Global Trends in DISSOLVING PULP

According to Rod Young, RISI's Chief Economic Advisor, the turnaround of dissolving pulp supply and demand over the last decade has been nothing short of amazing. World demand for dissolving pulp began trending steeply upwards in the early years of the current decade and has continued to grow above the rate of GDP. A lot of the increase in demand is due to substitution for cotton. The current estimate is that dissolving pulp demand will hit 7.6 million tonnes this year.

1 Dissolving pulp may be broadly classified as viscose pulp, which is used to make viscose staple fibers, and hi-alpha or specialty pulp, which is used to make a broad array of higher valued products such as acetate tow for cigarette filters, cellulosic ethers used as additives in a number of materials, and nitrocellulose. Viscose pulp has accounted for the vast majority of the demand growth in dissolving pulp over the last 15 years, boosted by share gains for viscose staple fibers in the world textile fiber market. Most of these gains have been at the expense of cotton, especially in the 2010-2013 period when cotton prices were high and supplies were limited. Viscose staple fibers are being used in a broad range of products, including apparel, household furnishings such as bedding, and nonwovens wipes. The development of viscose fibers with superior product characteristics, led by lyocell and Tencel, is adding to the growth from traditional viscose staple fibers.

NORTH AMERICA
is the second-largest supplying region for dissolving pulp, with an estimated 1.8 million tonnes of production in 2017. The USA is expected to account for two-thirds of the total, or 1.2 million tonnes, and Canada the remainder.

AFRICA
is the next-largest producing region with all of the production confined to one country, South Africa. The biggest dissolving pulp mill in the world is located in South Africa and a paper grade pulp line at another mill was recently converted to dissolving pulp.

EUROPE
is expected to nearly match North American dissolving pulp output in the current year, producing 1.7 million tonnes of dissolving pulp. European production has doubled since 2010 based mainly on a slew of conversions from paper grade to viscose pulp on existing pulp lines.

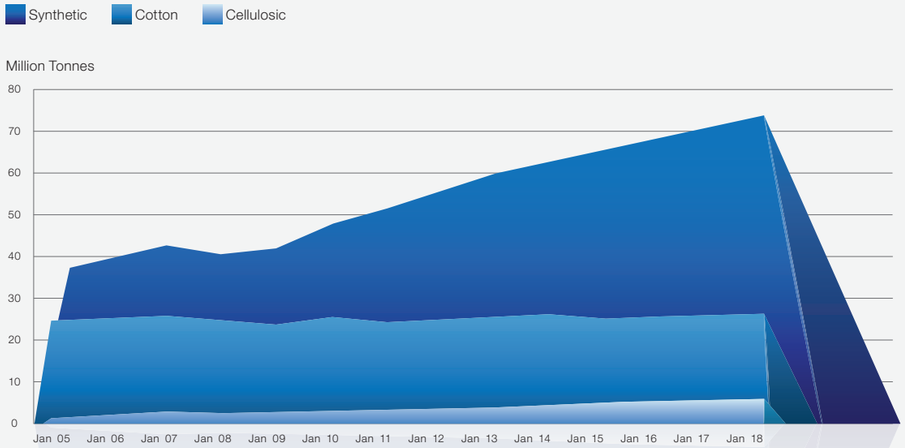
CHINA
is the largest producing country for dissolving pulp, it is also the largest consuming country. Estimates for this year are that China will produce 1.9 million tonnes of dissolving pulp, accounting for 25% of world output.

2 Global demand for hi-alpha pulp has also increased over the past 15 years although at pedestrian pace compared to viscose pulp. Usage of acetate pulps for cigarette tow rose relatively rapidly through the middle part of this decade due mainly to increasing consumption of cigarettes in China and more filters being applied. However, rising taxes on cigarettes by the central government becoming increasingly concerned about health issues have resulted in a recent reduction in cigarette consumption in that country. Ether pulps are still associated with demand growth slightly above GDP growth, focused on the pharmaceutical and food sectors increasing their usage of cellulosic ethers as additives.

3 China is still the largest producing country for dissolving pulp, reflecting in part the fact that it is also the largest consuming country. The estimate for this year is that China will produce 1.9 million tonnes of dissolving pulp, accounting for 25% of world output. Dissolving pulp production has jumped 700,000 tonnes from 2010 after stagnating in the second half of the last decade. The vast majority of Chinese dissolving pulp production used to be based using cotton linters but wood-based output now dominates due to its lower costs. Investment in new wood dissolving pulp by Chinese producers has been encouraged by strong domestic demand growth and tariffs on American viscose pulp suppliers since 2014.

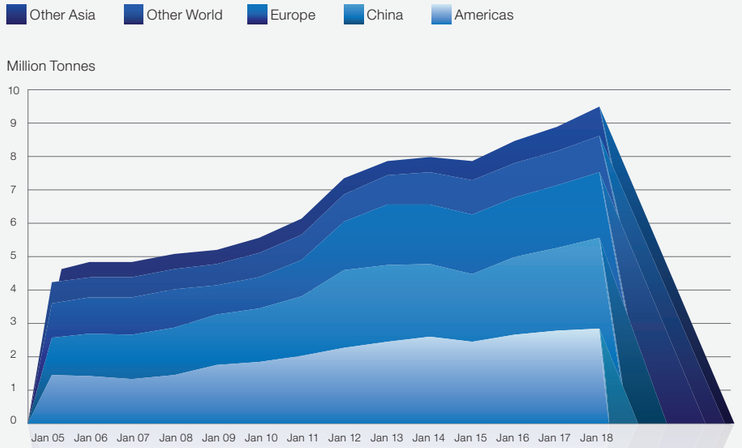
4 Dissolving pulp production is predicted to expand in all regions over the next five years. China and the remainder of Asia are expected to show the largest gains at 600,000 tonnes each. Greenfield mills are scheduled to start in China and Laos next year, while major conversions will take place in China and Indonesia. Latin America will closely follow the expansion in Asia in response to a large paper grade pulp mill in Chile being converted to dissolving pulp. Almost all, if not all, of the new capacity entering the dissolving pulp market is capable of swinging between paper grade and dissolving pulp. The technological advances that allowed mills with continuous digesters to be swing operations has virtually ensured that any new capacity will take advantage of that flexibility.

WORLD TEXTILE FIBER DEMAND
World textile fiber demand showing dissolving pulp fiber still some way behind synthetic and cotton fiber demand, however, with plenty of steady growth opportunities.



Tables and Graphs: RISI; For more information, go to: http://www.risiinfo.com

WORLD DISSOLVING PULP CAPACITY
China leads the way in dissolving fiber production globally.



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Rod Young started modeling and forecasting in the pulp and paper industry in 1977. Since then, his work in international pulp and paper markets has received worldwide recognition. Rod now consults on a regular basis with companies throughout the world. He continues to assist in the development of the RISI analysis and forecast of the world pulp and paper market, along with working on individual projects. In addition, Rod is the primary person responsible for the RISI analysis of the global dissolving pulp market.