Kachemak Kelp/Sea to Sprout
2026 Biostimulant Application Protocol/Recommendations - Pasture

Updated 7/8/26

Big-picture strategy for Kenai Peninsula soils and pasture development

Kenai Peninsula agricultural soils are often shallow, low in organic matter, and can be low in N and P, with drainage and pH issues depending on site history. Biostimulants and fertilizers have different modes of action, and for pasture development are best used together. Biostimulant will help with **root development, stress tolerance, and nutrient uptake** when used in concert with a baseline fertility program (manure, compost, and/or fertilizer) because kelp products are not a full NPK source.

Sea to Sprout should be used as a **biological "primer"** layered on top of your fertility and cover crop design.

GENERAL APPLICATION GUIDELINES

- Dilute 1:100
- Standard application ½ quart/acre
- Apply at the recommended dilution every 1–4 weeks during active growth.
    - Every 1–2 weeks during establishment or periods of plant stress
    - Every 3–4 weeks in stable growing conditions
- Seeds: Soak 8–24 hours before planting to support strong germination.
- Transplants: Dip seedlings at transplant to help reduce shock.
- Sea to Sprout can be applied on its own or alongside regular fertilizer protocol as part of your regular plant care routine. Biostimulants and fertilizers have different modes of action, so will not overwhelm plant or soil biology, and can act synergistically. For best results, apply at the recommended dilution during key growth stages, especially during establishment and periods of environmental stress.

Timing Best Practices

- Apply early morning or late afternoon to minimize leaf burn and maximize absorption
- Avoid application during extreme heat (>85°F/29°C)
- Apply 3-5 days before anticipated stress events (drought, temperature extremes.

Spray Volume Considerations

- Ensure adequate coverage: spray until runoff for optimal foliar uptake
- Use finer droplet size (200-300 microns) for better leaf adhesion
- Include non-ionic surfactant (0.1-0.25% v/v) to improve coverage if needed

Storage and Handling

- Store concentrate in cool, dark location
- Mix fresh spray solution for each application
- Use mixed solution within 24 hours for best results

Sea to Sprout 2026 field test application protocol - Pasture:

For reclamation of existing nutrient-poor pasture:

Goal: To stimulate and deepen root systems in fescue/brome/timothy and gradually improve soil function.

1. Timing

- Start as soon as there is active green growth and soil temps are consistently above ~40–45°F (late April–May, site-specific).
- Continue **every 2 weeks during the first season** because this is "reclamation" (stressed stand), then shift to every 3–4 weeks in later years once the pasture is more stable, keeping 1:100 dilution.[4][6]

2. Application method

For pasture, most value will come from **foliar + light soil contact**:

- Use 1:100 dilution at **0.5 quart/acre product** in enough carrier water to get **even coverage of the canopy** (typically 10–30 gal water/acre, depending on sprayer).
- Apply **late afternoon or during overcast days** to reduce UV degradation and leaf burn risk and to maximize stomatal uptake.
- Avoid spraying right before a heavy rain so it has time to absorb rather than wash off.

3. Integration with fertility

- If broadcasting composted manure or a granular N source for pasture renovation, keep **kelp as a separate pass or in a liquid blend**, applied **after** you have some active regrowth to stimulate physiological response (not bare soil).

Newly plowed and planted fescue, brome, timothy + field pea cover crops

Use one or all of **three modes**: seed, in-furrow/soil, and foliar.

1. Seed and inoculant stage (if practical for scale, otherwise skip to post-emergence (2))

- **Grass seeds**: If practical, pre-plant soak 8–12 hours at standard dilution can improve early vigor and root development.
- **Field peas**:
    - Inoculate seed per label.

- If soaking pea seed, limit to 2 hours and let the seed surface dry to tacky before adding inoculant (so don't drown rhizobia).

2. At/just after planting (soil contact)

- On **newly plowed ground**, it is valuable to get kelp to the **upper root zone** to help with microbial and root response:
  - Using a sprayer, apply after seeding but before emergence, at 1:100, 0.5 qt/acre, in enough water to lightly wet the soil surface.
  - Alternatively, if any in-furrow or drill-mounted liquid capability, apply in-furrow at the same dilution and rate.

3. Establishment foliar program (critical for first season)

For a fescue/brome/timothy + pea mix:

- Begin foliar applications when seedlings have **at least 2–3 true leaves** and are clearly photosynthesizing (for grasses and peas).
- During the establishment period (first 6–8 weeks after emergence), follow more intensive application:
  - **Every 1–2 weeks**, 1:100 dilution, 0.5 quart/acre, again in 10–30 gal water/acre. Frequent low doses are supported as more effective than infrequent heavy doses on turf and forage systems using kelp.

Focus these early applications on:

- Right after **germination and early tillering** of grasses.
- Around **nodulation and early vining** for peas (when you see early tendrils and branching).

Once the stand is well-rooted and canopy closes, back off to **every 3–4 weeks** while conditions remain favorable.

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4. Using stress periods to time "extra" applications - to improve cold and drought tolerance and plant resilience.

- **Cold snaps and frost events** after green-up.
- **Droughty spells on sandy/gravelly ground** or compaction-related waterlogging on heavier sites.
- **Late-season heat spikes** or unusually dry periods.

Treat **every 1–2 weeks during stress**; for example:

- If you expect a frost event, apply 3–5 days before as a foliar spray to prime stress-response pathways.
- After any visible stress (wilting, chlorosis, frost damage), an immediate follow-up application at the standard rate can help recovery.

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5. Simplified operational schedule

For **year 1, new plowed field with grass + pea cover**:

- Pre-plant: optional seed soak trial; ensure friendly with pea inoculant practice.
- At planting or just after: 1 pass with 1:100, 0.5 qt/acre onto soil surface or in-furrow.
- Early establishment (0–8 weeks post-emergence): foliar every 1–2 weeks at 1:100, 0.5 qt/acre.
- Mid-season (stand fairly stable): every 3–4 weeks until senescence or grazing.
- Extra passes: target just before or after forecast stress events.

For **degraded existing pasture**:

- Initiate in spring at green-up.
- First season: foliar every 2 weeks through active growth to help roots and tillering.
- Subsequent seasons: every 3–4 weeks, plus any stress-timed passes.
- Layer with your chosen fertility amendments based on soil testing and UAF forage recommendations

References

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