

Loomix as a supplement to wheat pasture

Two loads of cattle from the same origin were used as control and treatment groups for an investigation in the Panhandle of Texas.

Before the season ended, Loomix consumption was limited by blending with Loomix #5. As a result, Loomix consumption averaged 1.935 pounds per day. In addition, average daily gain from purchase to end of the pasture season was 1.788 pounds and 1.166 pounds respectively for the Loomix and control groups. This is a 0.622 pound per day advantage for Loomix over the negative control group.

The results of this comparison show that Loomix can improve performance and profitability of wheat pastured cattle.

Beef Cattle – Winter Wheat

When there is not any government participation, winter wheat is a crop that can be grazed during the winter months, then allowed to mature and harvested for grain in the early summer.

Grazing value of the wheat used in this way varies depending primarily on the weather. Typically, a large number of light weight cattle will be purchased for wheat grazing.

In “average” years, gains made by cattle on wheat pastures are economical and profitable. However, due to the high moisture content of the growing wheat, and the limited body capacity of the type of cattle typically selected for wheat pasture grazing, gains can be significantly improved by supplemental feeding. Not only are gains improved, financial return is increased.

Due to the fact that rate of gain is dependent on a specific combination of nutrients, light cattle with limited capacity for consumption of high moisture wheat may receive enough protein and energy to support 1 pound of gain, but only enough phosphorus to support .8 pounds of gain, in which case the gain will be .8 lb per day.

Supplying such cattle with one to one-and-a-half pounds daily of palatable Loomix can supply the Phosphorus needed for an added rate of gain. This procedure has resulted in increased gains from .25 to .333 lbs for each pound of Loomix consumed in addition to normal gains from wheat pasture alone.

Under certain conditions, cattle pastured on winter wheat may suffer from wheat poisoning. This is a metabolic disease caused by a lack of Magnesium, which in turn interferes with assimilation of Calcium and phosphorus, and may be fatal. Magnesium can be added to Loomix as an aid in controlling wheat poisoning.

The Loomix used for cattle on wheat pasture should be the most palatable, lowest protein mix available.

Under certain conditions of weather and wheat pasture stage of growth, bloat is common among grazing cattle. Loomix is an excellent vehicle for Poloxalene or similar surfactants, which have proven to control the type of bloat common to cattle grazing wheat pasture.

In certain areas of the United States, wheat is planted to be grazed during its growth phase in the winter months. Many of the cattle selected for this program are light-weight, with relatively small capacity for feed intake. Actively growing wheat is high in nutrients on a dry matter basis, but small cattle can benefit from supplemental nutrients. Loomix has a record of increasing rate of gain and improving profit when fed to light cattle on wheat pasture.

Utilizing Winter Wheat for Cattle Feeding

In most feeding programs, one or more nutrients are present in amounts small enough to limit desired production.

It is possible to identify limiting nutrients by comparing calculated nutrient intake with published recommended nutrient allowances for each specific class of cattle being fed. When limiting nutrients are identified, a decision on the type of supplement to be used to improve intake of the limiting nutrient can be made.

Shown below are recommended daily nutrient allowances published by the National Research Council. Weights shown are season averages, not merely starting weights.

Nutrient	550 lb Calves	750 lb Yearlings	850 lb Shelly Cows
Crude Protein, lbs	1.32	1.54	0.88
NEm, Therms	4.88	6.16	6.89
NEg, Therms*	1.59	2.01	--
Calcium, grams	18	20	11
Phosphorus, grams	16	18	11

* For one pound daily gain. Protein, Calcium and Phosphorus requirements increase with the amount of daily gain

Most cattle grazing on winter wheat are not fed a supplement. However, due to total dry matter capacity, the nutrient intake of light-weight cattle may not be adequate to support desired gains.

Below are shown calculated results from grazing cattle of different classes on winter wheat without supplement:

	Calves	Yearlings	Cows
Lbs/hd/day winter wheat	38	51	78

Calculated Daily Nutrient Intake and Performance:

	Calves	Yearlings	Cows
Crude Protein, lbs	2.28	3.06	4.68
NEm, Therms	4.88	6.16	6.89
NEg, Therms	1.75	3.09	4.85
Calcium, grams	15	21	31
Phosphorus	15	21	31
Calculated Daily Gain, lbs	0.90	1.50	

What Should Cattle on Wheat be Supplemented With

The average dry matter of wheat pasture is only 19.8%, which is lower than recommended for complete cattle feed. Therefore, some added dry matter should be supplementally fed, especially if cattle do not have access to milo or corn stubble in connection with the wheat pasture.

Wheat pasture is adequate in protein, so supplemental protein is not necessary for cattle grazing on Winter wheat. At certain times and under certain conditions, wheat, rye, oats and other small grain plants may contain an unusually large amount of nitrate. In order to avoid nitrate poisoning, wheat pasture supplements should not contain sources of non-protein nitrogen such as urea and ammonium polyphosphates.

All cattle, especially older cattle and cows nursing calves, are apt to suffer from wheat poisoning when grazing on unsupplemented wheat pasture. This disease is caused by a lack of the proper amount of magnesium, which in turn leads to an apparent calcium deficiency. Another cause of this disease is continued lack of sunlight, such as may occur at the time of year when wheat is usually grazed. For this reason, Vitamin D should be supplemented to aid in the metabolism of both calcium and phosphorus when there isn't enough sunlight to provide for normal Vitamin D synthesis.

Even though young cattle rarely show symptoms of wheat poisoning, they should be supplemented with Magnesium and Vitamin D as insurance against the inefficient performance that could result from improper mineral metabolism.

Wheat pasture changes nutritionally at its various stages of growth, and therefore, the ration of the cattle grazing on it is constantly changing.

Constant ration changing, while it may not result in actual sickness, will lead to scouring which lowers the digestive efficiency of the cattle. Added dry matter can decrease the scouring effect of high moisture feed, but the scouring may lead to intestinal inflammation that in turn leads to infection. For this reason, certain groups of cattle should be supplemented with a feed containing an antibiotic specifically for control of intestinal problems.

A short answer to the question about what to supplement with wheat pasture would be: A supplement that is palatable, low in protein and low in nitrate, adds dry matter to the daily ration, supplies minerals deficient in wheat, improves metabolism for better efficiency and increases utilization of nutrients present in the wheat will “Pay for itself in increased gains.”

Why Supplement Cattle on Wheat Pasture?

There are three reasons why supplementally feeding cattle on wheat pasture is practical and economical.

First, the wheat itself is actually lacking some of the nutrients needed for maximum growth and gains.

Second, the season during which wheat is grazed is a time of radical weather changes which result in severe stress to cattle. They need all the nutritional help you can give them to overcome this stress.

Third, as the wheat is grazed down and grows back, its composition continually changes. This leads to bloat, scouring, or both and a supplement can be used to administer materials which can control both bloat and scouring.

Loomix liquid supplements have shown to increase gains by 0.25 to 0.50 pounds a day or more when used with average roughages. They increase gains in several ways:

- a) Supply protein and phosphorus not present in the roughage
- b) Replace roughage as a source of maintenance energy to release more of its energy for gain
- c) Increase appetite for greater roughage consumption
- d) Increase fiber digestibility by up to 34% over high molasses supplementation.

Yearlings on wheat pasture supplemented with Loomix gain an additional 1/3 lb per pound of Loomix:

Additional weight gain for yearlings on Loomix: $1/3 \text{ lb/hd/day} \times 1.5 \text{ lb/hd/day} = 0.50 \text{ lbs/hd/day}$

Value of additional weight gain: $0.50 \text{ lb/hd/day} \times \$1.00/\text{lb} = \$0.50/\text{hd/day}$

Cost of Loomix supplementation: $\$0.14/\text{lb} \times 1.5 \text{ lb/hd/day} = \$0.21/\text{hd/day}$

These calculations represent a 238% return on investment!