

## RAPPORTEUR'S REPORT

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Rapeseed has always presented a challenge not only to processors, but breeders, agronomists and farmers. After many years of handling it, I am of the opinion that nothing else today, among all the oilseeds known to man, is as tailor-made as the various rapeseed varieties around the world. In our country (Canada) its' introduction has changed the landscape of the prairies. From it has sprung an industry which in 15 years, has come to contribute to our agricultural economy more than 1 billion dollars. But as much as it has been a success it is also one of our country's greatest mysteries, commonly referred to "Oh, that yellow stuff in the summer"!

The success of the crop and its' processing, has been achieved due to tremendous insight by scientists and engineers around the world. It will therefore be an omission not to use this occasion to express the industry's heartfelt gratitude, for the many years of service and direction that has come from people such as you and institutions as the one we have all come to, this year, in an effort to explore and find out more answers.

The rapeseed processing industry needs more answers, as we enter the '90's. The global economy which is forming and the break-down of political and economic trade barriers that result from such changes, have created tremendous pressures for our industry. The messages of the 80's for cost effective, pollution free, safe operations, which guarantee high quality and high throughput processing of rapeseed, are becoming the realities of the 90's.

Stand alone processing plants, which were the uniqueness of the "industry" in Canada, are already becoming a memory.

Efficiency is the new message and low cost is the new reality. For countries, like Canada, where the standard of living and labour costs have escalated to heights that our industry's typical margins can no longer support, the need for new breakthroughs is essential.

It is very gratifying indeed to see in the technical session of the 8th International Rapeseed Congress, how completely all aspects of rapeseed processing have been covered from harvest to finished product applications.

Rapeseed storage, meal storage, pretreatment, pre-pressing, degumming, bleaching, and frying characteristics of canola oil, glucosinolate reduction and phospholipid characterization are all addressed through classical as well as new novel approaches. There is an uncontrolled urge on much of the work presented here, which seeks to break-through all conventional barriers of the classical pre-press/solvent extraction technique.

As things stand today in our industry, the processing of rapeseed is both labour and equipment intensive. The objectives remain yield maximization at high throughput rates in the most efficient way.

The controlling parameters of a good processing run are raw product quality, proper heat treatment prior to and after flaking and pre-pressing, followed by solvent extraction using hexane. During that step, the aim is to extract maximum oil with least loss of solvent.

Many of the papers presents in this congress are bringing forth these points. Points which are very well understood and practised by today's processor in modern mills. Some investigators have taken the challenge further and are showing us how to achieve results by elimination or replacement of currently used solvents, The end result of such processes is superior quality products.

Such new processes, as described by Dr. L. Diosady and Dr. Sorenson, on their respective papers, are offering us new insight and ways of eliminating some serious problems. There are , however, drawbacks. The economic impact of conversion and pricing uncertainty of the end products make such processes difficult to envision.

The introduction of enzymes to assist oil extraction, is something that merits attention. The work presented by Dr. K. Sosulski and Dr. Sorenson on independent studies, are promising. Oil yields however are drastically reduced, and that should be considered carefully. Also, the economics of using enzymes is not well understood.

A great desire to enhance protein quality in the meal, without serious oil loss, can be achieved through dehulling. This subject is covered in this congress by Professor Sokhansanj and the successful completion of work like this should be anticipated with great interest.

Ways of reducing chlorophyll in rapeseed are by far however one of the most immediate problems facing a professor. Although agronomic practices and storage techniques can help, Toeneboen's paper on "Modified Physical Refining of Canola Oil Through the Absorptive Treatment of Canola/Rapeseed Oil With Silica Absorbents", offers one of the most promising techniques for chlorophyll reduction, and if the costs can be justified, it may become a standard approach in the plants during the 1990's.

As we are debating the technical problems of processing it becomes clear that there are no easy answers. It gradually becomes apparent that classical processing is a very expensive preposition for stand alone plants. Lack of the integration required to carry the products to their finished stages is a significant economic disadvantage. This not only helps to spread costs out, but also assists in eliminating the exploitation of the stand alone processors alone with the distractive competition amongst the processors. Under such a scenario some of the the new processors explored here here, may not then seem as uneconomical.

The 8th International Congress has helped bring this issue to focus, while at the same time, presenting us with a series of insightful research topics from around the world.