USTER INTELLIGIN--A MILL PERSPECTIVE
Eugene Frye
Parkdale Mills, Inc.
Belmont, NC

Why involved?

1) We want to see improvement in ginning technologies When I speak of ginning I am referring to the entire process from module feeding to the bale press and everything in-between.

2. We wanted to promote the use of the new ginning technologies that show promise of preserving the fiber qualities that is presence in the seed cotton.

3) Influence ginning industry to change,

   Gin for what the **customer** wants!

   If the customer wants a white cotton with no trash then do whatever it takes to give them what they want even if it means destroying some of the fiber properties.

   Parkdale is striving to receive a better fiber package.

   Better length, better uniformity, less short fiber content, and a stronger more elastic fiber that still has a color of SLM and better with a leaf grade of 5 or better.

Discussions with Bobby Greene of Servico, Stanley Anathony of USDA ginning research lab and Hossein Ghorashi Of Uster we felt like the Intelligin system showed promise of improving the quality of the ginned lint.

Even though we are working with the McClendon-Mann-Felton gin in Marrianna, Ark as well as Servico, my comments are from our experiences with the Servico gin. We have not done enough testing on the Ark cotton at this point in time to be comfortable with the data.

We were hoping for a better fiber package when we entered into contracts with Servico this year. We have always felt like that less cleaning in the gin was the way industry should head. We have promoted the use of one lint cleaner for several years now with our gin direct contracts. Typically the gin equipment is set up for the worst seed cotton that they will gin. Process control enables you to run your equipment at optimum levels all the time.
For the most part this means less aggressive cleaning and less heat. Fiber is not damaged as much at the gin thus

preserving more of the initial qualities the fiber had before ginning process.

That is what we had hoped to gain. How are we actually benefiting from the gin process control? Since we have only begun to class this cotton in our on lab, the figures I will be using are the USDA. We did get a longer fiber with less short fiber content as expected. We also got some unexpected gains as well. Fiber strength and elongation increased.

As you can see by the table comparing Servico to Birmingham, that the cotton from Servico had a much better fiber package. The reason we compared Servico to Birmingham is that this is cotton from the same region of the country. Compared to Visalia because Visalia is normally considered having the best fiber in the country. Servico compared very favorably with Visalia on paper.

Comparison of Servico, Birmingham and Visalia follows:

Fiber Properties	SERVICO	BIRMINGHAM	VISALIA
LENGTH	1.15	1.106	1.134
UNIFORMITY	82.7	81.2	82.2
SHORT FIBER CONTENT	8.0	11.5	9.2
STRENGTH	30.0	29.0	31.7
SLM & BETTER	80.0 %	71.4 %	97.8 %
LEAF 4 AND BETTER	86 %	95 %	99.5 %
LEAF 5	12 %	5.0 %	0.5 %
Parkdale HVI SFC	7.6	----	7.1/8.8 **

**two different merchants

Parkdale AFIS tests		
	Servico	**California**
Mean length (w)	1.04	.95
Length CV (w)	33.3	39.02
UQL (w)	1.27	1.20
SFC (w)	7.8	12.9
Fineness	172	164
IFC %	9.4	8.7
Maturity ratio	.86	.89
Neps/gram	194	254

How did this cotton perform in the plant trial?

24\1 kpOE	Servico	California
Count	24.2	24.2
UT3		
Uster evenness	14.6	14.8
1 yd	4.2	4.4
3 yd	3.4	3.6
10 yd	2.4	2.5
50 yd	1.1	1.0
Thin places		
-30	2852	2993
-40	359	402
-50	16	20
Thick places		
+35	698	757
+50	71	80
Neps		
+140	1361	1334
+200	123	130
+280	7	8
Yarn strength		
Tensojet single end break		
gm-force	339.2	372.7
tenacity	13.52	14.85
elongation	4.89	3.94
B-work	471.0	400.3
Classimat III		
total	8	8
majors (top 6)	0	0
thicks	0	0
thins	0	2

How do these fiber parameters affect the spinning plants?

1) We know the longer the fiber the more it is worth in dollar value. Why? Especially in ring spinning where the fiber is twisted around other fiber in a helical fashion. The more time the fiber is twisted the stronger the yarn will be.

2) Short fiber content will determine how even and how lustrous the yarn/fabric will be. Typically we will remove 12-16 % fiber at combing trying to remove most of the short fiber(1/2 inch or less). If we have less of these to remove, it results in a cost savings to us as well as giving us a better product.

3) Strength affects yarn strength and processability in our plants.

4) Wax content?? We all know what heat does to wax. The more natural wax left on the fiber the better the fiber will process.

The gains we saw with the Intelligin system at Servico will help us process the fiber better.

One of the areas not covered by the Intelligin system that would be beneficial to us would be for Uster to add their contamination detector Optiscan to the Intelligin. Even though contamination complaints are down, this is still a significant problem. We have installed the Uster system as well as a system by Truetzschler in several of our plants. What these devices remove is astounding. We must find a way of eliminating this problem completely from the bales of cotton.

One last comment: Learn who your customers are, what your customers want and exceed their expectations with the product you deliver to them. The cotton we have tested and run this year off of the Intelligin system at Servico has done just that.