

quality of the beans from the standpoint of oil content. When they are talking about quality they are talking about the percentage of oil-content of the beans, not whether the seed looks nice or not.

The oil-content of the beans can vary considerably according to the conditions under which they have been grown. The companies are very much interested in the oil-content because that is the most valuable part of the bean. Where the oil-content drops below a certain percentage, it may make quite a difference to them.

Soybean oil usually varies in the beans from 17 to 21 per cent depending on the variety and the conditions under which they are grown; I would say that from 18 to 19 per cent is good but below 18 per cent they would say it was poor quality because it was low in oil. But above 19 per cent they are very good and the companies like that and they consider it very good quality.

My point is, that whereas at Harrow and at Ottawa we average around 19 to 20·2 per cent of oil in soybeans. At Indian Head where we have low yields, the oil-content is down to 15·2 per cent which is quite low, and would be an important consideration in the purchasing of beans grown in that particular area.

At Morden, the oil-content is 16·7 per cent which is also low. Anything below 18 per cent we consider as low and the companies consider it low, too. With 16·8 per cent at Lethbridge, even under irrigation where there was not a moisture problem, the oil-content averaged 16·8 per cent. So in all places in the prairie provinces where we have conducted tests, if it has not been a question of low yield, it has been a question of low oil-content.

I do not know what the cause is. The oil-content seems to be laid down late in the season. Whether it is because of cool temperatures, particularly at night, in August and September, I do not know. But there is something responsible for this low oil-content. The same varieties grown in the east have a much higher oil-content.

The yield obtained at all stations is quite satisfactory with the exception of Indian Head and possibly Morden; at those two stations and also at Lethbridge the quality of the seed produced as indicated by the percentage of oil-content was rather poor.

As the unit of value of the oil is much higher than that of the meal the commercial processers are interested in the high oil-content beans.

With oil at 14 cents a pound, which is about the price it has been for some time, and with meal at about \$90 a ton—(meal is considerably higher than that at the present time)—each one per cent of increase in oil increases the value of the soybeans at this particular level by 5·7 cents per bushel. If the beans could be increased 2 per cent extra oil on the average, you really increase the value by 11·4 cents a bushel. I am not saying that the grower gets the benefit. He should get some of it, but beans are not bought at the present time on the oil-content basis. Probably they may be at some time later. But with soybean meal at \$90 or even \$100 a ton, the meal is worth about 5 cents a pound whereas the oil is worth 14 cents a pound, so the greater the oil-content there is in the bean, the higher the quality, and the greater the value per bushel.

Factors which may affect the production of soybeans in the prairie provinces I have listed as follows: No. 1, low oil-content; No. 2, low yield under dry land conditions, No. 3, short season with cool temperatures especially at night; No. 4, excessive moisture; and No. 5, short growth causing difficulty in harvesting; No. 6, shattering of seed; No. 7, weed control problems.

One of the things which may affect the production of soybeans in the prairie provinces particularly with the varieties used at present, is the shortness of growth. We like to see them grow from 2½ to 3½ feet in height with the beans carried well up off the ground. Because, when you come to harvest them