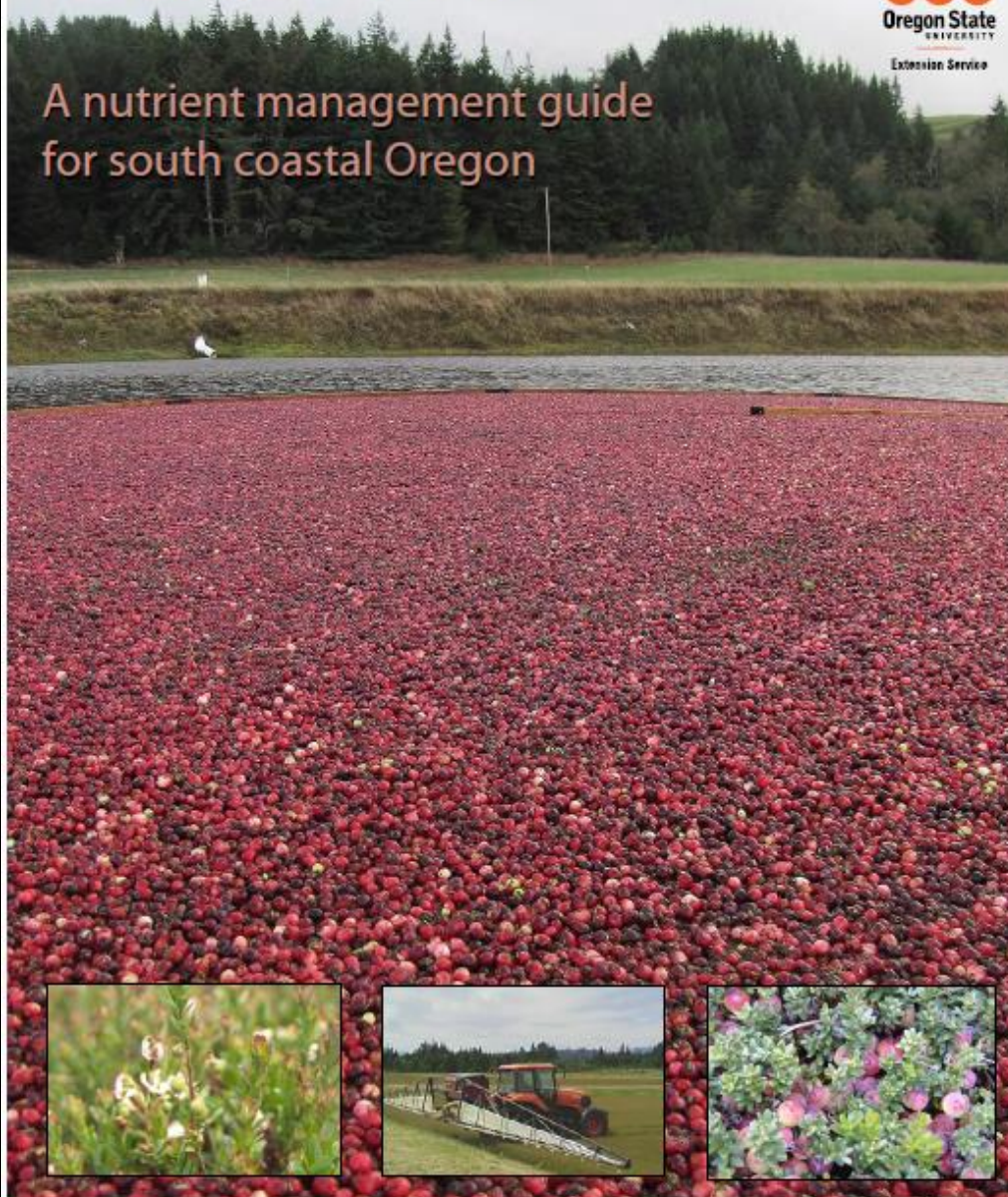


Cranberries



A nutrient management guide
for south coastal Oregon



Lord of the Bog; a cranberry trilogy

(why is this thing so long?)

- “Inherited” the revision
- 20+ years of work with cranberries
- The pivotal piece—your questions

Guide was written with help:

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What's new and what's not?

- Perpetual questions about fertilizer
 - How much to apply
 - When to make the application
 - Source to use
 - Method of application

Some of the new stuff

- Summary on page 3
- Cranberry plant growth on page 5

How does the cranberry plant grow?

Cranberry is a low-growing plant that produces stolons (runners). Along the length of the stolons, buds produce leafy shoots known as uprights. The initial uprights generated on a stolon produce roots to anchor the uprights to the soil. These uprights are vegetative, bearing no fruit or flowers. Once the upright population is established, each upright produces a terminal bud in midsummer. These buds are either vegetative or mixed floral/vegetative (Figure 4).

The terminal buds overwinter and begin growth of a new upright segment in the spring. Vegetative buds produce vegetative (nonflowering) uprights (U_N), and mixed buds produce flowering uprights (U_F).

Flowering uprights bear flowers that may become fruit, as well as leafy growth above the flowers or fruit. The leaves above the flowers on U_F are the primary source of the carbohydrates that will move into

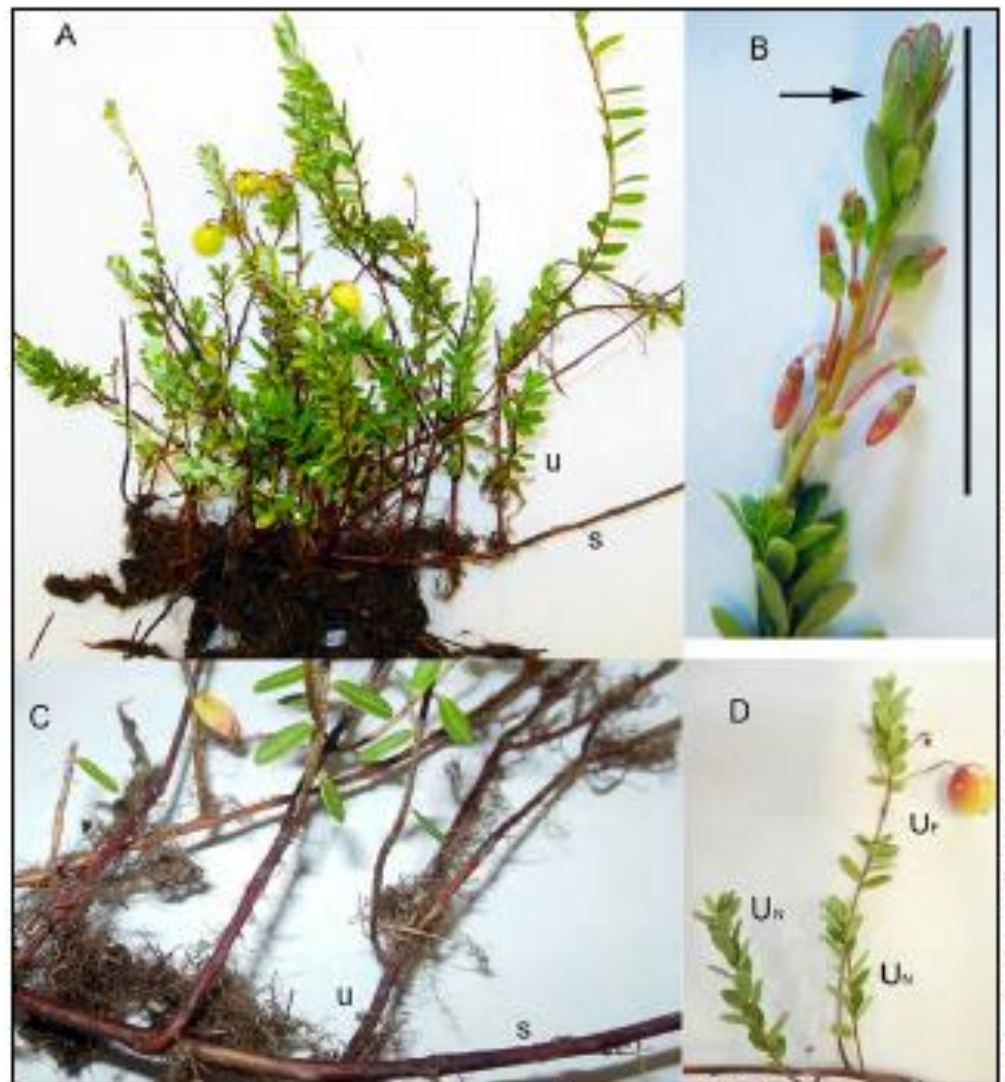


Figure 4.—(A) Stolons (s) give rise to uprights (u) and a fibrous mat of roots. (B) Flowering upright with unopened flowers. The vertical line shows current-year growth; below is previous-year growth. The arrow indicates leafy growth that will provide carbohydrates to developing berries. Upright length (total new portion above the flowers) can help determine whether nitrogen nutrition is adequate. (C) Uprights (u) growing from a stolon (s). Note fibrous roots. (D) Vegetative (U_N) and flowering (U_F) uprights.

Some of the new stuff

- Annual nutrient removal on page 7

Table 2.—Estimate of nutrients removed from a cranberry bed annually.^{1,2}

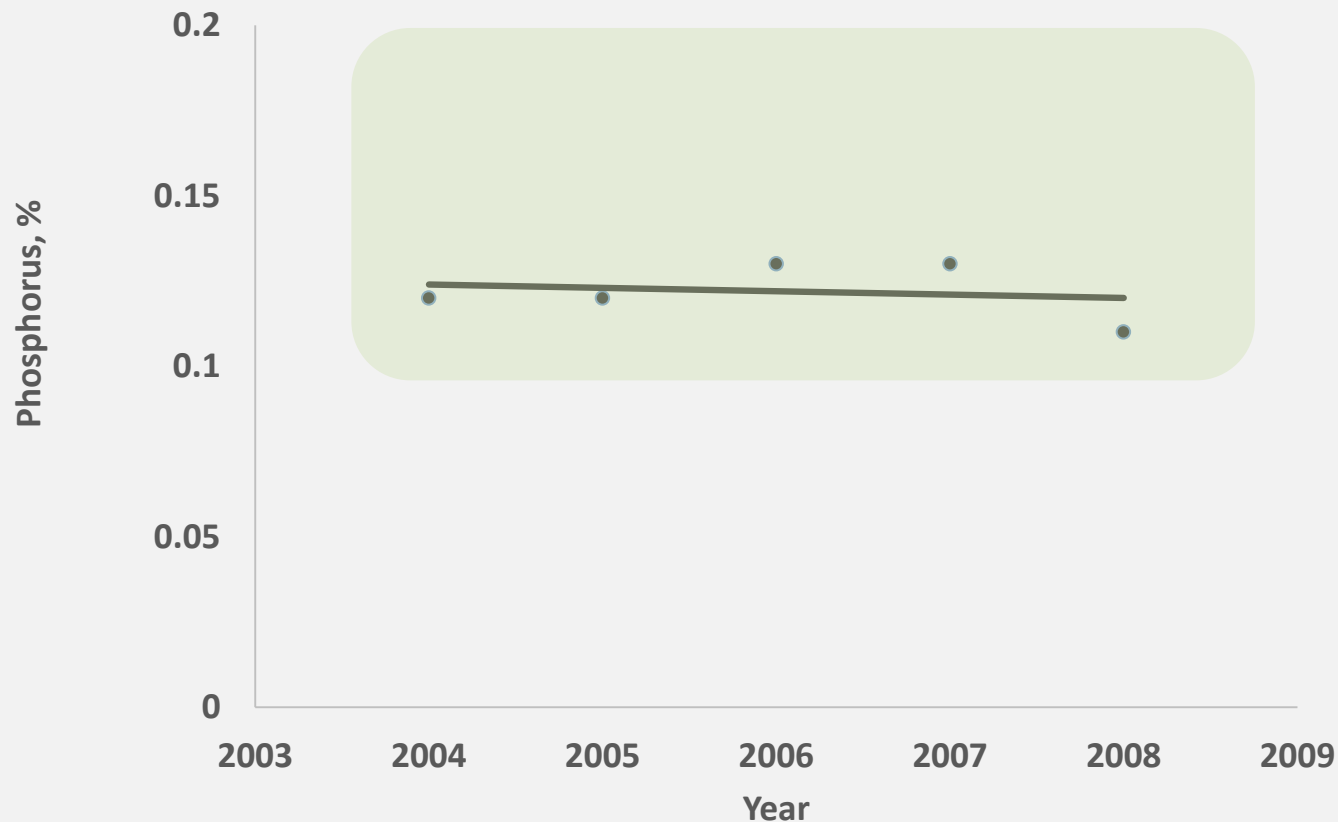
Component	Weight (lb/a)		Concentration or amount															
	Wet	Dry	N		P		K		S		Ca		Mg		B		Zn	
			(%)	(lb/a)	(%)	(lb/a)	(%)	(lb/a)	(%)	(lb/a)	(%)	(lb/a)	(%)	(lb/a)	(%)	(lb/a)	%	(lb/a)
Fruit	25,000	3,000	0.45	13.5	0.07	2.1	0.85	25.5	0.1	3	0.075	2	0.055	1.7	0.004	0.12	0.002	0.07
Pruned vines	500	275	1	2.8	0.2	0.55	0.55	1.5	0.2	0.6	0.75	2	0.27	0.7	0.004	0.01	0.002	0.01
Harvest trash	—	2,300	0.7	16.1	0.1	2	0.17	3.9	0.05	1.2	0.75	17	0.15	3	—	0	0.002	0.05
Total	—	5,575	—	32	—	5	—	31	—	5	—	21	—	5	—	0.13	—	0.13

¹Assumes pruning of 500 lb vines/a and harvest of 250 bbl fruit/a.

²Data from DeMoranville (1992).

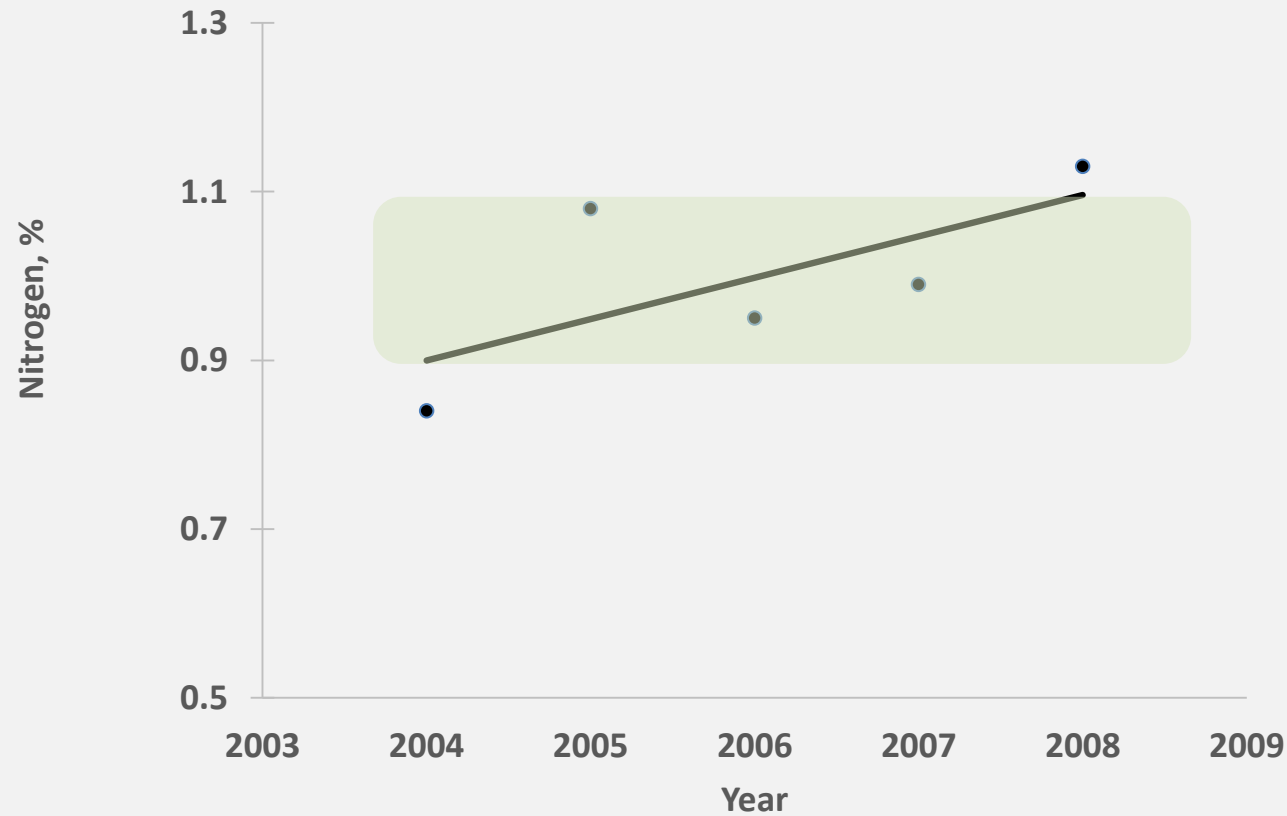
Some of the new stuff

- Interpretation of leaf analysis-page 14



Some of the new stuff

- Interpretation of tissue or leaf analysis



More new stuff

Harvest date and storage interactions

Delaying harvest from late September or early October to mid-November increased berry weight, °Brix (percent soluble solids), anthocyanin content, and yield. Waiting until late November to harvest fruit reduced berry weight and yield, while increasing the incidence of fruit rot.

For most harvest dates, °Brix increased after 3 weeks of storage. Increased °Brix was not related to desiccation, as berry weight did not decline during this time. Storage did not change anthocyanin content for most harvest dates. Physiological damage and rot increased after storage, particularly in the latest harvested fruit (Figure 16) and in fruit stored at room temperature.



Bernadine Stnk, © Oregon State University

Figure 16.—'Stevens' cranberries held for late harvest. Photo taken in early November For late-harvested cranberries, careful N management is required to ensure fruit quality during storage.

Appendices are new

- Estimating cranberry yield
- N fertilization and yield components
- Considerations-interpretation soil tests
- Nutrient detective; yield and P

Appendices are new

- Reducing K for cranberry production
- Gypsum application and cranberry crunch
- Fertilizer for bed establishment

Quiz Time

How much N is needed for berry production this year? (16)

Answer: None

Quiz Time

How quickly after application does N enter the cranberry plant? (19)

Answer: Within 24 hours

Quiz Time

True or False? Potassium chloride (KCl, muriate of potash, 0-0-60) should not be used to supply K for cranberry production? (27)

Answer: False

Quiz Time

True or False? Most, maybe all, of the potassium from a KCl (muriate of potash) application through the sprinkler system is taken into the cranberry plant via the roots (27+ 28)

Answer: True

**Wishes for a productive
and profitable time in
2015**

Happy Reading!