



# GREAT RESULTS BRING SUCCESS

## Alfalfa – 3<sup>rd</sup> and 4<sup>th</sup> Cut – Oakview Dairy (Tulare, CA)

3<sup>rd</sup> Cut: Northerly 35 acres received 100 ml/acre of Penergetic p. Compared to South Side (Control), Penergetic treated had (marginally) higher yield and higher grade (= \$20.00 higher value per ton) for an ROI of 2.74:1. 4<sup>th</sup> Cut: This time, the previous Control field (South Field) received 100 ml/ac. It was compared to the previously treated North Field (not treated this time). Result: Newly treated South Side produced 19.77 tons more (41% more) alfalfa for an ROI of 8.37:1.



## Alfalfa – 3<sup>rd</sup> and 4<sup>th</sup> Cuttings (Tonapah, NV)

3<sup>rd</sup> Cutting: Two alfalfa pivots (in 6th year of production) were treated with 100 ml/ac. of Penergetic p 20 days prior to being cut. Result: Penergetic treated pivots were only ones to receive Excellent rating (others rated Very Good). 4<sup>th</sup> Cutting: despite Penergetic p not being reapplied, the Penergetic residual effect resulted in these two (older) pivots producing ¼ ton more alfalfa per acre than the other (untreated) pivots. Operator observations: "The Penergetic treated fields had more leaves per plant and were noticeably darker green in color. We estimate the ROI at 6 to 1."



## Alfalfa – 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> Cuttings (Wendell, ID)

An irrigation pivot was divided in two. The west half (65 acres) was treated with Penergetic p (100 ml/ac.) before the 1<sup>st</sup> and 2<sup>nd</sup> cuts, but not prior to the 3<sup>rd</sup> cut. Results: over the three cuttings, the side treated with Penergetic produced 1 ton more per acre and consistently was 2.0 pts. higher in crude protein and higher in RFV. Based on yield (alone) this trial had an ROI of 15 to 1. If the higher grade (from higher RFV) is factored in the ROI increases further.

[See detailed results for more trial specific data.]



## Alfalfa – 3<sup>rd</sup> Cutting (Montana)

Side-by-side 135 acre pivots – treated and untreated. Penergetic p applied at 100 ml per acre through the pivot (using a chemigation tank) 25 days prior to 3<sup>rd</sup> cutting. Penergetic treated pivot yielded 47% more alfalfa for an ROI of 8.3 to 1.



## Alfalfa – 1<sup>st</sup> Year, 1<sup>st</sup> Cut (Paul, ID)

New crop of alfalfa grown under irrigation. Penergetic treated portion received 200 g/ac. of Penergetic k and 100 g/ac. of Penergetic p by field sprayer. Penergetic treated portion yielded 805 lbs. more per acre (32.5% more). The RFV and crude protein were also higher.



## Alfalfa – Eastern Washington

140 acres pivot – a portion of which was treated with Penergetic k (100 g/ac) and Penergetic p (100 g/ac) – was compared to a Control section of the same pivot. When walking the field, the Penergetic dealer noticed the alfalfa leaves in the Penergetic-treated section were noticeably greener and larger in size than the Control section. Plus the Penergetic crop was a much thicker stand. At the time of harvest, these earlier visual observations (during the growing season) were borne out, in terms of production, in that the Penergetic-treated portion produced an extra 0.46 tons / acre (or 26.3% more) alfalfa.



## Alfalfa – 4<sup>th</sup> Cutting (Wendell, ID)

Penergetic p ULTRA applied at 115 g/ac. prior to 3<sup>rd</sup> cutting. 3<sup>rd</sup> cut results not documented, yet residual effect of product on 4<sup>th</sup> cutting revealed higher yield, crude protein and RFV.



## Alfalfa – Dryland Field (Fairfield, ID)

"I used the Penergetic P product on half a 70 acre alfalfa field, 40 days before harvest. At harvest, the leaves on the treated plants were the size of nickels vs. the size of a pencil head eraser on the untreated plants. Lab testing confirmed what I was seeing out in the field, the treated sample was over 2.6 pts higher in protein! I also used the Penergetic P as a seed treatment on a small 16 acre field of newly planted alfalfa. I've never seen plants come out of the ground that quickly and just about every seed in the field sprouted! It's one of the greenest dryland alfalfa fields in the valley."

JR McMurdo, owner/operator



## Mixed Grass–Alfalfa (Southern Alberta)

A lower fertility (sandy gravel) parcel was sprayed with Penergetic k (200 g/ac. twice – Fall & Spring) and 100 g/ac. of Penergetic p (at 4" – 5" stage). The Control field was more productive alluvial river bottom land. At harvest the Penergetic treated field provided 0.93 tons more/acre (38% more) and other parameters (ADF, NDF, crude protein and RFV) were all more favourable. The operator expressed surprise in that the Penergetic treated field had always been less productive. Also, where the Penergetic was used, the grass blades were noticeably thicker and wider than in the Control field.



# Penergetic is a “no-brainer” to use on alfalfa

As the results on the previous page showed, Penergetic use consistently produces positive results – in terms of increased production (yield) and quality (e.g. protein and RFV) and provides for an attractive Return on Investment (ROI).

If you grow alfalfa, you owe it to yourself to experience the Penergetic difference. It is economical and easy to use – can be applied by field sprayer, irrigation pivot or (even) flood irrigation. Furthermore, once you see the results on alfalfa you will want to try it on all your other crops.

As the photo opposite illustrates Penergetic-treated alfalfa produces large, healthy dark green leaves. Whereas, as the aerial view (from a drone) below shows, the Penergetic difference is also even readily visible.



In this aerial view, of a farm in Central California, the field in the upper left has always being less productive for alfalfa production than the Control field (in lower right). Yet, with Penergetic p applied (at 100 ml/ac.) – as is obvious to the naked eye – the (formerly) lower fertility, Penergetic-treated field, now outperforms the Control field.



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On a farm in Central California, the field in the upper left has always been less productive for alfalfa production than the Control field (in lower right). Yet, with Penergetic p applied (at 100 ml/ac.) – as is obvious to the naked eye – the formerly lower fertility Penergetic-treated field now outperforms the Control field.

## PENERGETIC K (SOIL ACTIVATOR) CAN PLAY A KEY ROLE IN REHABILITATING DAMAGED AND PROBLEMATIC SOILS

Forage producers often also raise livestock. Usually, livestock manure is field applied on these forage crops. Provincial Environmental agencies regulate the quantity of manure – notably Phosphorus (P) and Nitrogen (N) levels permitted to accumulate in these fields.

Penergetic k (Soil Activator) can help reduce high P and N levels in soils to more manageable levels. As shown below, Penergetic k applied at a rate of 600 grams/acre, over a 10 month span, reduced **Phosphorus by 41% and Nitrogen by 69%**. [Soluble salts also fell by 19%.]

	PHOSPHORUS (ppm)	NITROGEN (ppm)	SOL. SALTS (mmha/cm)
UNTREATED	470	42	0.58
TREATED	283	13	0.41
Difference	-187	-29	-0.17

A companion product (Penergetic g – for liquid manure treatment) aids further in making manures more soil and plant friendly (and less noxious to the environment).



The alkali (white) soil, shown in the upper inset, had not grown a crop in the past 30 years. Yet, in late July 2015, 800 grams/acre of Penergetic k (Soil Activator) was spray applied. The following year (July 2016) 1.0 ton/acre of alfalfa was harvested from the same land. Alkaline soil is a problem in much of the western half of the U.S. and Canada. At this southern Alberta farm and elsewhere Penergetic k has demonstrated its ability to rehabilitate such damaged (unfertile) soils.



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