SLIDE 26: PAPER MACHINE TECHNOLOGY

- Scale is also increasing
- New systems to produce quality/performance-based papers using lower cost furnish
- Lower basis weights - reducing fiber needs for given print surface area
- Paper makers increasingly adapting to the materials available
- Reducing the domination of softwood in many grades
- Overall—reducing cash manufacturing costs for new machines.
SLIDE 27: PANELS AND LUMBER PROCESSES

- Globally, trend to smaller, more uniform logs
- Advances in processing technologies driving an array of products that create higher value from lower value fibers
  - engineered wood products
  - OSB
  - LVL
- Increasing scale and capital intensities.
In conclusion, let’s briefly look again at the three central issues of demand, supply, and cost competitiveness.

Global fiber demands will continue to grow significantly, putting pressure on the world’s fiber supply.

As a result, the world’s fiber supply systems will continue to adapt by:

- investing in new technology and processes to lower costs and maximize yield from existing fiber sources
- shifting to new fiber types
- moving to new supply regions
- expanding world trade to equalize imbalances.

Here, in North America, we will feel the effects of these global changes, and we must prepare to meet the challenges they pose.

North American foresters must work with their customers—pulp and paper mills and solid wood product producers—to create a fiber supply that will meet the long-term needs of their customers within the context of sustainable forest management.
The shifts discussed here will not happen overnight—they will occur gradually. Hence, the world fiber supply situation is an evolution, not a revolution. Fiber markets will adapt to the types of fiber available and to fiber sources—softwoods to hardwoods, virgin to recycled and non-wood fillers, temperate forests to tropical forests, native to plantation. As a result, there will never be a fiber shortfall. Demand developments will differ from region to region. However, worldwide supply and demand will always be in balance.

Increased trade is also part of the growing globalization of the forest products industry. New fast-growing hardwood plantations in the Southern Hemisphere will compete aggressively with northern forests in certain products. Global trade will be aided by the growth of truly global companies such as UPM-Kymmene’s purchase of Blandin and its linkage with APRIL. The new alliance has positions in the three key market and production arenas.

The high growth areas are abroad and development of global competition means we have to learn to compete on a global basis.

New players have made massive new greenfield pulp and paper mill capacity investments in Asia to take advantage of low cost fiber sources. These are driving up the scale of pulp mills and paper machines, and in certain grades are changing the supply structure of the industry—effectively rewriting the rules.

Products from these mills will compete on domestic (Asian) and international markets.
The intense competition and narrow margins in the pulp and paper industry require successful participants to be low-cost producers. Declining historical trend prices for pulp and paper further underscore the need for low-cost status, making the cost of fiber a crucial element in the economic operating environment. Forest managers who can lower fiber costs by maximizing fiber yields, shortening planting rotations, improving operational efficiency, and reducing harvesting and transportation costs will be better positioned to compete with low-cost regions around the world.

The position of North America as the world’s primary source of low cost fiber has ended. Increasing competition from alternative supplier regions and alternative fibers means that the North American producers will be looking to foresters to supply the low-cost fiber they need to be competitive. Concurrently, there are increasing pressures to meet other demands on the forests, placing forest managers between the proverbial rock and a hard place.

For the major supply regions, the era of virgin fiber surpluses has ended in North America. To be competitive, fiber will have to be carefully managed; the shift from hunter gatherer mentality to forest managers will be required. Of course, the level of management will differ and must meet sustainability criteria. Foresters, and others responsible for production from forests, will have to work hard with their customers to understand their needs and work to maximize efficiencies and yields—to reduce costs.

In pulp and paper, opportunities will continue for softwood fiber. Despite the overall rise of recycled and hardwood fibers, northern softwood will continue to dominate products where softwood provides a sustainable advantage such as coated groundwood papers, SBS, and kraft linerboard for domestic and export markets.

The product evolution described earlier for the solid wood sector will likewise continue with a similar array of substitutes and competitor platforms.
SLIDE 31: DIRECTIONS FOR NORTH AMERICAN PRODUCERS (II)

Dr Philip Raup, one of my professors at the University of Minnesota, taught that resources are not the limiting factor, but rather it is human ingenuity and know-how. Few industries illustrate this better than the forest products industry where we are witnessing fundamental changes to the nature and composition of the products being produced.

R&D will play a major role in these developments. In this regard, investments in better understanding the silvicultural and tree breeding potentials of the species available to you in the Lake States Region is essential. Recall the gains made by the Brazilians.

Time is critical. With respect to fiber costs, the competitors are ahead, current advantages are eroding, and it takes time to realize the benefits.