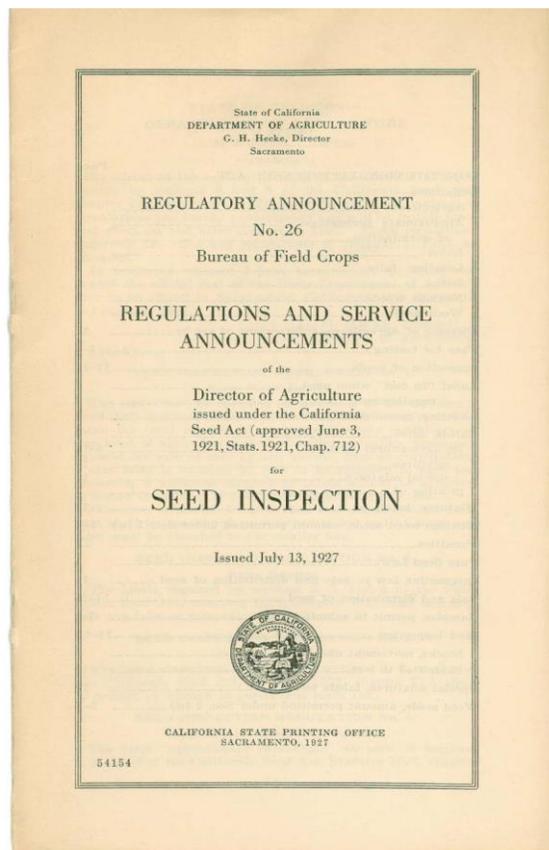


A Brief History of the California Seed Law and CDFA Seed Services
Prepared by John Heaton, CDFA Seed Services
Presented November 2008 - Seed Advisory Board Meeting (revised Jan. 2015)



History of Seed Law with present day comparisons

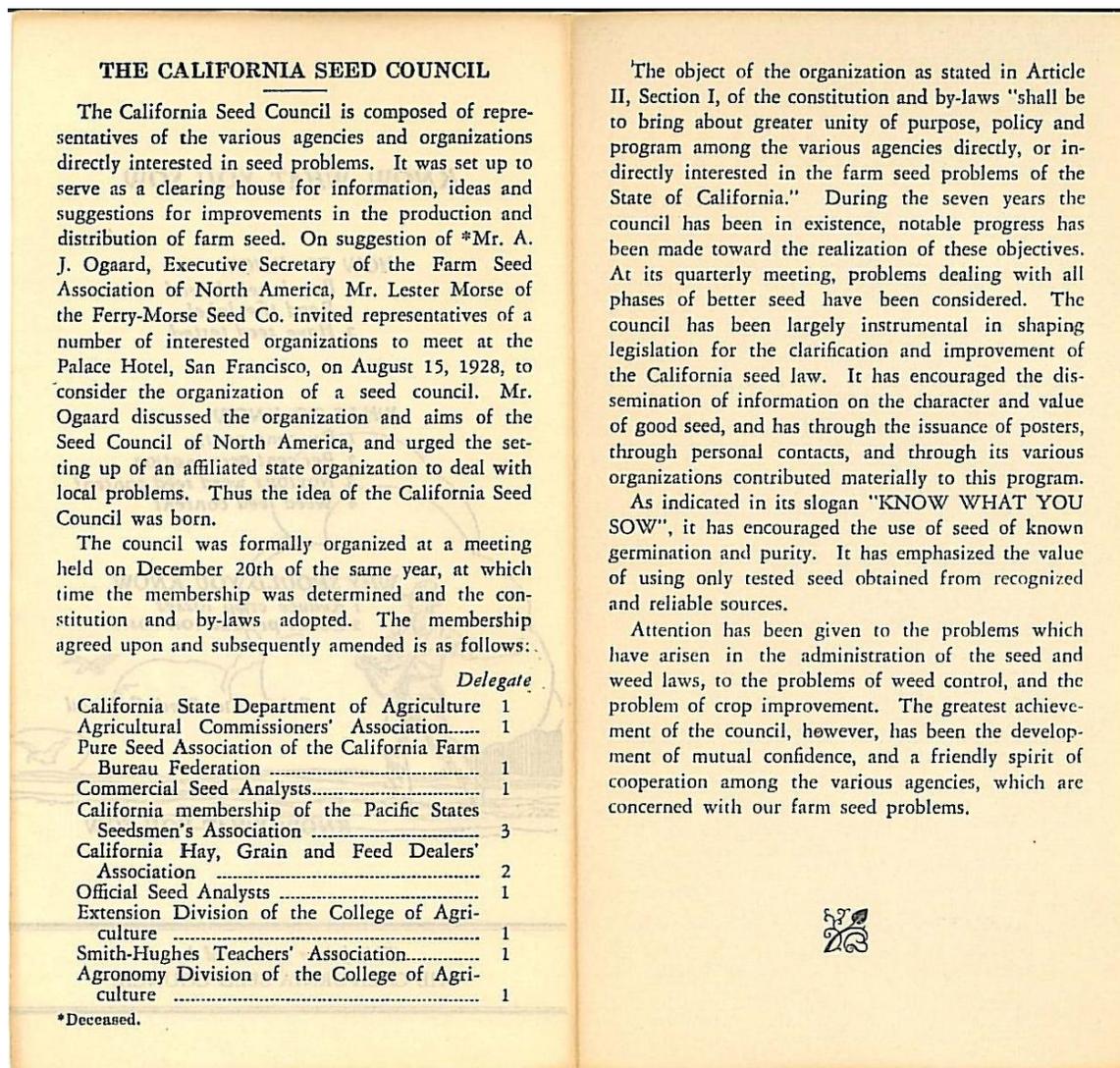
As far back as 1816, steps have been taken to regulate the sale of seeds. Switzerland appears to be the first country to have enacted laws to improve the quality of seeds, mainly because of unsatisfactory results from planting seeds with questionable purity and germination. The first official steps taken in England were in 1869 and 1878 when the adulteration of seeds acts were passed.

In 1897 Maine enacted a state law governing the sale of agricultural seeds. The United States federal government passed the Annual Importation Act in 1905, which gave the U.S. Department of Agriculture (USDA) authority to purchase seed on the open market and test it for adulteration and mislabeling. Numerous states implemented their own seed laws and 1928 forty-five states had laws regulating the quality of agricultural seeds sold. These states also maintained seed testing laboratories as an aid and protection to agriculture in their state. [Reference: *Seeds from the Regulatory Angle*, By O.F. Anderson, USDA Agricultural Bulletin, September 1949]

Seed laws were not only desired because they protect the buyer through proper labeling, but they also protect producers by setting forth clear regulations that, if followed, will enable the producers to avoid controversies and litigation over seed quality and performance. Consequently, seed laws have become an essential part of a well developed, mature seed industry which contributes to efficient agriculture.

In 1921 the California Legislature approved the California Seed Act with the intent of providing an orderly market for seed sales and to ensure the availability of high-quality seed to consumers.

By 1928, the **California Seed Council** had formed. The Council acted as an open forum for matters of interest to the seed industry. The chief purpose of the Council was to promote the production, distribution and use of better seed. The slogan of the Council was "KNOW WHAT YOU SOW."



Joint efforts by the Legislative Committee in the Seed Council and the Legislative Committee of the California Seed Association, assured that any contradicting provisions proposed to control seed-related problems were resolved before being presented to the Legislature.

Meanwhile at the Federal level, although previous seed legislation addressed specific concerns about the labeling and quality of seed marketed in the United States, it was clear that a single, more comprehensive law was needed. Consequently, discussions were initiated around 1936, which culminated in the enactment of the Federal Seed Act of 1939. This act is the single most important piece of seed legislation in U.S. history and covers all agricultural and vegetable seeds imported into the United States and shipped in interstate commerce. Unlike previous acts, it did not require proof of intent

to defraud in cases of mislabeling. [Reference: China Farmers' Daily, Foreign Seed Industry Edition, Article 4. <http://www.amseed.com/docs/CFDarticle4.doc>]

Since formation of the California Seed Law, enforcement of the provisions have been achieved through the joint efforts of County Agriculture Commissioners, various bureaus or programs in the California Department of Agriculture, and the state seed lab. In 1941 responsibility for enforcement of the California Seed Law was transferred from the Bureau of Field Crops to the Bureau of Rodent, Plague and Seed Control. In more recent years, responsibility for enforcement of the Seed Law has rested with the Seed Services Program in the Pest Exclusion Branch of CDFA.

In reviewing the historical minutes of Seed Council meetings, it is interesting to note how little things have changed. For example, as early as 1946, there was considerable discussion about adequate funds to control seed law violations. Comments by Bureau Chief, Dr. William Ball at a 1946 Seed Council meeting indicate that human nature hasn't changed much. The minutes quote him as saying "There are individuals who are attempting to comply with the law, who if they are familiar with the measure will cooperate; but if those individuals do not have enforcement officials checking on them there is a tendency to let certain important violations go by." That sentiment is shared by most, if not all, Seed Control Officials today.

In 1950 Dr. Emro Bruch, Field Supervisor of Seed Inspection for the California Department of Agriculture, provided a 5-year summary of the state's seed lab activities. He identified the same types of seed samples being submitted to the lab in 1950, as are analyzed in today's lab.

- Service samples – (fees implemented for analysis in January 1, 1947)
- Certification samples
- Quarantine samples
- Enforcing samples – now referred to as official or regulatory samples.
- Federal samples – for enforcement of FSA in Western States and export certification

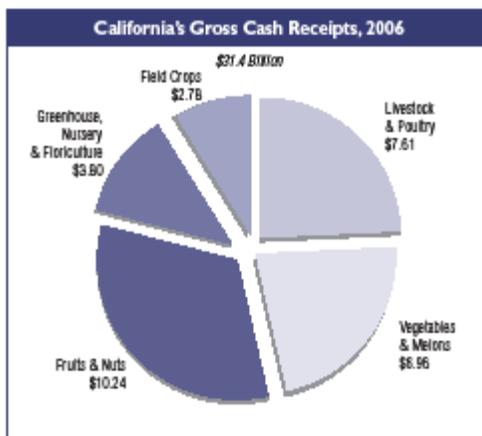
Interestingly, Dr. Bruch noted that samples for enforcement purposes only accounted for about 2.5% of the samples submitted in the prior five years. He also noted that they had a "considerable back log" of samples in the lab. Unfortunately, the total number of each type of sample was not provided in his comments. The point was made however, that enforcement samples comprised only a small part of the lab's activities and function in 1950. The flow of various types of samples continues to be a concern for the seed lab even today.

Throughout the years, the Council reviewed the cost of various seed law enforcement and compliance monitoring activities.

In 1959, the Deputy Director for the California Department of Agriculture, Dr. James Ralph, addressed the Seed Council. He noted that the cash farm income for California in 1959 was \$1.2 billion. He pointed out that much of that farm income starts with the seed. He added that the cost for processing the official seed samples in the prior year was \$30,000, a price he thought to be very reasonable considering the protection provided to the entire agricultural community. That cost for processing official seed samples, calculates to roughly 0.0025% of the cash farm income in California during 1959.

As a comparison, in 2006 California's cash farm income was reported to be \$31.4 billion dollars. The cost for the entire seed lab in 2006, not just the processing of official samples, was ~\$765,000 or about

0.0024% of cash farm income for California in 2006. Almost 50 years later, the change in the cost of processing lab samples is almost null, though admittedly the present cost reflects more lab activities.



[Reference: <http://www.cdfa.ca.gov/files/pdf/card/cashreceiptsNEW.pdf>]

It is interesting to note that even 50 years ago, seedsmen were struggling with lawsuits about seed quality. By 1960, the Seed Council was discussing the formation of an Arbitration Committee. Eventually they proposed an addition to the California Seed Law, section 921, entitled “Complaint, investigation and finding, and recommendation prerequisite to legal action.” Even today, the seed industry has real concerns about lawsuits and struggles with how best to handle seed complaints.

In 1968, funding for seed law enforcement began to change. The Governor’s Task Force recommended the following changes:

1. The seed inspection program become self-supporting and that legislation be prepared for a license or tonnage tax or some similar device to present to the legislature.
2. The state inspection officials should do all the seed inspections.
3. The California State Seed Laboratory should be transferred from the Division of the Plant Industry to the Division of Inspection Services.

In 1970 Bob Skaggs replaced Emro Bruch and Rodney Cobb. He became the Program Supervisor of Seed Services Program in the California Agricultural Department. At that time, he reported that the budget for Seed Services in FY 1970-71 was \$181,000.

While there are many ways to calculate present value of \$181,000 in the 1970 budget, the most appropriate indicator is arguably the nominal GDP per capita. This indicator measures the "average" per-person output of the economy in the prices of the current year. A relative value calculator was used to determine that \$181,000.00 from 1970 is worth \$1,633,682 in 2007 when one selects the nominal GDP per capita as the indicator. This amount compares favorably with the \$1,400,028 budget the Seed Services Program had in FY 2007-08.

If the same calculation is used for the reported seed lab budget of \$60,000 in 1972, the calculated 2007 value of \$464,896 also compares favorably to the \$410,000 budgeted to the seed lab in 2007.

By 1972, the Seed Council was seriously exploring ways to self-fund the Seed Services Program. It was clear that adequate funds would no longer be available from the general funds. The Council was determined to maintain enforcement at the state level rather than defaulting to enforcement at the

individual county levels. In FY 1972-73, no funds were allocated from the general fund for the Seed Services Program. Enforcement of label violations was assigned solely to counties.

The industry responded but struggled with how to develop a mechanism to fund the Seed Services Program. In 1973, Bob Skaggs presented the 17th draft of proposed amendments to the seed law, for funding the enforcement that would be conducted by the California Department of Agriculture. Most significant among the draft were the addition of Articles 2.5 and 4.5. Article 2.5 established the Seed Advisory Board and article 4.5 established the requirement for registration of seed sellers and payment of an annual assessment on the value of seed sold in California.

As a result of these successful amendments to the Seed Law by the seed industry, the first Seed Advisory Board commenced activities on July 1, 1974 and was composed of seven individuals from the seed industry.

In 1975, the Plant Division of CDFA was reorganized such that the Program Supervisor of the Seed Services Program was no longer responsible for the state seed laboratory. The reorganization was partly in response to complaints that the rate of failed samples increased when budgets were low but decreased when budgets were high. Through separation of the Seed Services Program and the Seed Lab, the supervising botanist of the Seed Lab was independent of the enforcing unit, thus reducing the possibility for claims of bias.

By 1978, participation at meetings of the California Seed Council was beginning to wane and the Council started to review their purpose and to question the need for their future existence. They noted that other organizations were now performing the functions and activities they previously performed. The Council continued to meet however, until the mid 1980s at which time it ceased to function.

In 1982, the USDA decided to close the Federal Seed Lab located in Sacramento. The state seed lab remained open at the downtown headquarters, however it struggled for general fund resources to support operational activities. Financial concerns resulted in various analyses, including one that can be used to make comparisons against present day lab activities.

An analysis of the workload for the state seed lab in 1984, reported that the average number of tests completed per personnel year was 1,190. The number of personnel years in the lab was 6.5. In comparison, for FY 2006-07 the lab conducted 4,987 tests on 2,907 seed samples with 6.5 personnel years. This works out to an average of 767 tests per personnel year in 2006-07. The slight reduction in the average number of tests per personnel year, can be attributed to the reduction in submitted regulatory samples that the Seed Services Program initiated. That decision resulted in faster turnaround of regulatory samples and consequently more enforcement opportunities.

During the budget of fiscal year 1991-92, the *general* funding for the state seed lab was cut by \$52,335. Although section 52356 of the California Seed Law stated that expenditures by the lab for processing official seed samples should not exceed one-third the cost of the lab's total expenditures, the Seed Advisory Board decided to provide additional funding so the lab could maintain its output and quality of analysis. The Board directed the Seed Services Program to establish an annual Memorandum of Understanding with the lab, such that the Board could annually review its level of funding and expenditure for processing official seed samples.

Then, almost in contradiction to the agreement to use assessment funds to cover the cost of testing and analyzing official seed samples, the Seed Advisory Board voted at the December 1992 meeting to

request the Director of the Department of Food and Agriculture to refund \$500,000 of the accumulated reserves to the seed industry. It is interesting to note that in making the recommendation, the Board was aware that the assessment rate for FY 1993-94 would have to be substantially higher (0.32/\$100 value). One can only speculate as to the reason why a refund was given, only to be followed by a substantial increase in assessment rate.

In 1994, the State Seed Lab, which was now part of the Plant Diagnostics Branch of CDFA, moved to its present location on Meadowview Road. The Seed Advisory Board continues to support the use of assessment collections from the seed industry to cover approximately seventy two percent of the state seed lab's operating budget (as of FY2013).

In 1998, the Board of Directors for the California Seed Association approved a motion to support the establishment of the UCD Seed Biotechnology Center. They also agreed that a portion of assessments (\$0.05/\$100 sales) should be used to fund operational costs of the SBC and that the operational funding mechanism should sunset after 3 years. In FY 2000-01, on recommendation by the Seed Advisory Board, the CDFA Seed Services Program executed a three-year MOU with the newly-founded UCD Seed Biotechnology Center. The amount of the MOU was for \$150,000 per year. The MOU was renewed in 2003 and increased to \$200,000 in 2006. At the November 1, 2012 meeting, the Seed Advisory Board committed to another three-year MOU for funding the SBC through June 2016.

The seed industry, through collections administered by the CDFA Seed Services Program, continues to fund the state seed lab at a level of approximately 72% of the lab's operational costs minus revenue from service samples. In addition, the industry has also committed to fund the UCD Seed Biotechnology Center in the amount of at least \$200,000 a year through 2016. The statute for Seed Subvention, or payment of \$120,000 to County Agricultural Commissioners for seed law enforcement, was renewed by the legislature for FY2013 and will become inoperative July 1, 2019.

The remaining funds in the Seed Services Budget are left for the Seed Services program to conduct seed law enforcement activities and administer the Seed Services Program. The November meeting of the Seed Advisory Board has become the traditional time for participants of MOUs and the supervisor of the Seed Services Program to present summaries of their activities and staffing levels.