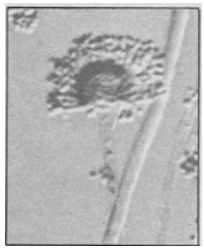

Effects of new rules on EEC trade

New European legislation on aflatoxin content of six raw materials for animal feeds will increase the cost of using those materials as quality control costs rise. The legislation is too recent to determine yet if usage of the regulated materials has been affected or if feed manufacturers are looking for alternate nonregulated materials, according to this status report by Maria Cappuccio, Trade Policy Coordinator for the Grain and Feed Trade Association (GAFTA) office in England. There are data indicating the level of aflatoxin in imported raw materials is lower, perhaps indicating closer control at the point of origin. The trade is hoping an approved method can be developed to detoxify aflatoxin contaminated materials.

In the previous article, attention has been drawn to the changes which have taken place in European legislation during the past decade, in particular the introduction of further aflatoxin controls.

As previously mentioned, undesirable substances, including aflatoxin, have been controlled by European legislation since 1973. These were established mainly in the finished feed produced by the compound feed manufacturer where maximum levels of inclusion were set.

In 1980 discussions began on the basis of extending this legislation for the first time to raw materials to increase the level of control, although it was recognized that to extend control for all raw materials could lead to tremendous difficulties in view of the volume of raw materials and the need for monitoring, policing and enforcement. It was therefore considered prudent during the discussions between the trade and officials to try to reduce the number of raw materials to be controlled, so that only those materials that were considered more susceptible to aflatoxin contamination should have the controls tightened. In this respect the following materials and their derivatives were included in the Directive EC 74/63 (Undesirable substances): maize, cottonseed, copra, babassu, groundnuts, palm kernels.

The directive provides that these materials can only be sold in the EC under the following conditions: where the level of aflatoxin present is between 0.05–0.20 mg/kg to compounders and home-mixers who are included in a National Register. These registers will be developed by the appropriate national authorities responsible in each of the 12 member states.

Where the level of aflatoxin present in any one of the named materials is at or below 0.05 mg/kg, the material may be freely traded throughout the EC.

Should the level of aflatoxin be over 0.20 mg/kg, it would be an offense to put the material into free circulation within the EC. The penalty, therefore, for traders who import suspect materials is great—they are obliged to provide a declaration of the aflatoxin content present when selling the materials. Thus, if the materials have an aflatoxin level above 0.2 mg/kg, the importer would be obliged to have the goods returned to their origin, destroyed or sold outside the EC.

Any one of these options would incur such losses that great care is being taken to avoid this situation arising.

In assessing the practical effects, and the way the trade is adjusting, one has first to understand the background against which this legislation was developed. It began in the early 1980s and evolved over a number of years before being accepted in 1986 with a final date for adoption of Dec. 3, 1988. During that time, the trade was being alerted to the developments and to the requirements which eventually would need to be met. Although the legislation is relatively new, and some would say it is too early to assess the implications, it is interesting to consider the GAFTA analysts' reports in respect of aflatoxin content found in samples of various raw materials for the year to December 1988 and the first quarter of 1989 (Tables 1 and 2). The results do confirm a trend toward aflatoxin contents not exceeding 0.2 mg/kg, with the majority of samples analyzed falling within the 0.02–0.049 mg/kg range.

This early indication may mean that traders, particularly those who regularly import from Third World countries, have begun to make the necessary adjustments in the way they trade by encouraging suppliers at origin to meet more stringent requirements for exports. This would help reduce the risk for those concerned with shipping the goods, bearing in mind that aflatoxin tends to "pocket" throughout a consignment rather than being evenly distributed, which causes further problems when taking samples for analysis and hence increases the risks for the trader. To overcome this and to avoid rejection, the trader will try to ensure by analysis that the goods supplied at origin will have nil or negligible levels of aflatoxin present, although this is difficult to achieve bearing in mind that the sources of supply to an export elevator are many, which means the degree of variation can be enormous.

When reviewing the actions of the U.K. government and other

member states during 1982, with the legislation put into effect in 1988, the effects at first sight are somewhat different.

In 1982 the U.K. government introduced a ban on cottonseed and groundnut; subsequently the ban was lifted on both commodities, and made provisional for groundnuts/meal, which meant that imports would be allowed only if they respected a maximum level of 0.05 mg/kg. (Following the U.K. government's action, other member nations also sought changes in their legislation.)

The result of this approach was that trade came to an abrupt stop overnight in that material (Table 3).

The data demonstrate that while imports of whole groundnuts have remained constant, those imports destined for the animal feed sector did not recover from the abrupt changes in legislation.

Indeed, when consideration is given to EC oilseeds imports it can be seen that certain categories of oilseeds have not enjoyed further growth, whereas others have increased significantly both in terms of production and trade (Table 4).

From Table 4 the trade data determine the following:

For groundnuts, linseed and sesame, these have declined.

For cottonseed, copra and soya, there has been a marginal increase.

For palm kernel, rapeseed and sunflowerseed, this group has shown significant growth. Table 5 also highlights the increased domestic production in the EC for the major oilseeds, rapeseed, soybean, cottonseed and sunflowerseed.

For other materials that are not covered by the GAFTA Analysts' report, such as maize, maize gluten feed, germ meal and babassu, trade between the EC has increased and shows no sign of declining. For babassu, trade data are limited.

Moreover, it has to be borne in mind that other materials which have played a central role in European least-cost ration formulations include manioc, sweet potatoes and residues (both domestic and imported) from the processing of cereals, rice, fruit and sugar, which account for the most significant increases.

TABLE 1

Aflatoxin Levels Found in Samples Tested Between Jan. 1 and Dec. 31, 1988

Commodity and origin	Number tested	Aflatoxin B_1 mg/kg <0.02	0.02–0.049	0.05–0.20	>0.20
Cereal replacer					
Holland	12	12			
Copra					
Darl es Salaam exp.	1		1		
Indonesia exp.	1			1	
Indonesia ext.	2	1	1		
Phillipine ext.	3		1	2	
Zanzibar exp.	1	1			
Cottonseed					
Argentina exp.	5		3	2	
Argentina ext.	7		3	4	
Burkina Faso ext.	3	3			
Burma exp.	1			1	
Cameroon ext.	1	1			
Chad ext.	1	1			
China exp.	47	47			
Ethiopia ext.	2			2	
Ivory Coast ext.	4	4			
Mali exp.	1		1		
Paraguay exp.	3			3	
Paraguay ext.	2			2	
Sudan exp.	1			1	
Togo exp.	1		1		
Unclass. exp.	10	3	4	3	
Unclass. ext.	5	1	2	2	
Groundnut					
Argentina ext.	3	2		1	
Senegal ext.	72	30	30	12	
Sudan ext.	1			1	
Maize					
France	3	3			
Maize by-product					
Argentina	7	2	1	4	
U.S.A.	30	28	2		
Unclassified	15	15			
Palm kernel					
Indonesia exp.	3	3			
Ivory Coast exp.	2		2		
Malaysia exp.	15	15			
New Britain exp.	6	6			
Zaire exp.	3		3		
Unclass. expt.	4	3		1	
Rice bran					
India	1	1			
Soya					
Argentina ext.	2	2			
Brazil ext.	13	13			
U.S. ext.	11	11			
Sunflower					
Spain ext.	1	1			

Ext. = solvent extracted; exp. = expeller extracted.

The reason for changes in purchasing requirements is largely evolutionary, as the number and quantity of raw materials and residues which have appeared on the market during the past 10 years have increased significantly. These changes, coupled with a greater emphasis on protein energy efficiency as well as the improved technical knowledge in respect to other compositional elements, are likely to have a direct effect on raw material selection. Additionally, changes in legislation also will be taken into

account as to effects on overall cost and whether a material, when compared with others, will be competitive.

It is in this context that, so far, based on the trade's response, the European legislation that introduced aflatoxin controls for the six named raw materials and their derivatives, does not appear at first sight to have had the same impact as the legislation brought into effect in 1982, especially compared with the fact that the trade had been making adjustments during the period 1982–1988 before the legislation finally took effect. To this course must be added the greater number of raw materials now available.

The scope of adjustment as a result of legislation being introduced inevitably becomes a cost, which is likely to be borne by those involved in the industry from origin through to consumption. The new arrangements make it imperative that analysis of raw materials should take place throughout the distributive chain and it will only become evident during the next few years whether there will be a significant shift in emphasis away from use of the raw materials covered by the legislation toward raw materials currently outside its scope.

Those involved in trading the named raw materials will need to demonstrate that the material has been analyzed and conforms with the legislation. There is, therefore, a constraint when trading these materials because they must keep within a specified level of aflatoxin, otherwise they will not be allowed in free circulation in the EC.

A further point of discussion revolves around the subject of seasonal variation which, from time to time, will have a more pronounced effect on those materials that are more susceptible to aflatoxin. In this context the trade needs to exercise extreme vigilance at all times as each season is likely to bring about its own particular problems.

For this and other reasons, several traders have expressed a keen interest in the subject of detoxifi-

TABLE 2

Aflatoxin B_1 Levels (mg/kg) Found in Samples Tested Between Jan. 1, 1989, and March 31, 1989, Entering British Ports

Commodity and origin	Number tested	Minimum	Maximum	Average
Cottonseed				
Argentina exp.	1	0.050	0.050	0.050
China exp.	8	N.D.	0.007	<0.005
China ext.	1	N.D.	N.D.	N.D.
Unclass. exp.	1	0.005	0.005	0.005
Maize				
France	6	N.D.	N.D.	N.D.
Maize by-product				
Argentina	1	<0.005	<0.005	<0.005
U.S.A.	35	N.D.	0.025	0.009
Unclassified	15	<0.030	0.030	0.013
Palm kernel				
Malaysia exp.	1	N.D.	N.D.	N.D.
Nigeria exp.	1	0.070	0.070	0.070
Unclassified	1	N.D.	N.D.	N.D.

N.D. = not determined.

TABLE 3

European Community and United Kingdom Groundnut/meal Imports (million metric tons)

	1976/77	1981/82	1988/89
Groundnuts			
E.C. (including U.K.)	0.45	0.39	0.44
U.K.	0.08	0.08	0.12
Groundnut meal			
E.C. (including U.K.)	1.12	0.34	0.44
U.K.	0.31	—	—

TABLE 4

European Community Imports/Exports of Oilseeds and Oilseed Meals (million metric tons)

	1979/80		1989/90	
	Imports	Exports	Imports	Exports
Cottonseed	0.03	—	0.06	—
Cottonseed meal	0.66	0.06	0.66	0.06
Copra	0.26	—	0.08	—
Copra meal	0.85	0.05	1.06	0.07
Groundnuts	0.40	0.02	0.44	0.05
Groundnut meal	0.91	0.03	0.43	0.03
Linseed	0.34	—	0.30	—
Linseed meal	0.64	—	0.51	—
Palm kernel	0.13	—	0.13	—
Palm kernel meal	0.44	—	10.6	—
Rapeseed	0.75	0.28	2.33	2.05
Rapeseed meal	0.53	0.27	1.15	0.83
Sesameseed	0.03	—	—	—
Sesameseed meal	0.02	—	—	—
Soybeans	12.82	0.31	10.84	0.30
Soybean meal	9.42	3.55	12.02	4.15
Sunflowerseed	1.43	0.07	1.65	1.55
Sunflowerseed meal	0.68	0.18	1.50	0.41
Total (all commodities)	30.44	4.82	34.22	9.50
Total (excluding soya)	8.70	0.96	11.36	5.05

cation, because it would permit them access to a greater number of materials, and they would have a further assurance that if materials were "treated" the risk of "aflatoxin" being found in excess of the required levels would not arise.

For the EC as a whole there is no approved method, although it is understood that in France, for example, a detoxification plant is operating using an ammonia process. While this may be acceptable in France, it is not clear whether the detoxified produce is acceptable in other member states because of insufficient toxicological data. It is also understood that a plant has been established in Senegal which uses a two-stage process involving formaldehyde and ammonia. This process is also said by some to have insufficient toxicological data.

TABLE 5

European Community Oilseed Production (million metric tons)

	1979/80	1988/89	% Increase
Soya	0.04	1.59	+387.50
Cottonseed	0.25	0.55	+120.00
Sunflowerseed	0.72	3.99	+454.16
Rapeseed	1.22	5.24	+330.00

The matter of detoxification is one the EC Commission has, in the past, promised to open up discussions with a view to agreeing on an EC method, but this has not been discussed with any seriousness since 1984. It remains an issue which the trade is keen to pursue.

To sum up, in the future I would expect that the effects of legislation will:

- Make buyers more selective in the choice and origin of the material. This will result in further analysis to determine these materials with nil or negligible levels which are likely to be sought by buyers.
- Increase costs for analysis, transport, storage and handling for sellers of imported/domestic raw materials to ensure compliance with the legislation.
- Promote the concept of research and development into methods to detoxify in order to reduce the presence of aflatoxin.