



**T - SHIRT
YARNS**

KAREN MADIGAN

How to recycle t-shirts etc.

T - S H I R T Y A R N S

Karen Madigan

A booklet on how to recycle stretch fabrics into yarns for hand and machine knitting, weaving, crochet and other yarn crafts.

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INTRODUCTION

This booklet is a brief introduction to the many possibilities of yarns made from stretch fabrics. The main development and initial research of this craft was done by Catherine Mick of Canada. I have defined the stretch fabrics and their resulting yarns into various categories and used my own experience and ideas to enlarge the subject.

This is a 'developing craft', so it is wise to keep an open mind in relation to what can and can't be done. Any rules are not 'fixed' and often wonderful yarns are created by bending or doing away with the rules!

Most of the yarns described are particularly suited to making garments of clothing, although I have included information for heavier yarns suited to mats, rugs, etc.

I have named these yarns 'T-shirt yarns', mainly because T-shirts are a favourite to recycle. I now encourage you to 'have a go' at creating and designing your own beautiful yarns by recycling.

WHY RECYCLE?

These yarns are often referred to as 'rag yarns' however, they don't look or function as rags. Something old or unwanted becomes new and loved in this case. Recycling is becoming more and more relevant in today's society, in our search for economy and minimal wastage of our resources.

Stretch fabric garments often only wear well for one season, but this booklet will describe how to recycle those garments into others that will last years.

Another benefit of this craft is the pleasure it will give you in creating expensive looking yarns, for next to nothing.

TYPES OF FABRICS TO USE

A lot of different types of stretch knit fabrics can be used in this craft, including old machine knitted jumpers and cardigans. Listed overleaf are several common types of fabrics for use and the type of yarn that is produced from them.

TYPES OF FABRICS

SINGLE KNITS:	This fabric looks like stocking stitch on the right side of the fabric and garter stitch on the wrong side.
DOUBLE KNITS:	Both wrong and right sides of the fabric look like stocking stitch.
RIB KNITS:	Often purchased in tubular form. Looks like rib stitch on both sides.
STRETCH TERRY:	This looks like stocking stitch on the wrong side and towelling on the right side of the fabric.
VELOUR:	This knit has a velvet appearance on the right side of the fabric.
SWEATER KNITS:	These can resemble hand knits, but are commercially knitted.
STRETCH LACE:	A lacy fabric that stretches.

STYLES OF YARNS:

SINGLE KNITS produce a textured yarn, often with a rolled appearance. Knits with a cotton content make the best yarns.

DOUBLE KNITS produce a nice textured yarn.

RIB KNITS produce a boucle style of yarn.

STRETCH TERRY produces a soft summer weight yarn with a loopy look.

VELOUR produces a chenille yarn. This is a rich tufted yarn.

SWEATER KNITS produce chunky yarns. The fabric must be cut quite wide for the yarn to hold together.

STRETCH LACE produces a poor style of yarn, but can look quite interesting if plied with another T-shirt yarn.

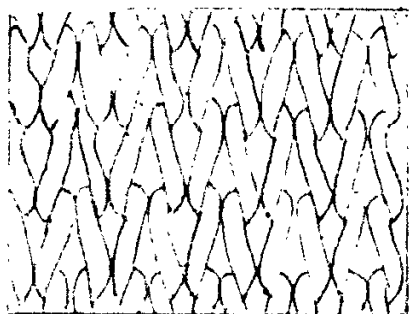
WHERE TO FIND FABRICS FOR RECYCLING

Fabrics for T-shirt yarns can be found in many places;

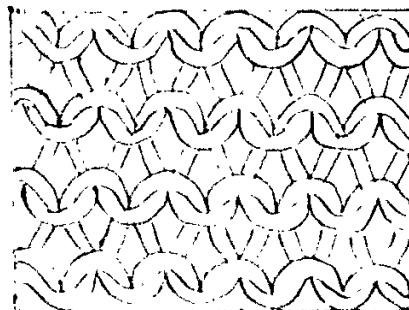
- 1) Any old clothes can be used, such as T-shirts, machine knitted jumpers, skirts etc., or anything made from stretch knit fabric.

Friends may clean out their cupboards and be happy to give you a bag full. Many opportunity or second hand clothing shops also have suitable clothing at a minimum of cost. However, with all old clothing, beware of stains as these will show in your newly created T-shirt yarns.

- 2) Remnants and ends of fabric rolls can be purchased at sales or factories quite easily. It is advisable to wash all new remnants before using.



Stocking stitch



Garter stitch

(or the reverse side
of stocking stitch)

CONSTRUCTION OF YARN

T-shirt yarns are constructed by cutting the fabric into a continual strip, which is then stabilized by pulling and stretching the cut strip to its maximum length. A one metre strip of cut fabric will often produce 2 or 3 times more in yarn length after stabilization.

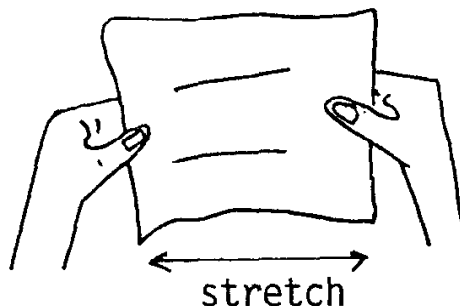
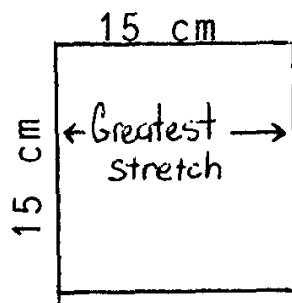
HOW TO CREATE A T-SHIRT YARN

TESTING THE FABRIC

Requirements

- Sharp scissors
- A 15cm x 15cm piece of fabric to test
- A large flat surface
- A ball winder (optional)
- A rotary blade cutter (optional)

The majority of yarns created for use in clothing are made by cutting across the stretch of the fabric. Gently stretch your test fabric piece to determine where the greatest stretch runs. Most fabrics stretch more across the width than lengthwise.



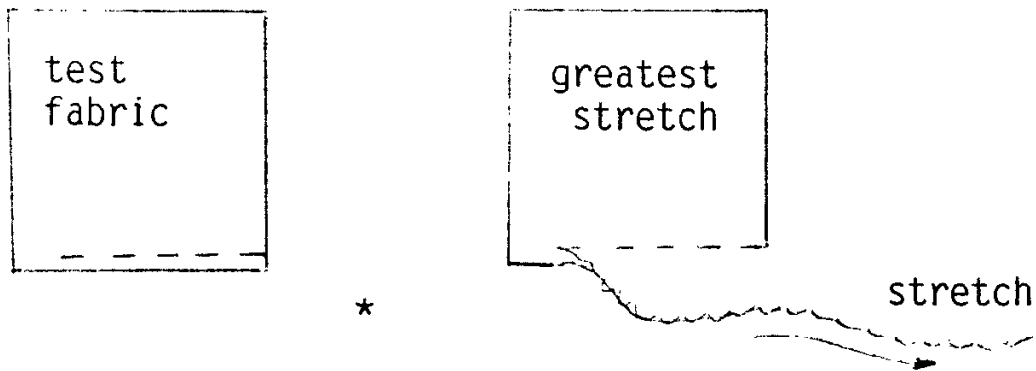
You will now cut the test fabric into a narrow strip to make the T-shirt yarn. There is an upper and lower limit of cutting thickness for the yarn. If the fabric strip is cut too thinly it will break. And if it is cut too thickly it will look just like an out of shape strip of fabric! Experiment with different cutting widths on the test fabric.

The general rule is; the finer the knit fabric, the finer the resultant yarn can be.



I have found that most fabrics can be cut to three different thickness's of .3cm, .5cm, and .75cm. The second thickness of .5cm is usually the most popular and successful. One exception to this is when using sweater knits. Because of their thickness, the strip is cut about 1cm or wider for strength.

After cutting a narrow strip across the stretchiest width of your test fabric, pull and stretch the strip to stabilize it into yarn.



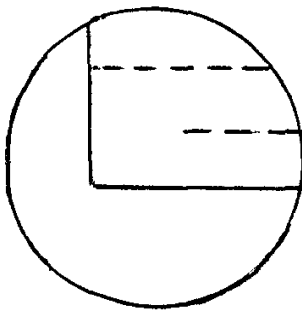
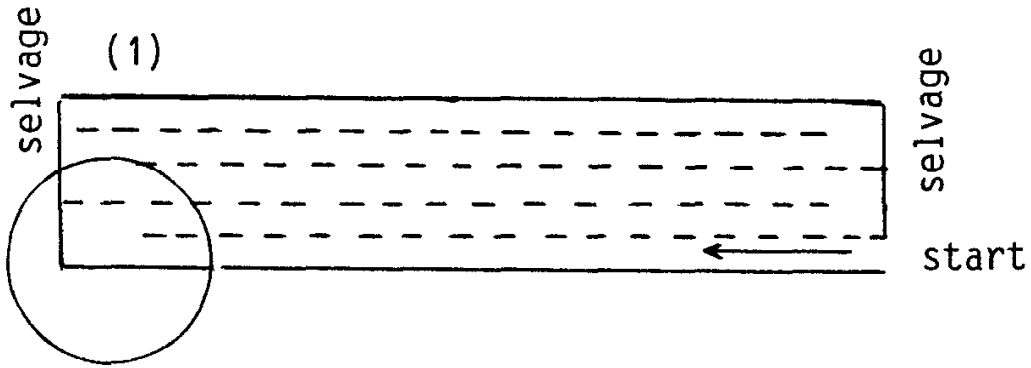
If the yarn breaks when you are stabilizing it (by pulling and stretching the fabric strip to its maximum length) cut the fabric a little wider.

A CONTINUOUS YARN

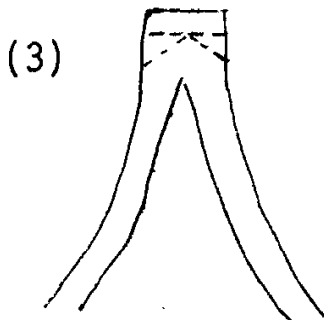
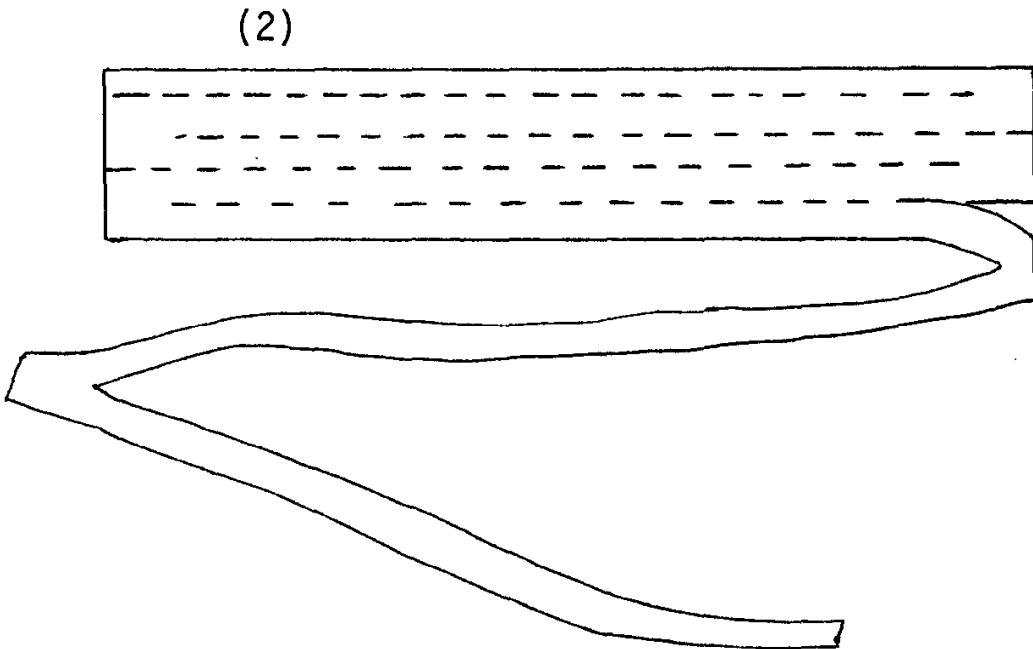
To made a continuous yarn without knots from a fabric, **square corners** are left at each edge (selvage) of the fabric These are later trimmed and are barely seen on the completed yarn.

* - - - - - indicates cutting line

A CONTINUOUS YARN



SQUARE CORNER

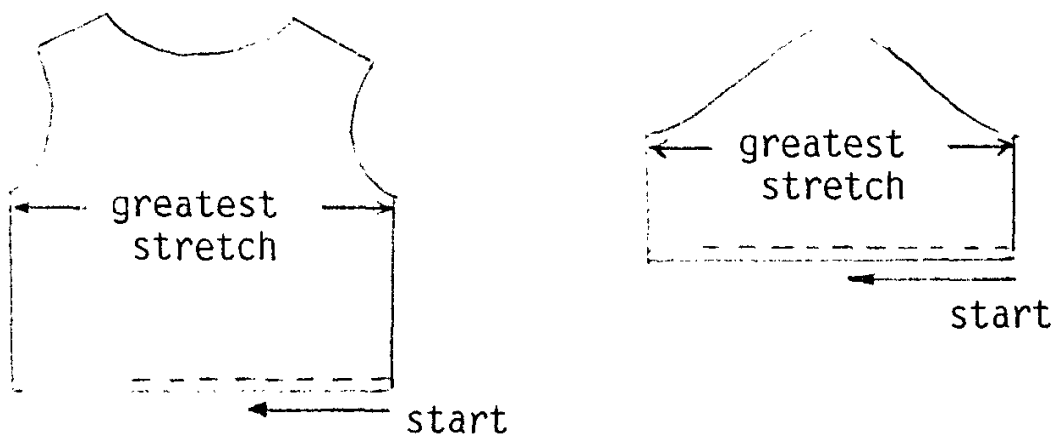


- (1) Cut fabric as broken lines indicate.
- (2) Cut fabric will then form a continuous strip.
- (3) Trim square corners.

Leave square corners at each selvage, as shown on page 9. Take care when trimming the square corners, that the join is still strong and will not break.

.....

With this knowledge you can now start to produce yarn from your remnants or old clothes. With old clothes however, remember to cut off seams, hems, basques and sleeves and start cutting at the bottom edge of each garment piece as shown.



After cutting a few metres of fabric in a continuous strip, pull and stretch the strip to stabilize it into yarn, and wind it into a ball. You will find that after a short time of cutting, you will have produced quite a lot of yarn!

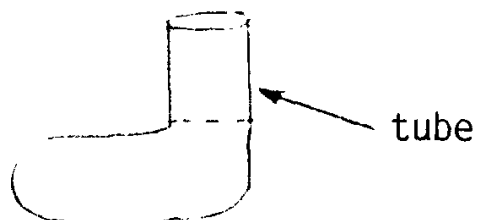
When stabilizing the yarn, there can be quite a lot of 'sawdust'. It is best to cover yourself and the floor of your work area with a cloth.

CUTTING INSTRUCTIONS FOR TUBULAR KNITS

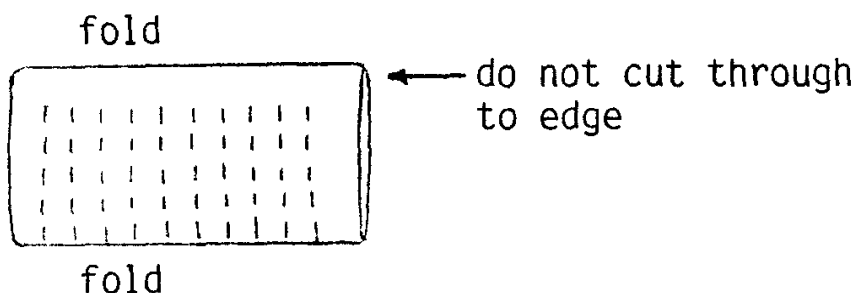
Tubular knits require different cutting techniques to obtain a continuous yarn.

Old un-elasticized socks can even be used with this method, but remember to cut off the foot.

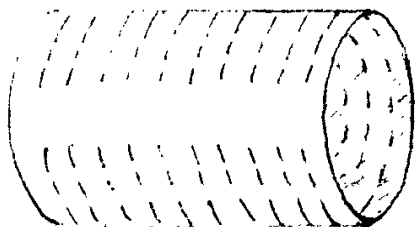
Only use this cutting technique if the fabric is in a tubular form, i.e. the tube of fabric has no seams.



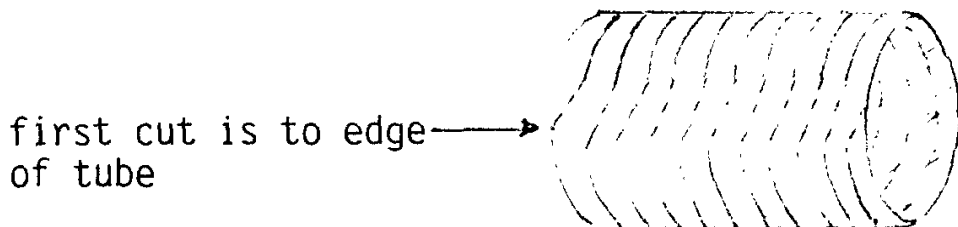
- 1) Cut the tube from one side, as shown, but do not cut right through the other fold of the tube.



- 2) Open the tube to reveal the uncut fold.



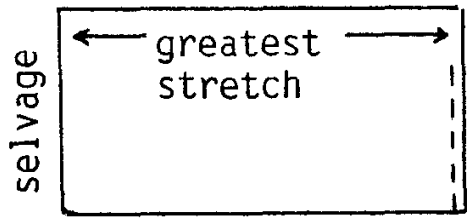
- 3) Make the first cut to the edge and continue as shown, producing a spiral.



- 4) The tube fabric should unroll to form a continuous yarn.

HEAVIER YARNS

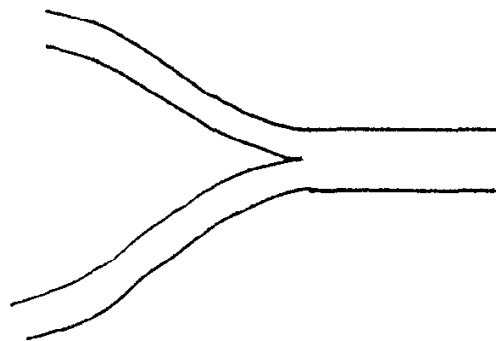
By cutting the fabric along its length with the least amount of stretch, a more stable, thicker yarn can be produced. These yarns are usually more suited to use in mats, rugs or heavier articles. Often there is no need to stabilize the yarn as there is little stretch in the fabric's length. One exception, however, is when a single knit is used. This yarn should be pulled and stretched very firmly to produce a tubular looking, style of yarn.



CREATIVE IDEAS

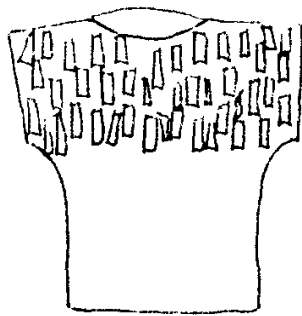
TAGS

A creative addition to these yarns which takes a minimum amount of effort, is the introduction of tags to a yarn. These are simply the square corners made a little longer and left untrimmed on the yarn.



Square corner
lengthened and left
untrimmed

You can also plan the tags to appear at closer intervals by dividing your fabric into several lengths. This will produce many more square corners for tags.

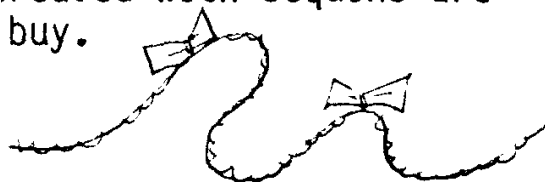


When planning a garment from these yarns, you could use heavily tagged yarns in one section, such as the bodice, and plain yarns in the rest of the garment.

BEADING

For variety, beads or shells are easily threaded onto the yarn as it is made. Sequins may also be used. Commercial yarns threaded with sequins are usually very expensive to buy.

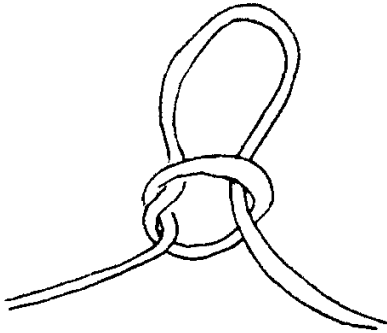
BOWS



A bow like effect can be achieved by inserting tiny rectangles of any fabric into a slip knot on the yarn. This fabric may be the same as the yarn, or woven fabric, in co-ordinating or contrasting colours or prints. These can be placed at even or uneven intervals throughout the yarn.

Another beautiful effect using this method is achieved by inserting groups of cut lengths of sewing thread into the slip knot. I usually use about 25-30 lengths of 1.5 - 2cm long sewing threads for each insertion. I collect all the threads that are

wasted, on the table and floor, when I am sewing. I save these until I have enough to make this unusual yarn. Nothing is wasted in this craft! With all insertions in the yarn, make sure the slip knot is very firm.



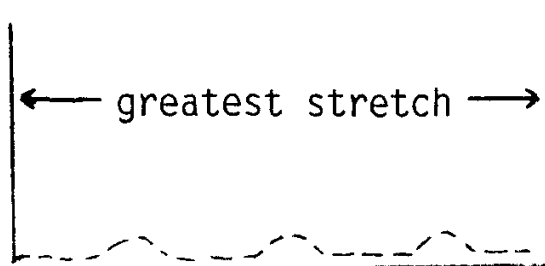
A slip knot



Approximate actual size of bow insertion

THICK AND THIN YARN

The fabric can also be cut unevenly to produce a thick and thin yarn. This seems to work best on single knits as the thickly cut yarn rolls nicely. The cutting edge of the fabric may need to be cut and straightened after every few rows of cutting. These yarns could also be plied with a fine T-shirt yarn.



Uneven cutting line

VARIETY IN KNIT FABRICS

Different patterns and colour combinations can be added into a yarn by simply choosing an interesting knit fabric to begin with. However, it is only by testing the fabric, that the desired yarn will be assured.

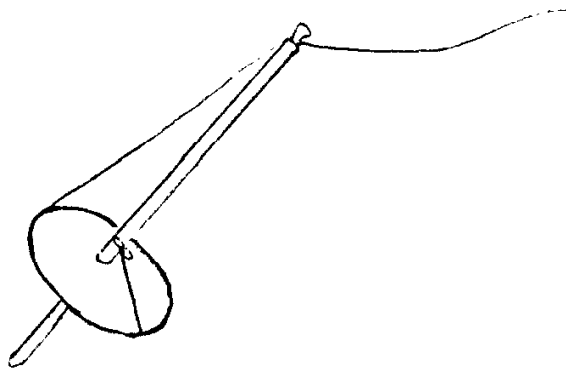
Listed below are some of the variety in fabrics you will encounter:

- 1) PLAIN FABRIC: This produces plain coloured yarn.
- 2) KNITTED-IN STRIPES: These stripes have been knitted into the fabric using different coloured yarns. These produce interesting variations in the yarn.
- 3) DYED PATTERN FABRIC: This fabric usually has motifs such as flowers or a design dyed or printed onto the fabric and can produce interesting results in the yarn.
- 4) HEAVY PRINTED PATTERN: This fabric is screen or hand printed, usually with thick paint. When the yarn is cut, the painted areas will not stabilize and will produce coloured lumps in the yarn. A plain piece of fabric could be hand painted especially for a yarn.
- 5) FAIR ISLE: Some sweater knits in particular have a fancy pattern knitted in one area of the fabric. This is very interesting to experiment with when planning a garment from this yarn.
- 6) LUREX KNITS: These fabrics have lurex thread knitted into them and produce beautiful and unusual yarns.
- 7) COTTON OR SYNTHETIC FABRIC: The composition of a fabric can greatly affect the look and feel of a

yarn. Yarns with a cotton content seem to be the best, but as mentioned previously, testing the fabric is the only way that the quality and design of a yarn is assured.

PLYING YARNS

Plying is the process of twisting 2 or 3 yarns together. A spinning wheel or spindle is normally required for plying yarns. This adds further interest to all T-shirt yarns. After plying, the twist in the yarn should be set by washing or leaving the yarn to rest on the bobbin of the spinning wheel or spindle for 24 hours.



BALANCED PLYING

Traditional balanced 2 ply or 3 ply can be used in many ways to enhance T-shirt yarns. The yarn plied can be:

- 1) Both T-shirt yarns of the same colour or different colours.
- 2) A T-shirt yarn plied with a sewing thread, crochet cotton, perle cotton or lurex thread etc.

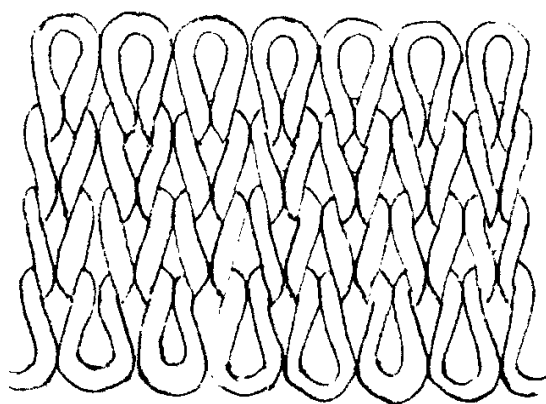
FANCY PLYING

Any fancy plying techniques can be used with these yarns. A spiral yarn, made by gently pushing one yarn along the other, is very pleasing, particularly if 2 colours are used. The spiral can be alternate colours throughout the yarn.

HOW TO PRODUCE ENOUGH YARN FOR A GARMENT

Obviously, the yarn from one recycled T-shirt will not be enough to knit, crochet or weave another garment. Listed below are several ideas to assist you.

- 1) The yarn from several T-shirts can be mixed in the one garment.
- 2) Commercial yarns can be added and mixed in many ways to extend the T-shirt yarns.
- 3) In weaving, two rows of commercial yarn should separate a row of T-shirt yarn. This produces a cloth with a softer drape, suitable for clothing.
- 4) Plied yarns will go further.
- 5) There are many knitting, crochet and weaving methods that lend themselves to using a variety of yarns, e.g. modular clothing, creative knitting.



Aqua T-shirt yarn

Blue T-shirt yarn

Commercial pale blue
perle cotton

Knitting suggestion

Remember, that a tension test or sample should always be done before a garment is planned. Lace knitting and crochet patterns are particularly good with these yarns, and I often use slightly larger needles or hooks than usually recommended for the equivalent yarn size.

In weaving with T-shirt yarns, there is usually a greater amount of shrinkage in the width than expected.

Inkle loom weaving with these yarns is also very successful. I usually use a fine cotton (approx. 16/2 cotton, or No. 20 crochet cotton) for the borders and weft and sometimes in the inkle band itself, to accentuate the textured, raised look of the T-shirt yarns.

LACE KNITTING PATTERN

Chinese Lanterns

This pattern usually repeats over 10 stitches, plus 4 extra.

Cast on a multiple of 10 stitches plus 4 extra.

1ST AND 13TH ROWS: K5, * yfwd, sl 1, K1, pssso, K1, (K2 tog, yfwd) twice, K3, rep from * to end of row.

2ND AND EVERY ALTERNATE ROW: purl

3RD AND 11TH ROWS: K1, * K3, (yfwd, sl 1, K1, pssso) twice, K1, K2 tog, yfwd, rep from * to last 4 sts, K4.

5TH AND 9TH ROWS: K3, * (yfwd, sl 1, K1, pssso) 3 times, K4, rep from * to last 2 sts, yfwd, sl 1, K1, pssso.

7TH ROW: K2, * (yfwd, sl 1, K1, pssso) 4 times, K2, rep from * to last 3 sts, yfwd, sl 1, K1, pssso, K1.

15TH AND 19TH ROWS: K1, K2 tog, yfwd, * K4, (K2 tog, yfwd) 3 times, rep from * to last sts, K2.

17TH ROW: K2, K2 tog, yfwd, * K2, (K2 tog, yfwd) 4 times, rep from * to last st, K1.

20TH ROW: Purl

GLOSSARY OF TERMS USED IN THIS BOOKLET

T-SHIRT YARN	This is my term to describe all yarns made with stretch fabric, even if the fabric is not manufactured for T-shirts.
Commercial yarn	Any yarn purchased at a retail store.
Lurex	Metallic thread, usually in gold, silver or copper colour.
Stretch fabric	This refers to all knitted fabrics that stretch.
'sawdust'	This is a term used by Catherine Mick to describe the tiny particles that shed from the yarn as it is stabilized. It may be advisable to wear a face mask in some cases.
Stabilizing the yarn	The process of pulling and stretching the cut strip of fabric to its maximum length, to produce the T-shirt yarn.
Selvage	The edge of the fabric.
Spindle	A simply made, ancient device for spinning and plying yarn.
Inkle loom Weaving	Weaving on a Inkle loom.
Woven fabric	Fabric that is woven not knitted.

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