used size 2.50 mm hook.

   Crocheted motif was washed gently in warm water, then laid flat to dry.
3) Preparation Method: 100% Wool purchased as prepared roving.

4) Spinning Method: 2 ply yarn was spun worsted.
   Sample 1: Spun 'z', plied 's'

5) Tpi 4.5/ Wpi 13/ angle 27/ 4 yards/ 1.76 grams/ Worsted Count: 3's
   Finishing Method: Washed yarn in hot water, then hung to dry.

6) Crocheted Sample: Used size 2.50 mm hook.
   Crocheted motif was washed gently in warm water, then laid flat to dry.
WOOL

1) Sample: Polwarth Wool
3) Preparation Method: 100% Wool purchased as prepared roving.
4) Spinning Method: 2 ply yarn was spun worsted.
   Sample 2: Spun 's', plied 'z'
5) Tpi 4.5/ Wpi 11/ angle 27/ 4 yards/ 1.54 grams/ Worsted Count: 4's
   Finishing Method: Washed yarn in hot water, then hung to dry.
6) Crocheted Sample: Used size 3.25 mm hook.
   Crocheted motif was washed gently in warm water, then laid flat to dry.
YAK

100% Yak carded into rolags.

4) Spinning Method: 2 ply yarn was spun woolen long draw.
   Sample 1: Spun 'z', plied 's'

5) Tpi 5/ Wpi 12/ angle 21/ 4 yards/ 1.61 grams/ Woolen Count: 7's
   Finishing Method: Washed yarn in hot soapy water alternated with cold
   rinse several times, given a hard snap on counter, then laid flat to dry.

6) Crocheted Sample: Used size 2.50 mm hook.
   Crocheted motif was washed gently in warm water, then laid flat to dry.
2) Source: 'Ancient Fibre Crafts', Alberta.
3) Preparation Method: 100% Yak carded into rolags.
4) Spinning Method: 2 ply yarn was spun woolen long draw.
   - Sample 2: Spun 's', plied 'z'
5) Tpi 5.5/ Wpi 12/ angle 21/ 4 yards/ 1.65 grams/ Woolen Count: 7's
   - Finishing Method: Washed yarn in hot soapy water alternated with cold rinse several times, given a hard snap on counter, then laid flat to dry.
6) Crocheted Sample: Used size 2.50 mm hook.
   - Crocheted motif was washed gently in warm water, then laid flat to dry.
CONCLUSION:

As a result of my studies on spinning yarn for crochet I have discovered several results that can be applied when creating a crocheted fabric.

I found that sample 1 which was spun zz,s most often created a softer duller looking fabric due to the separation in the plies as it was being crocheted. The separation of the plies also made the yarn harder to work with. Sample 2 which was spun ss,z usually created a firmer fabric with better stitch definition. If you wish to make a firm crocheted fabric that will wear well, show its potential lustre and be the easiest to work with, then spin the yarn 's' and ply it 'z'. The type of fibre being used will of course be a major factor in the end results of your crocheted material. I also found that my hands and fingers were not as co-ordinated while spinning in the 's' direction, so the singles were sometimes thicker than when I had spun them in the opposite direction. Maybe in time I could adjust to this, but even at the end of working with the sixteen different fibres, I was still having difficulty in manipulating the 's' spun singles.

When creating a crocheted fabric that you want to have a softer, maybe duller look and that would be more pliant, spin the singles 'z' and ply 's'. The type of fibre that you use would be a major factor for this fabric as well. You would have to take into account the probable separation that would happen with the plies and if that would interfere with what you want your end results to be.

Major factors to take into account would be the type of fibre you are using, as well as whether you would be spinning worsted or woolen. The finishing of the fibre will also make a difference in the end result of the crocheted fabric.

The type of fibre being used creates different effects in the finished fabric. The short protein fibres such as angora, cashmere, yak and camel which were woolen spun created soft, light weight fabrics often with a halo effect. The longer protein fibres such as alpaca and wool that were spun
Conclusion cont:
worsted created a smoother, stronger fibre which was more apt to display sheen but were heavier than the woolen fibres. The protein fibre Mohair was spun worsted because of its length, displayed a halo effect to the fabric but had less stitch definition and had more of a prickle factor to it. Silk being another protein fibre with good length was spun worsted with good twist which showed off its high lustre, strength and smoothness. It made a very drape able fabric as well. The long cellulose fibres of flax, hemp and ramie were spun worsted and wet spun showing the lustre to the fabric. These fibres were very crisp and strong. Cotton is a cellulose fibre as well, but due to its very short staple length it was spun woolen creating a soft fabric but having good stitch definition. The man-made fibres such as bamboo, corn silk and Lyocell were spun with a higher twist to keep the yarn together which helped to show off their great lustre and good stitch definition. Nylon is another man-made fibre which was spun worsted due to its length. It created a softer and duller fabric but the yarn had good elasticity and strength.

The finishing techniques to the fibres will create different effects in the crocheted fabrics. When the yarn is fulled it gives it strength and creates a soft fabric often with a halo to it. The cellulose yarns are simmered in hot water several times to take out the oils. When the crocheted fabric is made it is very crisp and can be pressed bringing out the sheen in the fibre.

Another conclusion that I came to in my study was that in order to make a fine light weight crocheted fabric, you have to spin your yarn finer that you think. When you are crocheting, the yarn is wrapped around the hook sometimes several times creating bulk in the stitch, so the finer you spin it the better unless you are trying for a bulky weight fabric. Crocheting makes a much heavier fabric than knitting due to the wrapping of the yarn.
Conclusion cont:

Some recommendations that I have for further study of crocheted fabrics would be to spin most fibres finer. I would also suggest spinning the bast fibres of flax, hemp and ramie as singles to create your crocheted fabric. My recommendations when making a crocheted fabric would be to spin samples of the fibre you wish to use both 's' and 'z'. Finish the spun sample yarns and crochet up a swatch. Wet finish the crocheted swatches and keep them as a record for future use. Your samples will help you to choose the most desirable crocheted fabric to be used for your project with a pre determined end result.
BIBLIOGRAPHY:

BOOKS


Web Sites


