

Regional Mixes for Southwest Hays

The three Arizona mixes (AZ Regional, AZ First Balance and AZ Copper Complete) were formulated by Patti Woodbury Kuvik of **Desert Equine Balance** and are manufactured and sold by HorseTech, maker of quality flax-based supplements. Although they are called "Arizona" mixes, these supplements are appropriate for most Southwest/California hays and are actually used with good results across the United States and Canada. California Trace is a supplement developed and used by California trimmer Sally Hugg

<i>"Standard" Servings are for an 880-1100 lb Horse at Maintenance eating 15-22lbs (7-10kg) forage per day (approx 1.7 - 2% body weight)</i>					
	AZ Regional Mix CP-082305	AZ First Balance CP-051506	AZ Copper Complete MS062010	California Trace www.californiatrace.com	California Trace Plus www.californiatrace.com
<i>Standard serving size</i>	3 oz (85 grams)	5 oz (142 grams)	5 oz (140 grams)	2 oz (56.8 grams)	4 oz (114 grams)
Cobalt	2 mg	2 mg	2 mg	--	5 mg
Copper	125 mg	150 mg	260 mg	175 mg	300 mg
Zinc	360 mg	450 mg	720 mg	500 mg	750 mg
Manganese	--	200 mg	200 mg	--	--
Iron	--	--	--	--	--
Magnesium	--	--	5 grams	--	--
Selenium	2 mg	2 mg	2 mg	2 mg	2 mg
Vitamin E	2,000 IU	4,000 IU	4,000 IU	750 mg	1,950 IU
Iodine	Not added	2 mg	4 mg	2 mg	3.5 mg
Vitamin A	15,000 IU	15,000 IU	15,000 IU	15,000 IU	15,000 IU
Biotin	10 mg	20 mg	20 mg	20 mg	20 mg
Chromium	--	--	4 mg	--	--
Lysine	--	10 grams	10 grams	7 grams	10 grams
Methionine	--	3 grams	3 grams	2.5 grams	3.5 grams
Threonine	--	--	2 grams		5 grams
Grapeseed Extract	1200 mg	1200 mg	--	--	--
B-complex	Included	Included	Included	--	Yeast culture
NutraFlax Base	2 oz Flax	3 oz Flax	2.5 oz Flax	Rice bran, almond hull meal, pelleted	Yeast culture, rice bran
EFA's (Ω-3's)	≈14 grams	≈21 grams	≈18 grams		

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<i>Per Day Cost Based on "Standard" Serving</i>					
	AZ Regional Mix CP-082305	AZ First Balance CP-051506	AZ Copper Complete MS062010	California Trace www.californiatrace.com	California Trace Plus www.californiatrace.com
Size (lbs)	25	25	25	25	25
Price per 25 lbs	\$103.95	\$104.95	\$106.95	\$95.00	\$125.00
Cost per ounce	\$0.26	\$0.26	\$0.267	\$0.2375	\$0.3125
Serving size oz	3 oz (85 grams)	5 oz (142 grams)	5 oz (140 grams)	2 oz (56.8 grams)	4 oz (114 grams)
# Servings-25 lbs	133.3	80.0	80.0	200	100
Cost per day	\$0.78	\$1.31	\$1.33	\$0.57	\$1.25
<i>HorseTech Club Member Cost (5% discount)</i>					
Price per 25 lbs	\$98.75	\$99.70	\$101.60	<i>Purchase directly from California Trace</i>	<i>Purchase directly from California Trace</i>
Cost per ounce	\$0.259	\$0.259	\$0.254		
Serving size oz	3 oz (85 grams)	5 oz (142 grams)	5 oz (140 grams)		
Cost per day	\$0.74	\$1.25	\$1.27		

Notes

*When comparing costs, note that there are differences in nutrients included, concentration and serving size, and the additional nutrients that need to be added separately. AZ Regional and California Trace are the most basic; AZ Copper Complete is the most comprehensive. (*AZ First Balance cost based on price when last ordered which was before a general price increase; please call for price before ordering.)*

B-complex vitamin package when included is equivalent to a one ounce serving of HorseTech's B-Plex

AZ Regional, AZ First Balance and California Trace provide approximately 125-150% of NRC minimum for copper and zinc. AZ Copper Complete and California Trace Plus are high copper supplements designed to counter the high iron found in many Western/Southwestern hays. They reflect the results of analyses of mainly Bermuda (but also other varieties including Alfalfa and Timothy) hays found in Arizona/California, which includes hay originating throughout AZ as well as California's Imperial Valley and Colorado.

Horses with poor hoof quality may benefit from the higher copper/zinc levels in the AZ Copper Complete and California Trace Plus formulas. The addition of amino acids (lysine, methionine and Threonine) in the AZ Copper Complete and California Trace may also be beneficial.

None of these mixes will provide a perfect "balance" for your hay/forage. For optimal nutrition, hay analysis and custom supplements based on the results are always the first choice.

<i>The Following Additions are Recommended:</i>					
Additions to be fed	AZ Regional Mix CP-082305	AZ First Balance CP-051506	AZ Copper Complete MS062010	California Trace*	California Trace Plus*
Flax	Contains 2 oz: an additional 2-4 ounces is optional	Contains 3 oz: an additional 2-3 ounces is optional	Contains 2.5 oz; an additional 2-4 ounces is optional	Not included, I would recommend 2-4 oz for horses on hay only	Not included, I would recommend 2-4 oz for horses on hay only
Magnesium	May add 5-10 grams with untested hay.	May add 5-10 grams with untested hay.	Contains 5 gm; an additional 1-5 grams is optional	May add 5-10 grams with untested hay.	May add 5-10 grams with untested hay.
Vitamin E	Contains 2,000 IU Additional E may be desired in some situations	Contains 4,000 IU Additional E may be desired in some situations	Contains 4,000 IU Additional E may be desired in some situations	I would add additional vitamin E to bring total to minimum 2,000 IU	Contains 2,000 IU Additional E may be desired in some situations
Salt A plain white salt block should be available at all times.	Add 1-3 oz plain or iodized salt Provide plain white salt block	Add 1-3 oz plain or iodized salt Provide plain white salt block	Add 1-3 oz plain salt Provide plain white salt block	Add 1-3 oz plain or iodized salt Provide plain white salt block	Add 1-3 oz plain or iodized salt Provide plain white salt block
Iodine	From iodized salt (if intake is sufficient) or from Source.	Contains 2 mg iodine. This is at the low end of requirement, may add additional.	Contains 4 mg iodine. May use iodized salt to boost this level.	Contains 2 mg iodine. This is at the low end of requirement, may add additional.	Contains 3.5 mg iodine. May use iodized salt to boost this level.

***California Trace and California Trace Plus** are formulated by Sally Hugg and are sold through her website at <http://www.californiatrace.com/index.html>.

The following notes are based on 850-1100 lb "average" horse receiving a "standard" serving of the above supplements.

Flax – 2-6 ounces provides adequate Omega-3. Horses on pasture full time probably receive adequate Omega-3; hay fed horses should receive flax.

Magnesium – With untested hay, I generally do not exceed 10 grams magnesium and would stay with 5 grams for "healthy" horses (horses without metabolic issues such as IR or EPSM/PSSM). AZ Copper Complete contains 5 grams of magnesium. Additional may be added up to total of 10 grams but hay analysis is advised.

For an IR horse, you can slowly adjust up to 10 grams based on response (crest, manure consistency). Some EPSM/PSSM symptoms may respond to higher levels of magnesium; this should be individualized.

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HorseTech Magnesium Oxide - 5 grams would be 1 rounded scoop (a level scoop is approximately 4.5 grams), 10 grams would be two rounded scoops.

If using teaspoons/tablespoons – a level tablespoon of magnesium oxide supplies approximately 8 grams of magnesium. A level teaspoon supplies approximately 3 grams (and no, when I researched weight/volume, 3 teaspoons did **not** equal 1 tablespoon).

Vitamin E – The vitamin E in the AZ mixes should remain stable in HorseTech mixes up to 3-4 months. Horses on full time pasture normally receive adequate vitamin E; hay fed horses should be supplemented year round.

Horses with EPSM/PSSM symptoms may benefit from higher levels of vitamin E (up to 10,000 IU for large drafts or warmbloods). Natural vitamin E capsules with an oil base are preferred for better absorption.

Salt – 1 to 3 oz plain or iodized as indicated in chart - these are levels required for maintenance - horses in work will require more. Do NOT use mineral salt, or mineral salt blocks. One ounce salt is approximately 4 teaspoons. 2 oz is approximately 8 tsp (or slightly less than 3 Tbsp). Plain bulk salt can be purchased at Costco, Sam's Club and, sometimes, at bakeries. Some feed stores carry plain and iodized salt, read labels carefully. A plain white salt block should be available at all times.

Iodine – AZ Copper Complete contains adequate iodine for maintenance and work for horses eating up to 24 lbs or so of hay. Larger horses eating more hay will also use a larger serving of supplement so should receive adequate iodine. The iodine in AZ First Balance is at the low end for maintenance. For an average horse add additional iodine from iodized salt or Source. I like using Source (original meal) for additional iodine. There are some circumstances when it may be beneficial to increase iodine supplementation, such as high nitrates in hay or high levels of perchlorate in water.

See the "measure" files at <http://www.desertequinebalance.com/Files> for detailed information on measuring minerals, salt and Source/iodine.

Ordering: To order any of the Arizona Mixes, call HorseTech at 1 (800) 831-3309 or email service@horsetech.com.

Specify the CP or MS number of the product you wish to order along with the product name.

AZ Regional Mix and AZ Copper Complete can be ordered directly from HorseTech's "Popular Custom Products" page at

<http://www.horsetech.com/popular-customs.htm#Quick%20Links%20to%20Product%20Pages>

Custom Regional mixes are available in 25 lb buckets, which range from 80 to 140 standard servings depending on concentration. There are no added shipping charges – shipping is included in the price of the supplement. They are also available in larger quantities - but I suggest ordering only enough for three months at a time to ensure freshness.

To order California Trace or to contact Sally Hugg go to her website at <http://www.californiatrace.com/index.html>.

To obtain HorseTech's 5% discount (which applies to all products you order from HorseTech – you need to become a HorseTech Member.

Go to <http://www.horsetech.com/member-id.htm#Quick%20Links%20to%20Product%20Pages> (or scroll down to the "Become a HorseTech

Member" bar at the bottom of the HorseTech home page <http://www.horsetech.com>).

Questions?

Contact Patti Woodbury Kuvik DesertEquineBalance@gmail.com.

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When adjusting the amount of supplement fed up or down, consider both horse's weight and amount of hay eaten daily. This is not an "exact" science. Feeding less than the recommended amounts will have less benefit; feeding more is wasteful. Though not usually advised, the recommended amounts to be fed can be safely doubled for the weights shown and still remain well below NRC maximum tolerable levels.

<i>Feeding Recommendations - total amount to be fed per day (based on forage fed at 1.5 to 2% of BW)</i>						
Horse's Weight	Hay or Forage Lbs/day	AZ Regional Mix CP-082305	AZ First Balance CP-051506	AZ Copper Complete MS062010	California Trace	California Trace Plus
1600-1800	32-36	6 oz (56 grams)	10 oz (280 grams)	10 oz (280 grams)		
1400-1600	28-32	5-6 oz	9 oz (252 grams)	9 oz (252 grams)		
1200-1400	24-28	4-5 oz	8 oz (224 grams)	8 oz (224 grams)		
1050-1200	20-24	4 oz	7 oz (196 grams)	7 oz (196 grams)		
950-1100	18-22	3-4 oz	6 oz (56 grams)	6 oz (56 grams)		
880-1100	16-22	Standard Serving 3 oz (85 grams)	Standard Serving 5 oz (142 grams)	Standard Serving 5 oz (140 grams)	Standard Serving 2 oz (56.8 grams)	Standard Serving 4 oz (114 grams)
700-900	14-18	3 oz	4-5 oz (112-140 grams)	4-5 oz (112-140 grams)		
600-750	12-15	2-3 oz	4oz (112 grams)	4oz (112 grams)		
450-600	9-12	2-3 oza	3.5oz (98 grams)	3.5oz (98 grams)		
300-450	6-9	1-2 oz	2-3oz (56-84 grams)	2-3oz (56-84 grams)		
200-300	4-6	1-2 oz	1-2oz (28-56 grams)	1-2oz (28-56 grams)		
< 200	< 4	1 oz	1oz (28 grams)	1oz (28 grams)		

*All supplements and feeds should be stored in a cool dry environment to ensure continued potency of ingredients.
Always have fresh water and a plain white salt block available.*

~ THERE ARE NO MAGIC BULLETS IN EQUINE NUTRITION ~