aroma chemical industry.

In two short years we have gone from one extreme to the other: from shortages accompanied by increasing prices to ready availability and lower selling prices. Bad news traveled fast in these two years. The rate at which everyone rushed to buy everything in sight presented an awesome spectacle. Many speculators were quick to feed the "bad news" fires—it was good for their business. Previously good solid manufacturers became commodity speculators overnight; many purchased essential oils without even the benefit of sample. If the name was right, they bought it! You could always resell at a higher price. As a result, quality suffered dreadfully. The shining exception was lavandin oil. Although higher in price, it was of good quality because of the shortages of the traditional additives including linalool and linalyl acetate.

But toward the end of 1974, a distinct slackening in business was more than obvious, then—recession. As fashionable as it had been to stock up on every product during '74, overnight, it seemed, inventory became a dirty word, something not to have.

Then the exact reverse of '74 took place. Whereas in '74 despite the apparent shortage situation, more pounds of product were produced than consumed, in '75 fewer pounds were produced than were consumed. For a year that will be remembered for its shortages, sufficient material was produced in 1974 to cause the inventory excesses that almost every company had on entering 1975. As a result, virtually every aroma chemical manufacturer faced less than optimal production. His fixed expenses went up with energy and most other costs, except for a few raw materials. Improvement to facilities, especially those necessitated by safety considerations and environmental restrictions, all increased his costs of production. The situation was aggravated in specific cases as new capacity that had been initiated in answer to the shortage situation of 1974 began to come on stream.

Yet the purchasing section of some companies in our industry continued to think in terms of products being commodities, without proper attention to quality. One cent a pound less was felt to be of greater importance than quality of product or good service. An example of a product being driven down to rock bottom in price is amyl cinnamic aldehyde—now totally uninteresting to the traditional manufacturers.

The bright light on the horizon is that business activity picked up noticeably during the third quarter of 1975. The once embarrassing aroma chemical inventories were brought under control and for most customers reached a near normal level. Cash flow improved. No longer did customers order part-drum quantities for the exact amount to be used in specific orders in the house.

A look to the future—a very serious consideration is that most manufacturers are unhappy with current selling prices and the marginal profit they produce. This disposition does not make for a stable outlook. Costs of producing goods are rising; we have already experienced increased prices for many petrochemicals. Natural products are about at their bottom level and due to increased purchasing activity will undoubtedly move upwards. Energy will cost more. To take care of the public's increasing concern for the environment and to cope with the government's OSHA requirements will also add to the manufacturer's costs. In the past we looked to technical innovations to maintain ever-decreasing costs for major aroma chemicals. Those days, unfortunately seem to be over. While we still can expect technical innovations, it does not seem likely that they will, overall, outweigh the cost problems outlined here. Competition continues to be keen, but in our industry there seems to be a relatively thin line between glut and shortage. The issue, it seems, is not whether prices will increase in 1976—but when.

Natural Products and Their Sources, by Eric Bruell, Polarome Manufacturing Company.

Our subject is the future supplies of natural raw materials for the essential oil industry. We might divide these raw materials roughly into three groups: 1) those that serve as raw materials in the production of isolates, competing head-on with synthetics and including citronella, lemongrass, menthol, and clove leaf; 2) those that can be replaced by synthetic oils, such as anis, bo... de rose, fir needle, geranium, citrus oils, sandalwood mint oils, and floral extractives; 3) those that are not threatened by replacements—at least for the present—including cedarwood, eucalyptus, guaiacwood, lavandin, ocotea, petitgrain, patchouli, vetivert, and ylang.

The common enemy of these naturals of all three categories is production cost. Any persistent upward trend beyond normal inflationary forces could cause the demise of a natural raw material.

As to the first group of naturals, in talking to growers in Guatemala, Java, and China, I found they fully expect to be able to compete with synthetic isolates. These people expect to hold but a small portion of the isolates market, about 25 percent, but they do expect to hold this fraction. These naturals can be grown abundantly like any other agricultural product, and there should be no shortage of essential oils to make isolates. But manufacturers in the United States and Europe may not have naturals for processing if the oil-producing countries fractionate or synthesize the oils themselves rather than exporting.

The second category of naturals covers a broad spectrum of food and fragrance products. The continuing development of synthetic replacements, spurred by the rising costs of the naturals, tends to discourage their cultivation. The supply in this category ranges from abundance as in the case of citrus oils, anis, geranium, cassia, and floral extractives to decreasing production as for sandalwood oil and bois de rose. Shortages should occur in production of these oils only because of man-made causes.

The same applies to natural oils in the third group. Recently, for instance, a vast quantity of patchouli came into the United States market with no customer in sight, apparently on speculation. Speculators in the field interpreted this to mean that someone was hoarding; they started buying. The final result was dropping prices and dropping production; as a consequence, a temporary shortage in patchouli can be expected a year from now. Such market movements have also affected petitgrain, ocotea, and vetivert.

At the present time, we have enough cumulative carryover and overproduction so that no shortages are in sight. Those concerned with natural raw materials would be well served to initiate continuing studies of specific oils with a view to long-range production plans. Vital considerations in our industry are balancing production with projected consumption and consideration of the fact that production costs and awareness of competition may force agricultural producers to industrialize right at the production centers.

Bottlenecks are a legitimate fear for the future. We can prevent these bottlenecks by discouraging "cornering" a product or "short selling." These practices tend to depress the market for everyone.