

AUSTRALIAN COTTON CONFERENCE
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"What does the Spinning Industry require of our Cotton
- at Home and Overseas"

I know that I can speak without fear of contradiction when I say that every spinner in the world knows exactly what it is that he particularly wants from our Australian cotton - and the only problem that I have in presenting this paper on their behalf is that I cannot claim to know exactly "what it is" that they particularly want.

That may sound like a negative statement to many of you but if you examine the history of the cotton spinning industry and look at the product range, the make and vintage of their equipment, their production rates, and the climatic conditions under which they operate, you may be able to understand my dilemma.

Like most other major manufacturing industries, cotton spinners in the western world have been constantly pressured by heavy competition from low wage costs countries. That constant pressure to reduce overall production costs has been the major catalyst in the development of the industry.

Many significant improvements have been made over the years through the gradual development of individual processes, but every now and then there is a major technological breakthrough which results in an evolutionary change.

There have been two such evolutionary changes since the beginning of this century.

The first was when the established technology of mule spinning was challenged and eventually replaced by the cheaper and more easily operated ring spinning system. By the late sixties this system had plateaued, and because of technological problems, offered little opportunity for increased production.

This resulted in the second evolutionary period of open end rotor spinning. As in the early days of ring yarns, open end rotor yarns were almost totally rejected by the textile trade because of their inferior quality. But the mounting pressure of having further to reduce manufacturing costs, combined with the improvements in production rate, machine reliability, efficiency and yarn quality, has caused rotor yarns to progressively replace ring yarns, and at today's limits they are capable of supplying seventy-five percent by weight of the total world market for cotton yarns.

However, as both ring and rotor processes reach their technological limits, they too will be challenged by another cheaper yarn producing system - like friction spinning - which, with continued machine developments, will overcome its present problems to emerge as the third evolutionary spinning technology before the end of this century. I believe that the three systems of ring, open end rotor and friction will operate side by side up till then, and each different method of assembling and twisting the fibres to create a yarn will require something different from its raw cotton fibres.

I made the point at the beginning of this speech that I don't claim to know what other spinners require from our raw cotton, so therefore the views that I'm about to express are my own, and I can only hope that they reflect those held by others.

One of the major problems with Australian cottons in the past has been the variation between crops. We have experienced a wide range in average Micronaire, maturity levels, grades and colour and, as with this year's crop - seed variety.

As a spinner of 100% Australian cotton, my first requirement therefore is consistency. For instance, the new seed varieties of D.P.90 and Siokra have been identified as having a different dye affinity, and the normal practice of phasing in the new season's crop could not be followed this year. The old crop of D.P.61 or Namcala has to be completely run out before the new varieties are introduced, and our customers had to be informed of the need to keep the resultant yarns separate - and warned of the consequences if they did not.

Whilst this has been a costly and troublesome exercise, I accept that the longterm benefits outweigh the problems, providing, of course, that the exercise is not repeated again next year.

As far as individual fibre properties go, my No. 1 requirement, regardless of the spinning process, is for a fully mature fibre of between 3.0 and 3.5 Micronaire.

My second requirement is strength, and the development of D.P. 90 and Siokra has, to some extent, satisfied this need. If you could just combine a mature fibre of 3.0 to 3.5 Micronaire with these varieties, and still achieve a strength of 21 + mN/Tex, then you would create a fibre that will be highly accepted by all and sundry. You only have to look at the price being paid for Pima and Giza varieties to appreciate that point.

Fibre length is No. 3 on my priority list, and once again, the two new varieties with a range between 1" and 1-1/8" fit into the length category required by nearly the entire range of open end and medium fine to coarse ring yarns. For the finer combed ring yarns, and entire range of friction yarns, a fibre longer than 1-1/8" would be desirable.

The next area that commands attention is that of grade. My observation is that you are trying too hard to upgrade and clean the cotton fibres during the ginning process. Modern spinning mills, with sophisticated, computerised opening and cleaning lines, have the capacity to clean much better than any gin. This, combined with the significant improvement in blending capacity, has given the modern mill manager the opportunity of upgrading much lower grades of cotton, and I predict that there will be almost no demand for grades higher than Middling for the production of 100% cotton yarns after the next five years, and that the average requirement will be Low Middling to Strict Low Middling Plus. To highlight this point, a reduction of five cents per kg. in my raw material costs converts into an annual saving of \$250,000.

In summing up, I can only advise you to continue along the path that you have started on - refine the D.P.90 and Siokra varieties to achieve a finer and more mature fibre - and don't chase higher grades during ginning.

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