

# Application Guidelines:

-ProDegreaze™

-ProSoak™

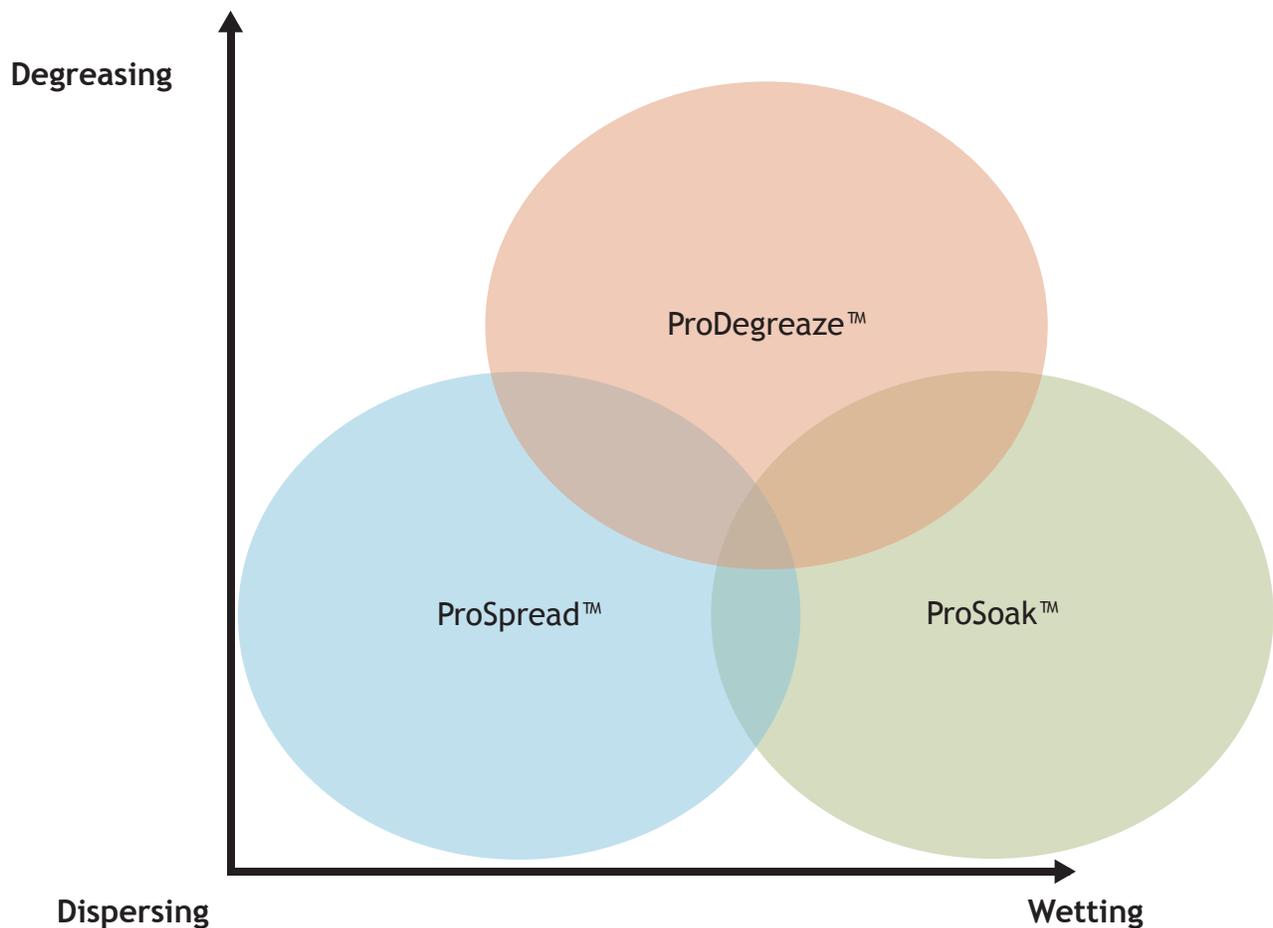
-ProSpread™

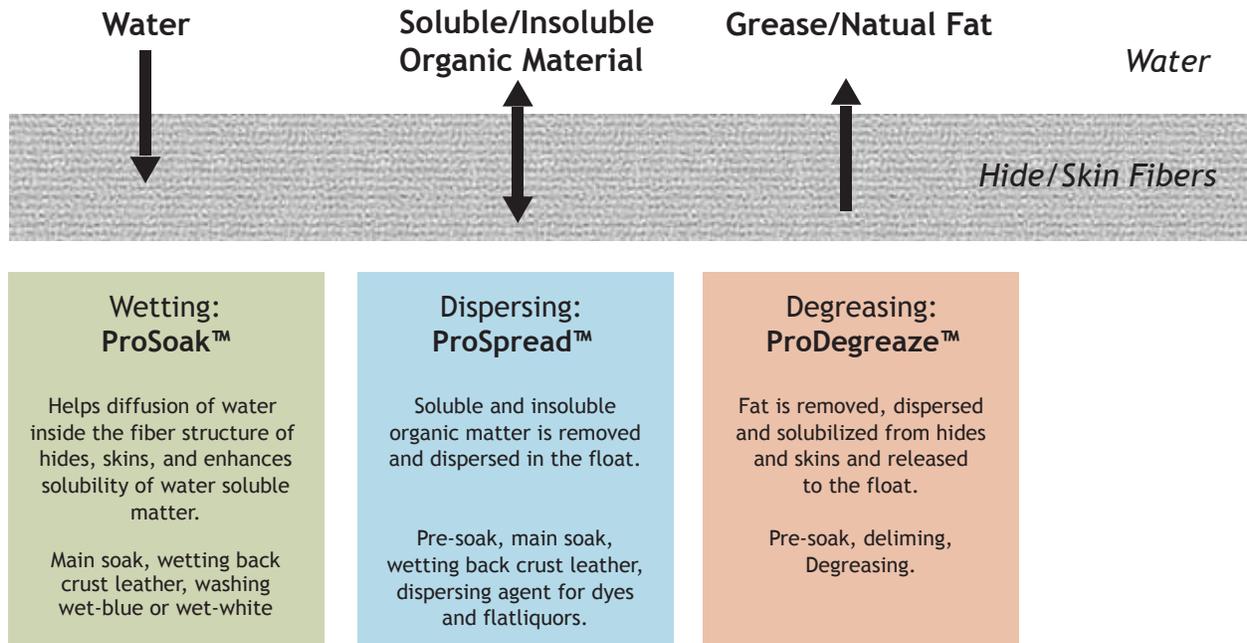


## Leather Powered by Probiotics™ Means:

- Based on a blend of biochemicals derived from a controlled fermentation process using probiotic cultures and selected natural raw ingredients
- Replacement of traditional leather processing chemicals
- Non-enzyme-based technology provides innovative solutions to reduce effluent loads while improving leather quality and yield
- 100% biodegradable and 100% natural
- Effective across a wide range of temperatures and pH. Proviera™ tannery products can be used in all tannery operations within the most extreme conditions of the leather-making process
- Application is tailored to each tannery's unique process and protocols

## Properties of Proviera Tannery Products





## Basic guidelines for the use of Proviera™ biochemicals in the tanning process

### •Pre-Soaking

#### *Fresh hides or skins:*

Objective: Remove and disperse dirt, manure, unstructured and soluble proteins and superficial grease.

ProSpread 0.1-0.3% of fresh weight.

If hides or skins are greasy, add ProDegreaze 0.1-0.2%.

Drain float.

Processing time can be reduced from standard tannery process.

#### •Salted fresh hides or skins:

Objective: Rehydrate hides or skins from the effect of salt. Remove and disperse dirt, manure, unstructured and soluble proteins and superficial grease.

ProSoak 0.1-0.2% of salted weight.

ProSpread 0.1-0.3% of salted weight.

If hides or skins are greasy, add ProDegreaze 0.1-0.2%.

Drain float.

Processing time can be reduced from standard tannery process.

#### •Dried and dried salted hides and skins:

Objective: Rehydrate hides or skins from the effect of salt. Remove and disperse dirt, manure, unstructured and soluble proteins and superficial grease.

ProSoak 0.3-0.5% of salted dry weight.

ProSpread 0.3-0.5% of salted dry weight.

If hides or skins are greasy, add ProDegreaze 0.2-0.5%.

Drain float.

Hides or skins must recuperate hydrated properties.

In all cases, the recommended temperature should be 25°-28°C. Proviera tannery products ensure the proper soaking effect without the need to increase temperature. If temperature increases, e.g. due to mechanical action, and soaking time is too long, use preservatives to avoid microbiological damage.

## Basic guidelines for the use of Proviera™ biochemicals in the tanning process

### •Main Soaking

Objective: Hydration of hides and skins. Ensures water is inside the fibrous net of collagen protein to activate functional groups and enable its reaction with the chemicals. If process is carried out in drums, reduce to low RPM.

ProSoak™ 0.2-0.5% on fresh or salted fresh weight or 0.5-1.0% on dried or dried salted weight.

Avoid surfactants at this stage. If hides contain low fat use ProSpread™ 0.1-0.3%. If hides are greasy consider using ProDegreaze™ instead. ProDegreaze and ProSpread are considered to be better than chemical surfactants.

### •Unhairing/Liming

Use standard tannery protocols. 0.05-0.1% ProDegreaze helps to remove hair roots and to obtain smooth grain.

### •Deliming/Bating

Use ProDegreaze 0.3% of pelt weight for hides in one or several stages to solubilize remaining insoluble fat.

### •Degreasing Sheepskins

Depending on the fat content but in general terms, use very short or no float with up to 7.0% ProDegreaze of pickled weight in three washes with water at 6 °C Bé and up to 2.0% ProSpread.

### •Washing Wet-Blue

Total 0.5-1.0% of Proviera tannery products can be used here. No need to add acid (e.g. oxalic) to eliminate or fix residual chromium salts.

Use ProSoak, if final article needs to have waterproof properties.

Use ProSpread, for better dyeing evenness and softness.

Use ProDegreaze, if hides or skins are too greasy.

### •Crust Wetting Back

1.0-3.0% on dried weight of Proviera tannery products can be used here replacing ammonia or surfactants.

Use ProSoak, if final article needs to have waterproof properties or grain is too loose.

Use ProSpread, for better dyeing evenness and softness.

Use ProDegreaze, if hides or skins are too greasy.

### •Dyeing / Fatliquoring

ProSpread 0.5-1.0% of wet-blue weight (1.0-2.0% of dried weight) will help improve evenness of dyeing and fat dispersion without the need for ammonia or dyeing auxiliaries.

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