Estrogenic factors

Description
These non-steroidal estrogenic substances are mostly isoflavones that occur in the form of glycosides (Francis et al., 2001). In soybean, for example, genistein is the most prominent isoflavone (Tacon, 1997). They can bind to oestrogen receptors or get converted into compounds that have estrogenic effects (Francis et al., 2001). Studies with Siberian sturgeon have shown that phytoestrogens could induce vitellogenesis (Francis et al., 2001).

Occurrences
Phytoestrogens are present in many cereals, legumes and oilseeds such as barley, rice, wheat, corn, chick pea, lucerne, groundnut, soybean, cottonseed and linseed.

Treatment
Genistein has been reported to be heat-stable, but phytoestrogens are not a serious threat to fish (Tacon, 1997). They should however be taken into account while formulating the feed (Francis et al., 2001).