DEPARTMENT OF FOOD AND AGRICULTURE
PROPOSED AMENDMENT OF THE REGULATIONS

Title 3, California Code of Regulations
Section 3899 Schedule 1

INITIAL STATEMENT OF REASONS/
PLAIN ENGLISH POLICY STATEMENT OVERVIEW

Description of the Public Problem, Administrative Requirement, or Other Condition or Circumstance the Regulations are Intended to Address

Under the California Food and Agricultural Code (FAC) 52332 (a), the Secretary of Agriculture, by regulation, may adopt a list of the plants and crops that the Secretary finds are or may be grown in California. The list of plants and crops is located in Title 3 California Code of Regulations (CCR) section 3899, Schedule I subsection (a) Agricultural Seed, and subsection (b) Vegetable Seeds. The proposed amendments to Schedule I are intended to update the list, to harmonize the list with Federal seed regulations and to reflect changes in agricultural practices.

Specific Purpose and Factual Basis

The specific purpose of section 3899, Schedule I, is to identify and designate certain seed or propagules of plants that may be sold and grown in agriculture. The purpose of this amendment is to update the list to reflect the form of the crop seed list used by the Department seed laboratory and the national current standards. By harmonizing this regulation with the industry standard, we avoid ambiguity and ensure compatibility with standards followed by other states.

General Amendment:

- Fix typographic and formatting errors in the current list
  - Replace FNa1 with *
  - Add space between species epithet and the authority
Correct spelling error: Mat bean (*Vigna aconitifolia*), Amaranth (*Amaranthus* spp.), Yellow bluestem (*Bothriochloa ischaemum*), Large hop clover (*Trifolium campestre*), Guayule (*Parthenium argentinatum*), Heron’s bill, Blue lupine (*Lupinus angustifolius*), Blue panicgrass (*Panicum antidotale*), Sourclover (*Melilotus indicus*), White sweetclover (*Melilotus albus*), Veldtgrass (*Ehrharta calycina*), Sweet basil (*Ocimum basilicum*), and Cumin (*Cuminum cyminum*)

Remove extraneous cross-referencing:

- See also: Castorbean, Horsebean, Soybean, Velvetbean (located between list of beans and list of beets on Schedule I(a))
- Buckhorn plaintain: see plaintain
- See also: Alyceclover, Burclover, Sourclover, Sweetclover (located between list of clover and list of corn)
- Foxtail millet: See Millet
- See also: Chickpea
- Grasspea, Pigeonpea, Roughpea, Tangier pea (located between the list of peas and the peanut)
- Proso millet: See Millet (located between Popcorn and Poa trivialis)
- See also: Wildrice (located between Rice and Ricegrass, Indian)
- See also: Horsebean, Soybean (located between list of beans and list of beets on Schedule I(b))

Added common names:

- Horsebean: Fava bean, Windsor bean
- Subclover: Subterranean clover
- African millet: Ragi millet
- Guineagrass: Green panicgrass
- Rough bluegrass: Poa trivialis
- Annual ryegrass: Italian ryegrass
- Cowpea: Southernpea
- Monantha vetch: Single flower vetch
- Pak-choi: Celery cabbage
- Remove extraneous common names:
  - Wheatgrass: Bluestem wheatgrass
  - Sorghum: Broomcorn, Kafir, Kaoliang, Milo maize, Shallu, Sorgo
  - Grasspea: Wedge pea
  - Lettuce: Romaine
  - Mallow: Malva
- Moved seed reference
  - Bean (field): from after Adzuki bean to after Fava Bean Schedule I(a)
  - Sericea lespedeza
  - Striate lespedeza
  - Common oat, Red oat (merged with “Oat”)
  - Broadbean: Horsebean
  - Cowpea, Yardlong (moved to Yardlong bean under bean list)
  - Watermelon, Muskemelon
- Update scientific names where necessary to match current accepted nomenclature
catharticus), Indian ricegrass (Oryzopsis hymenoides; update = Achnatherum hymenoides), Smilagrass (Oryzopsis miliacea; update = Pitatherum miliaceum), Nodding stipa (Stipa cernua; update = Nassella cernua), Purple stipa (Stipa pulchra; update = Nassella pulchra), Sudangrass (Sorghum sudanense; update = Sorghum x drummondii), Velvetbean (Mucuna deeringiana; update = Mucuna pruriens), Bard vetch (Vicia calcarata; update = Vicia monantha), Beardless wheatgrass (Agropyron spicatum; update = Pseudoroegneria spicatum), Intermediate wheatgrass (Agropyron intermedium; update = Thinopyrum intermedium), Pubescent wheatgrass (Agropyron intermedium; update = Thinopyrum intermedium), Slender wheatgrass (Agropyron trachycaulum; update = Elymus trachycaulus), Streamband wheatgrass (Agropyron riparium; update = Elymus lanceolatus), Tall wheatgrass (Agropyron elongatum; update = Thinopyrum ponticum), Western wheatgrass (Agropyron smithii; update = Pascopyrum smithii), Annual wildrice (Zizania aquatica; update = Zizania palustris), Russian wildrye (Elymus junceus; update = Psathyrostachys juncea), Artichoke (Cynara scolymus; update = Cynara cardunculus), Leek (Allium ampeloprasum; update = Allium porrum), Pumpkin (Cucurbita spp.; update = Cucurbita pepo, Curbita moschata, Cucurbita maxima), Rhubarb (Rheum spp.; update = Rheum rhabarbarum), Squash (Cucurbita spp.; update = Cucurbita pepo, Curbita moschata, Cucurbita maxima), Tomato (Lycopersicon esculentum; update = Solanum lycopersicum)

- Add subspecies or variety name: Narrowleaf vetch (Vicia sativa subsp. nigra), Winter vetch (Vicia villosa subsp. varia), Chinese cabbage (Brassica rapa subsp. Pekinensis), Tronchuda cabbage (Brassica oleracea var. costata), Cardoon (Cynara cardunculus subsp. flavescens), Carrot (Daucus carota subsp. sativus), Collards (Brassica oleracea var. viridis), Florence fennel (Foeniculum vulgare var. azoricum), Kale (Brassica oleracea var. viridis), Pak-choi (Brassica rapa subsp. chinensis)
Amendment by addition:

- Add four new seeds to the schedule I(a) agricultural seeds list: Lentil (*Lens culinaris*), Siberian lespedeza (*Lespedeza cuneata*), Turnip rape (*Brassica rapa* subsp. *silvestris*), and Intermediate ryegrass (*Lolium x hybridium*)
- Add two new seeds to schedule I(b) vegetable seeds list: Perennial wall-rocket (*Diplotaxis tenuifolia*) and Annual wall-rocket (*Diplotaxis muralis*)
- Add the common names of Arugula, Garden Rocket, Rocket Salad, Rugula, and Salad Rocket for *Eruca sativa* on schedule I(b).
- Add the common name of Oregano for *Origanum vulgare* on schedule I(b).
- Add a breakdown of wheat types to the list. Club wheat (*Triticum compactum*), Durum wheat (*Triticum durum*), Polish wheat (*Triticum polonicum*), Poulard wheat (*Triticum turgidum*), and Wheat x Agrotriticum (*Triticum x Agrotriticum*) will be included in the amended list. The previous list had a single wheat type.
- Add two crops to schedule I(b) vegetable seeds list, that were already present on the schedule I(a) agricultural seeds list, as they are sold as both. Adzuki bean (*Vigna angularis*) and Bell bean (*Vicia faba*) are included in the amended vegetable seed list.

Amendment by removal:

- Remove two seeds from the schedule I(a) agricultural seeds list: buffelgrass (*Cenchrus ciliaris*) and little mallow (*Malva parviflora*). These are weedy species and are not currently grown agronomically.

**General Amendment**

Under this amendment, as outlined above, several scientific names are updated, several typographic errors are corrected, and many formatting mistakes are remedied. These changes improve the quality and comprehensibility of CCR section 3899 schedule I, but they are non-substantive.
Amendment by Addition

Several species of crop seed are being added to CCR section 3899 schedule I under this amendment. All are crops whose seeds are currently sold and/or grown in California. Seeds of crops on the list are tested for purity according to California seed law (CCR section 3880) and labelled correctly in order to protect the consumer and avoid confusion in the trade (FAC section 52452[a]). Lentil (*Lens culinaris*), annual wall rocket (*Diplotaxis muralis*), perennial wall rocket (*Diplotaxis tenuifolia*), Siberian lespedeza (*Lespedieza cuneata*), turnip rape (*Brassica rapa subsp. silvestris*), intermediate ryegrass (*Lolium x hybridium*), and the following varieties of wheat: club wheat (*Triticum compactum*), durum wheat (*Triticum durum*), Polish wheat (*Triticum polonicum*), Poulard wheat (*Triticum turgidum*) and wheat x agrotriticum (*Triticum x Agrotriticum*) were not included in the last amendment of CCR section 3899 schedule I. All of these are currently sold as seed in California. They are being added to CCR section 3899 because their non-inclusion might lead to confusion regarding quality and identification of seed lots of these species as well as related crop seed currently included in CCR section 3899 schedule I. Seed companies label and test seeds routinely. Adding new varieties to CCR section 3899 schedule I will have little or no impact on an industry that routinely practices seed testing and labelling. By providing standard names, testing, and labelling requirements for these products, there will be disambiguation as to which product a consumer is purchasing and its quality.

Two crops (Adzuki bean and Bell bean) are on CCR section 3899 schedule I (a) Agricultural Crops and will, under this amendment, be added to CCR section 3899 schedule I(b) Vegetable Crops, because, depending on the circumstances, they are sold as both. Agricultural Crop seed and Vegetable Crop seed are tested and labelled in similar, but different, ways. By having these two crops appear on both lists, it allows the appropriate testing and labelling to take place depending on the proposed use of the seed.
This amendment adds additional common names for *Eruca sativa* (Arugula, Garden Rocket, Rocket Salad, Rugula, and Salad Rocket) and *Origanum vulgare* (Oregano) to CCR section 3899 schedule I to reflect current usage. Although alternative common name labelling of seed lots is allowed by CCR section 3863(c), common names in CCR section 3899 schedule I are recognized as official and their inclusion prevents their use on official labels for other varieties. The effects of these changes are expected to be modest, but they will increase the confidence of both seed producers and consumers that current frequently used common names are acceptable on labels for seed sold in California.

**Amendment by Removal**

Little Mallow

Little mallow (*Malva parviflora*) is a winter annual broadleaf plant and occasionally a biennial or short-lived perennial plant. It is native to Northern Africa, Europe and Asia and is found as a weed throughout California where it inhabits agricultural lands, roadsides, and disturbed sites. Under certain conditions, little mallow accumulates nitrates to concentrations toxic to cattle. Poultry that consume mallow leaves or seeds can produce lower quality eggs. After sprouting, little mallow seedlings rapidly develop a strong taproot, making the plant difficult to eliminate, even when young.

The removal of little mallow (*Malva parviflora*) from CCR section 3899 schedule I will have no impact on California agriculture, the seed industry, or the environment. Little mallow is not a regulated pest, but it is a common weed of roadsides, row crops, and waste areas in California. It currently is neither sold as commercial seed nor planted purposefully in California, nor is it likely to be so. So, its inclusion in CCR section 3899 schedule I is misleading and may confuse farmers and consumers to believe that this common weed is an agricultural plant. Therefore, it is appropriate to remove it from the list of seeds subject to seed purity testing and labelling requirements.

**Buffelgrass**
Buffelgrass (*Pennisetum ciliare*, synonym *Cenchrus ciliaris*) is a long-lived perennial bunchgrass. It is a densely tufted perennial, with deeply penetrating roots and erect stems to 60 cm tall. It is native to Africa, India, and western Asia. It is naturalized in North and South America and in Australia. It was introduced into North America as livestock forage in arid areas. Buffelgrass seeds are light, umbrella-like, and dispersed primarily by wind and water. Barbed bristles on buffelgrass seed coats allow for long-distance dispersal in animal skin and fur. Motor vehicles also disperse buffelgrass seed. Buffelgrass can begin producing seeds at 3 months from germination and continue seed production for more than 10 years. Its weedy qualities suit it for desert range conditions.

Buffelgrass was introduced into Texas and Arizona in the 1930s and 1940s to stabilize overgrazed rangelands and provide livestock forage. Buffelgrass also was established in Arizona from seed dispersed from Sonora, Mexico where over 1,000,000 acres (400,000 ha) of native desert and thorn-scrub vegetation were converted to buffelgrass pasture. Buffelgrass also was introduced into Hawaii. In California, it occurs spontaneously in five counties the south.

Buffelgrass has been used as forage in arid environments, and this is a positive economic value. But when buffelgrass invades new habitats, there is often a loss of soil fertility, an increase in soil erosion and an increase in surface water runoff; this results in degraded water quality. It also increases the frequency and spread of destructive wildfires by producing an easily combustible connection between individual desert shrubs, trees, and saguaro cacti. Because of this, it has been listed as a prohibited noxious weed in Arizona.

In natural areas, buffelgrass tends to form dense swards that exclude native vegetation, decreasing biodiversity and altering successional processes. In upland arid regions, buffelgrass can transform native desert shrub and thorn-scrub into grasslands. In Arizona, buffelgrass excludes native shrubs such as creosote (*Larrea tridentata*), saltbush (*Atriplex* spp.), and bursage (*Ambrosia* spp.) and their associated native grasses and forbs. In Hawaii, buffelgrass displaces native pili grass (*Heteropogon contortus*) communities and
discourages the succession of native woody species. In lowland riparian areas, buffelgrass can replace native riparian vegetation along riverbanks. In the arid areas of Queensland, Australia, buffelgrass outcompetes and displaces native grasses and riparian vegetation. By dominating riparian areas and their moist refuges within arid regions, buffelgrass threatens keystone habitats that are vital to the survival of many plant and animal species.

The removal of buffelgrass from CCR section 3899 schedule I will have no impact on California agriculture, the seed industry, or the environment. It currently is neither sold as commercial seed nor planted purposefully in California, nor is it likely to be so. So, its inclusion in CCR section 3899 schedule I is superfluous. Therefore, it is appropriate to remove it from the list of seeds subject to seed purity testing and labelling requirements.

TECHNICAL, THEORETICAL, AND/OR EMPIRICAL STUDY, REPORTS, OR DOCUMENTS.

A Pest Risk Recommendation by California Department of Food and Agriculture (the Department) staff, based on biology, produced a preliminary recommendation that buffelgrass be given a “B” pest rating. A “B” rating means that a pest is invasive and established in California, but that regulatory action could slow or halt its spread to new areas. Generally, a B-rated plant would be a candidate for listing in the CCR section 4500 list of California noxious weeds. In this case, the listing of buffelgrass on the agricultural seed list precluded a “B” rating and dictated a listing of “D” reserved for beneficial organisms (Kelch 2017). Amendment of CCR section 3899 to remove buffelgrass is a necessary step in assigning buffelgrass its correct regulatory status; this will allow the Department to fulfill its regulatory responsibility to control the spread of noxious weeds and other invasive pests within the state, as per FAC section 403.
EVIDENCE SUPPORTING FINDING OF NO SIGNIFICANT STATEWIDE ADVERSE ECONOMIC IMPACT DIRECTLY AFFECTING BUSINESS.

ECONOMIC IMPACT ANALYSIS

The Department’s Seed Botany Laboratory (Seed Lab) provides identification and quality assessments of agricultural seeds, vegetable, flower, native and weed seeds. The Seed Laboratory identifies and evaluates seed samples and other plant propagules submitted by Department representatives (primarily through the Pest Exclusion Branch), seed producers and distributors, commercial and private laboratories, other state and federal agencies, academic institutions, and private citizens. The Seed Lab is considered an impartial authority and the information provided is often utilized in resolving contract disputes among seed trade parties.

With regard to buffelgrass testing in the Seed Lab, there were no records in the regulatory sample database of buffelgrass (records going back to 2002). Likewise, there were no records in the service sample database of buffelgrass (records going back to 2007). Queries to several rangeland seed suppliers by CDFA staff revealed that buffelgrass is not currently a commonly used or sold grass in California.

With regards to little mallow testing in the Seed Lab, there were no records in the regulatory sample database of little mallow (records going back to 2002). It was never sampled by Seed service inspectors, nor was it ever sent in by companies as a service sample.

All the seeds listed under the “Amendment by addition section” are currently sold as seed in California. Adding these seeds to CCR section 3899 Schedule I is expected to have little impact on an in industry that routinely practices seed testing and labelling. By providing standard names, testing, and labelling requirements for these products, there will be disambiguation as to which product a consumer is purchasing and its quality.
The Creation or Elimination of Jobs within the State

As neither buffelgrass seed nor little mallow seed are generally sold in the seed trade in California, the Department has made an assessment that the amendment of the regulation would not create or eliminate jobs within California.

As the seeds listed under the “Amendment by addition section” are already currently sold, the Department has made an assessment that the amendment of the regulation would not create or eliminate jobs within California.

The Creation of New Businesses or the Elimination of Existing Businesses within the State

As neither Buffelgrass seed nor little mallow seed are generally sold in the seed trade in California, the Department has made an assessment that the amendment of the regulation would not create new or eliminate existing businesses within California.

As the seeds listed under the “Amendment by addition section” are already currently sold, the Department has made an assessment that the amendment of the regulation would not create new or eliminate existing businesses within California.

The Expansion of Businesses Currently Doing Business within the State

As neither buffelgrass seed nor little mallow seed are generally sold in the seed trade in California, the Department has made an assessment that the amendment of the regulation would not expand existing businesses within California.

As neither buffelgrass seed nor little mallow seed are generally sold in the seed trade in California, there will be no effect on worker health or safety.
As the seeds listed under the “Amendment by addition section” are already currently sold, the Department has made an assessment that the amendment of the regulation would not expand existing businesses within California.

**Anticipated Benefits from this Regulatory Action**

FAC section 403 directs that the Department shall prevent the introduction and spread of injurious insect or animal pests, plant diseases, and noxious weeds.

Existing law, FAC Section 407, provides that the Secretary may adopt such regulations as are reasonably necessary to carry out the provisions of this code that the Secretary is directed or authorized to administer or enforce.

Removal of buffelgrass from Schedule I will allow the Department to regulate this invasive species and prevent it spreading further and harming California’s agriculture or environment.

Under this amendment, the enhanced ability to label seed with currently-used common names will allow better marketing of the affected products and reduce the effort of the supplier to comply with current regulations.

Under this amendment, the inclusion of six new crop seed varieties and the disambiguation of several more will improve the ability of the California consumer to choose the exact type and quality of the crop and vegetable seed that they buy.

To protect California’s environment, noxious weeds are prohibited from sale at nurseries. These amendments will enhance the Department’s ability to protect California agriculture and environment by removing a potential noxious weed from the list of seeds allowed to be sold and grown in the state.
The proposed regulation will harmonize seed regulation with the regulation of noxious weeds. This will enhance the ability of seed regulation to protect California agriculture and environment. The proposed amendment will also eliminate confusion about whether seed regulation or weed regulation has precedence in the importation of commercial seeds into California.

There are no known specific benefits to the worker safety or the health or public safety of California residents.

**Estimated Cost or Savings to Public Agencies or Affected Private Individuals or Entities**

The estimated cost or savings to public agencies or private entities will be minimal for the removal of little mallow and buffelgrass from the list of field crop seeds. The other updates included in this amendment will slightly increase the ease of administering seed regulations in California.

**REASONABLE ALTERNATIVES TO THE REGULATION AND THE AGENCY’S REASONS FOR REJECTING THOSE ALTERNATIVES.**

The Department considered not removing buffelgrass or little mallow from the list of seeds for planting in California. This would preclude listing buffelgrass as a noxious weed and prevent the State from helping to slow or prevent its continued spread in California.

The Department considered not adding seeds and name varieties to CCR section 3899 schedule I list of seeds for planting in California. Their non-inclusion might lead to confusion regarding quality and identification of seed lots of these species as well as related crop seed currently included on the list.

**REASONABLE ALTERNATIVES TO THE PROPOSED REGULATORY ACTION THAT WOULD LESSEN ANY ADVERSE IMPACT ON SMALL BUSINESS.**
As neither buffelgrass seed nor little mallow seed are generally sold in the seed trade in California currently, the Department has not identified any adverse impacts to small business.

As the seeds listed under the “Amendment by addition section” are already currently sold, the Department has not identified any adverse impacts to small business.

EVIDENCE SUPPORTING FINDING OF NO SIGNIFICANT STATEWIDE ADVERSE ECONOMIC IMPACT DIRECTLY AFFECTING BUSINESS.

The database of seed samples tested by CDFA staff revealed no buffelgrass or little mallow samples. Queries to several rangeland seed suppliers by CDFA staff revealed that buffelgrass is not currently a commonly used or sold grass in California. Little mallow was not found in an inventory of common seed suppliers.

Information Relied Upon

The Department is relying upon the following documents in the proposed amendment of section 3855:


CalFlora: http://www.calflora.org/cgi-bin/species_query.cgi?where-calrecnum=12041


Consortium of California Herbaria: ucjeps.berkeley.edu/consortium/


Meyer, Deborah J. January 31, 2018 email regarding buffelgrass testing at the CDFA Seed Laboratory


Weiner, Connie February 16, 2018 email regarding Little Mallow testing at the CDFA Seed Laboratory