

FDA GUIDANCE REGARDING MICROBIAL TESTING FOR SPROUTS

Failure to adopt effective preventive controls can be considered insanitary conditions which may render food injurious to health. Food produced under such conditions is adulterated under the act (21 U.S.C. 342(a)(4)). FDA will consider enforcement actions against any party who does not have effective preventive controls in place, in particular, *effective microbial testing*.

Seed should be sanitized as per label on bag or FDA Guidance referenced above. Even if only a few pathogens survive a seed disinfection treatment, they can grow to high levels during sprouting and contaminate the entire batch. Therefore, seed disinfection treatments should be combined with microbial testing to ensure that pathogens are not present before sprouts enter the food supply.

FDA recommends that a spore test for pathogens including *ecoli*, *D157*, *salmonella*, *listeria monocytogenes*, etc by collecting a sample of spent irrigation water from each production lot or batch prior to release. More information available at <http://www.fda.gov>.



THIS SEED IS A RAW AGRICULTURAL PRODUCT AND LIKE MOST OTHER SUCH PRODUCTS COULD CONTAIN PATHOGENS, INCLUDING BUT NOT LIMITED TO, SALMONELLA OR E-COLI.

STATE HEALTH AGENCIES STRONGLY RECOMMEND THAT SEEDS FOR SPROUTING BE SOAKED, IN A 2% SOLUTION (20,000 PARTS PER MILLION) OF CALCIUM HYPOCHLORITE AND WARM WATER, FOR FIFTEEN MINUTES PRIOR TO SPROUTING. THE PH OF THE SOLUTION SHOULD BE ADJUSTED TO 6-7. THE PERSON SPROUTING THIS SEED ASSUMES ALL RESPONSIBILITY FOR PROPER STERILIZATION.

BASED ON A 65% CONCENTRATION, THE FOLLOWING TABLE SHOULD ASSIST IN DETERMINING VARIOUS APPLICATION LEVELS:


	AVOIDABLE CHLORINE 2%				
GALLONS WATER	5	10	25	50	100
POUNDS CALCIUM HYPOCHLORITE	4 OZ.	20 OZ.	40 OZ.	100 OZ.	200 OZ.
POUNDS CALCIUM HYPOCHLORITE				250 OZ.	400 OZ.

STERILIZATION MUST BE DONE PRIOR TO USING THIS SEED FOR SPROUTING PURPOSES.

WARRANTY

CAUDILL SEED AND WAREHOUSE CO., INC. GIVES NO WARRANTY, EXPRESSED OR IMPLIED, AS TO PRODUCTIVENESS OF ANY SEEDS IT SELLS AND WILL NOT BE, IN ANY WAY, RESPONSIBLE FOR THE CROP, OUR LIABILITY, IN ALL INSTANCES IS LIMITED TO THE PURCHASE PRICE OF THE SEED.

IN LIEU OF ALL OTHER WARRANTIES EXPRESSED OR IMPLIED, AND LIABILITY FOR POSSIBLE NEGLIGENCE, THE COMPANY WARRANTS TO THE EXTENT OF THE PURCHASE PRICE THAT THE SEEDS SOLD ARE AS DESCRIBED BY US ON OUR CONTAINER WITHIN RECOGNIZED TOLERANCES. THE COMPANY EXPRESSLY DISCLAIMS ANY WARRANTY OF MERCHANTABILITY OF FITNESS FOR A PARTICULAR PURPOSE, UNDER ALL CIRCUMSTANCES, AND REGARDLESS OF WHETHER THE CLAIM IS BASED UPON CONTRACT, NEGLIGENCE, MISFEASANCE, OMISSION OR OTHERWISE AND REGARDLESS OF THE EXTENT OF THE LOSS. LIABILITY IS LIMITED TO THE PURCHASE PRICE OF THE SEEDS. AS A CONDITION TO SUCH LIABILITY WE MUST RECEIVE NOTICE BY REGISTERED MAIL WITHIN THIRTY DAYS AFTER ANY DEFECT IN THE SEED-BREEDERS APPARENT THAT SEEDS ARE DEFECTIVE. ALL SEED SOLD FOR SOYING OR SPROUTING PURPOSES ONLY. NOT FOR DIRECT HUMAN OR ANIMAL CONSUMPTION. DISTRIBUTED BY CAUDILL SEED CO., 1402 W. MIAMI ST., LOUISVILLE KY 40203



Mar. 4. 2009 11:58AM

ALFALFA

LOT#032-735

50LBS

PACK DATE 03-04-09

EXAMPLE

New labels

KIND OF SEED: ALFALFA ORIGIN: AUSTRALIA NET WEIGHT: 55 LB
 DATE TESTED: 3/9/2009 PURITY: 99.0% GERMINATION: 90%
 LOT#: X8009 INERT: 2.0%

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KIND OF SEED: ALFALFA ORIGIN: ITALY NET WEIGHT: 55 LB
 DATE TESTED: 1/30/2009 PURITY: 99.0% GERMINATION: 90%
 LOT#: 032-773 INERT: 2.0%

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Although this seed is intended for sprouting, it is a raw agricultural product that has not been subject to any treatment or process designed to eliminate or reduce harmful microbial contaminants. As a result, this seed, like any raw agricultural product, may contain potentially harmful microbial contaminants, including *Salmonella* or *E. coli*, and these contaminants may persist in any sprouts from the seed.

Because of the potential for microbial contamination of sprouts from seed, Federal and state agencies strongly recommend that seeds for producing sprouts for consumption as food be produced in accordance with FDA Guidance for Reducing Microbial Food Safety Hazards for Sprouted Seeds (<http://www.cfsan.fda.gov/~dms/sproug1.html>). In that guidance, FDA recommends that seeds for sprouting should be treated with one or more antimicrobial treatments (such as 20,000 ppm calcium hypochlorite) immediately before sprouting. Because currently approved antimicrobials have not been shown to be capable of eliminating all pathogens from seed, sprout producers should also conduct microbiological testing of spent irrigation water from each production lot to ensure that contaminated sprouts or food products are not distributed. FDA strongly recommends such testing and, to help ensure that such testing is not only conducted but also conducted properly, FDA has issued a Guidance for Sampling and Microbial Testing of Spent Irrigation Water During Sprout Production (<http://vm.cfsan.gov/~dms/sproug2.html>).

Caudill Seed Co. urges and expects that every grower using Caudill-supplied seed to grow sprouts for consumption as food will adhere to and follow all aspects of FDA's current recommended treatment and testing practices or will develop and follow more rigorous and protective treatment and testing practices than FDA recommends. Caudill Seed cannot and does not assume responsibility for the failure of a grower to ensure the safety of sprouts from Caudill-supplied seed or for the failure of a grower to properly treat seed or to properly conduct testing to ensure that contaminated sprouts or food products are not distributed.

The new labels

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