



REF 69.1005

ExPress®

EXTRUDER / PRESS SYSTEM

ExPress® is a system consisting of Insta-Pro® International dry extruders and horizontal screw presses, which allows for the removal of up to 75% of the available oil from most oil seeds. In addition, the **ExPress** system, is an environmentally friendly mechanical process utilizing *no* chemical solvents, steam or external heat sources, thus creating *no* hazardous waste streams.

Various oilseeds contain anti-nutritional factors or undesirable traits, including:

- Trypsin and chymotrypsin inhibitors (inhibit protein digestion)
- Lectins (decrease the digestibility of nitrogen-free extract)
- Urease
- Allergenic factors (reduce nutrient absorption)
- Lipase and Lipoxygenase (peroxidation and beany flavor)
- Gossypol (toxic pigment)
- Tannins
- Glucosinolates (toxic compounds)

Independent university studies have shown the Insta-Pro dry extrusion process to be the most effective way of reducing these anti-nutritional factors to safe levels without adversely affecting protein quality or amino acid availability.

Soybeans are the most widely processed oilseed through the **ExPress** system. In animal rations, dry extruded soybeans and ExPress soymeal consistently produce higher daily weight gains with less feed, as compared to other types of soybean processing methods. An important consideration for swine and poultry producers is that Insta-Pro dry extruded and **ExPress** soymeals have improved amino acid digestibility, which results in *less* nitrogen being released into the environment.

The **ExPress** system allows production of all-natural soybean oil, which can be used for human consumption without extensive refining. The oil has a very pleasant color, aroma and taste. Dry extrusion releases tocopherols, the natural anti-oxidants contained in soybeans. **ExPress** soybean oil has the highest level of tocopherols, which makes it stable for months under normal storage conditions. Tocopherols also keep dry extruded soymeal from going rancid for a period of months.

ExPress systems are ideally suited to produce all-natural oils and meals from identity-preserved, non-genetically modified, organic and specialty oilseeds.

Insta-Pro® International, A Division of Triple "F", Inc.

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