



December 1, 2011

Nancy Leppink
Deputy Administrator, Wage and Hour Division
U.S. Department of Labor, Room S-3502
200 Constitution Ave., NW
Washington, DC 20210

Re: RIN 1235-AA06; Proposed Changes to Child Labor Provisions for Employment in
Agriculture

Dear Ms. Leppink:

Farmworker Justice is a national, non-profit advocacy and education organization that works to improve working and living conditions for migrant and seasonal farmworkers and their families. Since its founding 30 years ago, Farmworker Justice has advocated for farmworkers in matters that affect the health and safety of the workers as well as their families and communities. Farmworker Justice and the undersigned organizations submit these comments in response to the request of the U.S. Department of Labor (“DOL”) for public comment on DOL’s proposed revisions to the child labor agricultural hazardous occupation orders (“H.O.s”) issued pursuant to the Fair Labor Standards Act (“FLSA”).

The proposed changes would be the first update since 1970. They are based on a comprehensive evaluation conducted by the National Institute for Occupational Safety and Health (“NIOSH”) in a 2002 report, which provided recommendations concerning both non-agricultural and agricultural H.O.s. Farmworker Justice supports the Department’s proposed revisions as well as additional protections such as promulgation and implementation of a heat stress standard for all farmworkers in general, and children specifically.

Farm work is hard and hazardous. In its 2008 edition of Injury Facts, The National Safety Council ranked agriculture as the most dangerous industry, with 28.7 deaths per 100,000 adult workers. According to Kansas State University (KSU), in 2007 there were 715 occupational deaths on farms and more than 80,000 disabling injuries.¹

The vast majority of U.S. farmworkers have low incomes, no health insurance, and limited access to health care, making them particularly vulnerable to workplace hazards. According to the National Agricultural Workers Survey (“NAWS”), the farmworker population is largely immigrant, male, poor, socially isolated, with limited English proficiency, and with low

¹ National Consumers League, NCL Report: Dangers of Youth Work in Agriculture (October 2010), available at <http://stopchildlabor.org/?p=1638>.

educational attainment. On average, the highest education level completed by farmworkers is 7th grade, with only 13% having graduated from high school; as a result, most farmworkers have low literacy skills or are non-literate. Farmworkers' median annual income is only \$10,000 – \$12,499 and at least 30% earn incomes below the U.S. poverty line.²

The hazards of the agricultural workplace are exacerbated by the workers' poverty, vulnerability, and lack of knowledge about their workplace rights. Accordingly, this population is one in profound need of occupational health and safety protections, and all the more so when it comes to children, who under existing labor laws have been allowed to make up a major portion of the agricultural workforce.³

According to the NIOSH, in 2001 there were an estimated 460,739 youths employed on farms; over 84,570 of whom were hired workers.⁴ Of a total 22,648 agricultural-related injuries that occurred in youths under the age of 20, the highest percentage, 46 percent, of all injuries occurred to youths between the ages of 10 and 15.⁵ Between 1995 and 2002, an estimated 907 youth died on American farms—well over 100 per year.⁶ Between 1992 and 2000, more than four in 10 work-related fatalities of young workers occurred on farms. Half of the fatalities in agriculture involved youth under age 15. For farmworkers of ages 15 to 17, the risk of fatal injury is four times the risk for young workers in other workplaces, according to U.S. Department of Labor's Bureau of Labor Statistics.

Despite the uniquely dangerous work and vulnerable workforce, FLSA actually excludes farmworkers from most protections, rather than providing extra protections. Historically, the agricultural H.O.s have provided limited protections for farmworker youths with respect to a number of particularly dangerous activities. These H.O.s are now being revised.

The agricultural H.O.s describe work activities that are particularly hazardous to young workers under age 16 who are *hired* to work in the agriculture sector. The proposed hazardous orders will not apply to youth who are working for their parents on their own family farm, or to children engaged in non-paid activities as part of their membership in a club such as 4-H. The FLSA only applies if there is an employer/employee relationship. Furthermore, young workers will still have the opportunity to work in agriculture performing less hazardous work until the age of 16. Agriculture should be no different from other dangerous industries, and should have the same protections based on hazards, risks and age-appropriate tasks.

² National Agricultural Workers Survey (NAWS) 2001 – 2002: A Demographic and Employment Profile of United States Farm Workers.

³ Section 13(c) of the Act provides an exemption from the child labor provisions for “any employee employed in agriculture outside of school hours for the school district where such employee is living while he is so employed.” Additionally, by virtue of the parental exemption provided in section 3(1) of the Act, children under 16 years of age are permitted to work on farms at any time in any occupation on a farm owned or operated by a parent or guardian.

⁴ SiloSmashers, Determination of the Costs and Benefits of Implementing NIOSH Recommendations Relating to Child Labor Hazardous Orders 5 (November 1, 2004).

⁵ Ibid.

⁶ NCL Report *supra* note 1.

H.O. 1 and 2 – Operation of Tractors and Farm Machinery

Current H.O. 1 & H.O. 2 prohibit a hired farm worker under the age of 16 from operating a tractor of over 20 PTO and heavy machinery. Farmworker Justice supports the improved protections, which would limit the operation of many forms of machinery by youth under 16 years of age. While Farmworker Justice supports these revisions we have concerns that “student-learners” would continue to be able to operate many of these machines. We do not believe that children should be allowed to operate tractors and heavy farm machinery under any circumstances, regardless of whether youth have participated in short-term training courses. Children under age 16 do not have the maturity, strength or often height needed for safe operation of farm machinery. Research indicates that adolescents oftentimes lack the capacity to properly evaluate risks that accompany the use of potentially lethal machinery due to biological and physical immaturity.⁷ This data supports the rationale for why most states prohibit youth under 16 from operating motor vehicles. Teenagers are four times as likely to be involved in a car crash as adults, according to the Insurance Institute for Highway Safety.⁸ The risks associated with tractor and heavy machinery operation is too great to allow children under 16 to participate in these activities.

Absent a complete prohibition of these activities for youths under 16, we support mitigating measures currently proposed by the DOL. If student-learners are allowed to operate equipment on public roads, we agree that they should hold a valid license for such operations. If student-learners are allowed to ride as passengers, we agree that they should have an approved seat with a seat belt and that seat-belt use should be required.

H.O. 3 – Hoisting Apparatuses and Conveyors

The newly proposed H.O. 3 prohibits hired farm workers under the age of 16 from operating hoisting apparatuses and conveyors. Farmworker Justice supports the proposed revisions, and we also agree with the decision not to permit a student learner exemption.

H.O. 4 – Work with Animals

Current H.O. 4 prohibits a hired farmworker under the age of 16 from working in an enclosed yard, pen or stall that is occupied by certain live animals. The proposed revision would expand the list of prohibited animals as well as prohibited activities. Farmworker Justice supports all of the proposed protections that involve working with or around animals and concur with the decision not to exempt student-learners.

H.O. 5 – Working with Timber

The current Ag H.O. prohibits hired farm workers under the age of 16 from certain activities related to timber with a butt diameter of more than six inches. The proposed revision would

⁷ NIOSH, Special hazard review: child labor research needs: recommendations from the NIOSH child labor working team. Cincinnati, OH: U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control, National Institute for Occupational Safety and Health, DHHS (NIOSH) Publication No. 97-143 available at <http://www.cdc.gov/niosh/docs/97-143/backgr.html>.

⁸ Q&A: Teenagers (December 2010) available at <http://www.iihs.org/research/qanda/teens.html>.

remove the 6-inch threshold when it comes to felling, bucking, skidding, loading or unloading timber. Farmworker Justice supports the proposed revisions and agrees that no student learner exemption should be permitted.

H.O. 6 – Working in Construction, Communications, Wrecking and Demolition and Excavation

The newly proposed H.O. 6 prohibits employment in construction, communications, wrecking and demolition, and excavation and extends protections enjoyed by youth in non-agricultural industries by farm workers under the age of 16. Farmworker Justice supports the new regulation.

H.O. 7 – Working at Heights

Current H.O. 7 prohibits hired farm workers under the age of 16 from working from a ladder or scaffold at a height of over 20 feet. The proposed revision would prohibit work on a roof, scaffold, elevated farm structures, and at elevations greater than 6 feet of another elevation. Farmworker Justice supports this revision, but we do not agree with a student-learner exemption. Falls are one of the leading occupational hazards in agriculture.⁹ In 2010, 6 deaths occurred as a result of falls in crop production and in animal production, 7 fatalities occurred.¹⁰ The non-fatal injury and illness rate due to falls from elevation for workers employed in agriculture, fishing and hunting was 13.8 per 10,000 workers.¹¹

In 2001, NIOSH analyzed data from the Census of Fatal Occupational Injuries (CFOI), and found that most of the 166 fatal falls among agricultural production workers between 1992- 1997 were falls from elevation. Most prominent among fatal falls in agricultural production were falls from vehicles, machinery, or implements (19.9% of the total), falls from roofs (11.4%), farm structures (10.8%) and ladders (10.2%).

A 1991 analysis of injuries in Florida agriculture was conducted based on Workers' Compensation records. The analysis revealed that falls accounted for nearly 25 percent of all serious disabling work injuries: 17 percent were elevated falls, 8 percent were same-level falls. Falls from heights accounted for 26 percent of the injuries in fruit and vegetable production occupations. Same-level falls accounted for 12 percent in both livestock and horticultural production occupations. In addition, 32 percent of all elevated falls in Florida agriculture were from ladders, while 25 percent were from vehicles and other mobile equipment.¹²

⁹ NIOSH Programs Portfolio, [Agriculture, Forestry, and Fishing: Occupational Safety and Health Risks](http://www.cdc.gov/niosh/programs/agff/risks.html) available at <http://www.cdc.gov/niosh/programs/agff/risks.html>.

¹⁰ BLS, National Census of fatal Occupational Injuries in 2010 available at <http://www.bls.gov/news.release/pdf/cfoi.pdf>

¹¹ BLS, [Median days away from work, number, and incidence rate for nonfatal occupational injuries and illnesses involving days away from work by industry and selected event or exposure](http://www.bls.gov/news.release/osh2.t01.htm) (2010) available at <http://www.bls.gov/news.release/osh2.t01.htm>.

¹² Lehtola, CJ, Becker, WJ, and Brown, CM (2001). Preventing Injuries from Slips, Trips, and Falls. Circular 869, one of a series of the Agricultural and Biological Engineering Department, Florida Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida. First published August 1990. Revised October 1992 and February 2001. Available at http://www.nasdonline.org/static_content/documents/208/d000006.pdf (last accessed 8/19/2010).

In 1998, youth under age 16 incurred an estimated 11,334 injuries resulting in restricted activity due to falls from elevation.¹³ Notable among these were falls from equipment or vehicles, including climbing steps or ladders (659 injuries) and falls associated with climbing other structures, often trees or hay bales (603 injuries).¹⁴ Based on this data, no exemption to allow student learners should be permitted.

As with the majority of federal occupational health and safety standards for general industry, agricultural workers are excluded from coverage of current OSHA ladder and fall protection standards.¹⁵ H.O. 7, however, provides at least some fall safety protections for child farmworkers.

The expansion of H.O. 7 covers work at elevations higher than 6 feet. This will allow for greater coverage of work situations in which fatal falls have been found to occur. Of the 152 fatal falls from elevation in the agricultural production industry identified by CFOI, only 38 case narratives (25%) indicated the number of feet fallen by the deceased worker. It is noteworthy that in 22 of the 38 incidents, the worker fell from 20 feet or less. This data indicates that permitting youth to work at heights of up to 20 feet is not sufficiently protective. Lowering the height threshold for youth in agriculture would make H.O. 7 more consistent with occupational safety standards for the construction industry that require fall protection at 6 feet.

H.O. 8 – Grain Bins

Current H.O. 8 prohibits working inside a fruit, forage, or grain storage designed to retain an oxygen deficient or toxic atmosphere; silos under certain circumstances; and manure pit. The proposed revision would prohibit all work in these structures. According to researchers at Purdue University, 51 grain bin accidents occurred in 2010—a record high. Out of 25 fatalities,¹⁶ 20 percent occurred to child workers under the age of 16 who suffocated after being trapped in shifting grain. The proposed new non-agricultural H.O. 18 would eliminate many of these needless deaths.

H.O. 9 – Manure Pits

The new H.O. 9 is the result of the bifurcation of H.O. 8. Farmworker Justice supports the prohibition against all work inside a manure pit or other manure containers.

H.O. 10 – Pesticide Handling

Current Ag. H.O. 9 addresses exposures of farmworkers under the age of 16 to Toxic Category I and II pesticides, due to their acute toxicity. No protection is provided against Category III or IV pesticides even though the chronic hazards associated with these chemicals include “potential neurotoxicity, reproductive toxicity, endocrine disruption, and carcinogenic effects.”¹⁷ The proposed revision of H.O. 10 would correct this deficiency by bringing consistency with the

¹³ NIOSH Recommendations to the U.S. Department and Labor for Changes to Hazardous Orders 81 (May 2002).

¹⁴ Ibid. at 80.

¹⁵ 29 C.F.R. § 1910.22

¹⁶ Workers Comp Insider, Record number of grain bin fatalities in 2010; OSHA cites employers (February 2011) available at <http://www.workerscompinsider.com/2011/02/record-number-o.html>.

¹⁷ NIOSH *supra* note 13 at 90.

EPA'S Worker Protection Standard at 40 C.F.R. part 170, which provides protection against Toxic Category III and IV pesticides.

The proposed H.O. 10 would prohibit children under the age of 16 from performing any activities that fall under the EPA's definition of "pesticide handler"¹⁸ of the WPS. The Department reasons that the proposed revision would be more protective than the current H.O., since it covers worker acute and chronic exposures to all toxic categories of pesticides used in the agricultural production on farms, nurseries, greenhouses, and forests.¹⁹ We urge DOL to adopt the proposed pesticide protections and to strengthen them by prohibiting farmworker youth from handling, washing, or reusing containers ever used to contain or transport pesticides.

Pesticide exposure causes farmworkers to suffer more chemical-related injuries and illnesses than any other workforce in the nation.²⁰ Symptoms of acute pesticide poisoning include rash, dizziness, nausea and vomiting, headaches, coma, and death. Long-term effects of pesticide exposure can result in cancer, neurologic problems, hormonal and reproductive health problems, and infertility.²¹ Many workers are exposed when handling and applying pesticides in both agricultural and nonagricultural employment. Many more are exposed through direct skin contact with residue left on crops and in the soil. Farmworkers are also subjected to exposure through inhalation of spray drift when working in nearby fields and other areas.

Child workers are particularly vulnerable to pesticide exposure. A 1993 study by the National Research Council concluded that "the toxicity of pesticides can potentially be influenced by the immaturity of biochemical and physiological functions and body composition of developing children and adolescents."²² In its recommendations, NIOSH noted that "[t]here is age-related variation in susceptibility to pesticides, based on different metabolic rates and ability to activate, detoxify and excrete xenobiotic compounds, and both qualitative and quantitative differences in toxicity of pesticides between children and adults."²³

A 2003 report on acute pesticide-related illnesses among young workers, using data from state-based surveillance systems and Poison Control Center data from the Toxic Exposure Surveillance System, revealed that 531 children suffered acute occupational pesticide-related

¹⁸A pesticide handler is anyone who is doing any of the following tasks: 1) mixing, loading, transferring, or applying pesticides, 2) handling opened containers of pesticides, 3) acting as a flagger, 4) cleaning, handling, adjusting, or repairing the parts of mixing, loading, or application equipment that may contain pesticide residues, 5) assisting with the application of pesticides, including incorporating the pesticide into the soil after the application has occurred, 6) entering a greenhouse or other enclosed area after application and before the inhalation exposure level listed on the product labeling has been reached or one of the WPS ventilation criteria has been met to: operate ventilation equipment; adjust or remove coverings, such as tarps, used in fumigation, or check air concentration levels, entering a treated area outdoors after application of any soil fumigant to adjust or remove soil coverings, such as tarpaulins, or 7) performing tasks as a crop advisor during any pesticide application, and before any inhalation exposure level or ventilation criteria listed in the labeling has been reached or one of the WPS ventilation criteria has been met during any restricted-entry interval, disposing of pesticides or pesticide containers.

¹⁹ 76 Fed. Reg. 54863

²⁰ Calvert et al., Acute Pesticide Poisoning Among Agricultural Workers in the United States, 1998-2005, American Journal of Industrial Medicine 51:8830898 (2008); Martin Donohoe, MD and Eric Hansen, MD Health Issues of Migrant and Seasonal Farmworkers, Journal of Health Care for the Poor and Underserved, Vol. 14, No.2, p. 157, (2003)

²¹ Human Rights Watch, Fields of Peril: Child Labor in U.S. Agriculture 50 (May 2010).

²² NIOSH *supra* note 13 at 95.

²³ *Ibid.*

illness between the years 1988 and 1999.²⁴ The median age for these workers was 16 years (range: 6—17 years) and 122 (23%) were 13 years or younger. Seventy percent of the children were employed in agricultural production and services. Of the 81 percent of cases where the EPA acute Toxicity Category was available, 67 percent of the illnesses were associated with Toxicity III pesticides—which are not covered by current Ag. H.O. 9.²⁵ Because these acute illnesses affect young people at a time before they have reached full developmental maturation, researchers are also concerned about unique and persistent chronic effects.²⁶

Several youth characteristics raise special concern about the health and safety of adolescents in the workplace. Young people are generally at increased risk of injury from lack of experience. Inexperienced workers are unfamiliar with the requirements of work, are less likely to be trained to recognize hazards, and are often unaware of their legal rights on the job. Youths are also generally less assertive than adults, making it less likely that they will question duties that put them at risk for pesticide exposure.²⁷

H.O. 11 - Blasting Agents

This H.O. prohibits workers under the age of 16 from handling or using a blasting agent. The proposed revision would retain the H.O. as currently written and renumber it as Ag H.O. 11. Farmworker Justice supports the retention of prohibitions regarding the handling and using of blasting agents.

H.O. 12 – Anhydrous Ammonia

This H.O. prohibits workers under the age of 16 from transporting, transferring, or applying anhydrous ammonia. The proposed revision would retain the H.O. as currently written and renumber it as Ag. H.O. 12. Farmworker Justice supports the retention of the prohibition regarding the transporting, transferring, or applying of anhydrous ammonia.

H.O. 13 – Work with Tobacco

The newly proposed H.O. 13 prohibits the employment of children in tobacco production and curing. Farmworker Justice supports the additional protections provided by this H.O. and strongly supports the decision to not propose a student-learner exemption. In addition to the proposed H.O.'s ban on work in the tobacco production and curing (including planting, cultivating, topping, harvesting, baling, barning, and curing), Farmworker Justice strongly urges the Department to prohibit all employment of youth in the processing and packing of tobacco.

²⁴ Geoffrey M. Calvert et al., Acute Pesticide-Related Illnesses Among Working Youths, 1988–1999, Am J Public Health. 2003 April; 93(4): 605–610 (Apr 2003) available at <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1447798/>.

²⁵ Ibid.

²⁶ See Natural Resources Defense Council, Trouble on the Farm: Growing Up with Pesticides in Agricultural Communities (New York: Natural Resources Defense Council, October 1998), p. viii; see also Geoffrey M. Calvert et al., “Acute Pesticide-Related Illnesses Among Working Youths, 1988–1999,” American Journal of Public Health, vol. 93, no. 4 (April 2003), p. 609 (citing W.R. Snodgrass, “Physiological and biochemical differences between children and adults as determinants of toxic response to environmental pollutants,” P.S. Guzelian, C.J. Henry, S.S. Olin, eds. Similarities and Differences Between Children and Adults: Implications for Risk Assessment, (Washington, DC: International Life Sciences Institute Press, 1992), pp. 35-42).

²⁷ Calvert et al. *supra* note 10.

In addition, given the toxicity levels of tobacco and the prohibitions of its use by minors, Farmworker Justice recommends extending the ban of all work in tobacco to workers under the age of 18.

The United States is one of the world's top five tobacco producers. Tobacco farming presents several hazards to those who cultivate and harvest the plant. Although tobacco farmworkers share many of the same hazards as other agricultural workers, tobacco production poses the additional threat of acute nicotine poisoning, green tobacco sickness (GTS). GTS is an occupational poisoning that occurs when workers absorb nicotine through the skin as they come in contact with the leaves of mature and wet tobacco. GTS is characterized largely by nausea, vomiting, headache, muscle weakness, dizziness, itching and rashes.²⁸ Symptoms may also include abdominal cramps, prostration, difficulty breathing, and fluctuations in heart rate and blood pressure.²⁹

Whereas most crops present external hazards to farmworkers, such as exposure to pesticides and musculoskeletal trauma, tobacco work presents an additional hazard in the form of the plant as a biohazard. Comparable situations occur only among those who cultivate illicit crops like coca and opium.³⁰ Moisture on tobacco leaves from dew or rain may contain as much as 9 mg of nicotine per 100 mL of liquid, roughly the same nicotine content in six cigarettes.³¹ Workers are exposed to the equivalent nicotine content of as much as 36 cigarettes on a humid day. In the United States, tobacco is usually harvested in August and September when environmental temperature is high. The combination of high environmental temperature and hard physical labor causes blood to move from the skin to avoid high body temperature, increasing surface blood flow and nicotine absorption.³²

Compared with adults, children are more vulnerable to GTS for a number of reasons including the following: their body size is small relative to the dose of nicotine; they have a lower likelihood of being tolerant to nicotine; and they lack knowledge about the risk of harvesting tobacco.³³ To illustrate the effects of GTS on children, McKnight RH et al. describe three pediatric case histories of GTS reported to the Kentucky Regional Poison Center, including the following case:

Thirteen Latino migrant field workers, including three workers age 15, 16, and 17, arrived in the emergency department in August six hours after they stopped working in tobacco fields. The weather was humid, raining sporadically throughout the day, with a temperature of 91 degrees Fahrenheit. All 13 workers experienced worsening and

²⁸ Ballard T, Ehlers J, Freund E, Auslander M, Brandt V, Halperin W. Green tobacco sickness: occupational nicotine poisoning in tobacco workers. *Arch Environ Health* 1995; 50:384-9. McKnight RH, Levine EJ, Rodgers GC. Detection of green tobacco sickness by a regional poison center. *Vet Hum Toxicol* 1994; 36:505-10.

²⁹ Arcury TA, Quandt SA. 2006 Health and social implications of tobacco production. *J. Agromedicine*. 11:71-81.

³⁰ McKnight RH, Spiller HA. Green tobacco sickness in children and adolescents. *Public Health Reports* 2005; 120: 602-605.

³¹ Gehlbach SH, Perry LD, Williams WA, Freeman JI, Langone JJ, Peta LV, Van Vunakis H. Nicotine absorption by workers harvesting tobacco. *Lancet* 1975; 1:478-80.

³² McKnight RH, Spiller HA. Green tobacco sickness in children and adolescents. *Public Health Reports* 2005; 120: 602-605.

³³ Ballard T, Ehlers J, Freund E, Auslander M, Brandt V, Halperin W. Green tobacco sickness: occupational nicotine poisoning in tobacco workers. *Arch Environ Health* 1995; 50:384-9. McKnight RH, Spiller HA. Green tobacco sickness in children and adolescents. *Public Health Reports* 2005; 120: 602-605.

persistent vomiting, headache, dizziness, and weakness throughout the evening. In the emergency department, five patients, including two of the young workers, experienced broadycardia, with heart rates between 43 and 54 beats per minutes.³⁴

Unfortunately, this frightening experience is far too common in tobacco farmworker communities. A study found that for every 100 days at risk, farmworkers had GTS for an estimated 1.88 days and for those workers who primed and harvested tobacco, they had GTS four out of every 100 days at risk.³⁵ On average, 8% of farmworkers had GTS during any given week, while 11% had it during the last third of the season.³⁶

Farmworker Justice supports this H.O. and urges DOL to expand its protections by banning work in tobacco packing and processing as well as production and curing, and to also raise the age limit of coverage to 18.

DOL must adopt a heat stress standard to protect young workers

Currently, there is no H.O. that provides protection against heat stress and exposure. Farmworker Justice urges the Department to immediately begin development and consideration of a Heat Stress H.O. for adoption in the near-term. Such a regulation is needed to limit the exposure of young farmworkers to extreme temperatures and arduous conditions. Children, as young as 12, are working 8 to 12 hour days in 100-degree heat, performing back-breaking, strenuous labor, and the epidemic of worker injury and death due to excessive heat exposure is projected to worsen in the coming years.³⁷

In order to fully protect children, measures must be taken to ensure that young workers are not exposed to conditions that raise their core body temperature above 100.4 F [temperature threshold is in accordance with the World Health Organization (“WHO”) and accepted by the NIOSH and the American Conference of Industrial Hygienists (“ACGIH”)].³⁸ Farmworker Justice believes that these measures must include implementing water, rest, and shade requirements and prohibiting the piece-rate payment for children under the age of 16.

During 1992-2006, a total of 423 worker deaths from exposure to environmental heat were reported in the United States. Of these 423 deaths, 25% occurred in agriculture while only 2-3% of the American population is employed in that industry.³⁹ While mortality for heat stroke

³⁴ McKnight RH, Spiller HA. Green tobacco sickness in children and adolescents. Public Health Reports 2005; 120: 602-605.

³⁵ Arcury TA, Quandt SA. Predictors of incidence and prevalence of green tobacco sickness among Latino farmworkers in North Carolina, USA. J Epidemiol Community Health 2001; 55:818-824.

³⁶ Ibid.

³⁷ U.S. Climate Change Science Program and the Subcommittee on Global Change Research. Analyses of the Effects of Global Change on Human Health and Welfare and Human Systems: Final Report, Synthesis and Assessment Product 4.6. Biello D. The New Normal? Average Global Temperatures Continue to Rise. Scientific American. July 22, 2010.

³⁸ NIOSH Publication No. 86-113. Basis for Recommended Standard: Occupational Exposure to Hot Environments (Revised Criteria 1986), p. 86. American Conference of Governmental Industrial Hygienists (ACGIH). 2011 Threshold Limit Values (TLVs) and Biological Exposure Indices (BEIs). Heat Stress and Heat Strain, p.211. ISBN: 978-1-60726028-8.

³⁹ RC Luginbuhl, LL Jackson, DN Castillo, KA Loring. Morbidity & Mortality Weekly Report. 2008;57(24):649-653.

ranges from 17% to 70%, depending on the severity and age of the patient, the Environmental Protection Agency has confirmed that children are more susceptible to heat.⁴⁰ The following are risk factors for heat illness in children:

- Greater surface area to body mass ratio than adults
- Production of more metabolic heat per kilogram of body weight
- Slower rate of sweating than adults
- Temperature when sweating starts higher
- Lower cardiac output at a given rate than adults
- Rate of acclimatization is slower
- Thirst response is blunted compared to adults
- Hydration affects children more than adults⁴¹

In addition to the risk factors of heat illness in children, common medical conditions that predispose children to an increased risk for heat illness may cause the following: excessive fluid loss, suboptimal sweating, excessive sweating, diminished thirst intake, and hypothalamic dysfunction.⁴²

There is consensus in the occupational health community that there is an upper limit of heat stress that a worker performing physical labor can tolerate before serious health effects ensue. ACGIH's methodology for measuring heat stress⁴³, which is relied upon by both NIOSH and the Occupational Safety and Health Administration ("OSHA"),⁴⁴ takes into account heat from two sources: 1) environmental heat, and 2) metabolic heat. The combination of these two sources causes heat stress on a worker. Calculations for environmental heat use the wet bulb globe temperature ("WBGT") index by measuring temperature, humidity, and solar radiation.

Metabolic heat, heat that is generated by the body, exacerbates the stress workers experience from environmental heat. For example, workers in light jobs can likely function in hotter environments while heavy work can only take place at lower temperatures without adverse health effects. By combining the two main heat sources, the ACGIH has formulated a temperature-work rate curve that can be used to determine the maximum temperature a worker can tolerate given their work intensity before protective measures must be taken. The best way to prevent heat illness is by reducing known modifiable risk factors for potentially hazardous conditions.

These preventative measures must apply to **all** workers. While child workers are particularly vulnerable to heat stress, all farmworkers are in dire need of protection from heat stress. In September 2011, Farmworker Justice, in conjunction with other advocates, filed a petition⁴⁵

⁴⁰ United States Environmental Protection Agency. Prevention, Pesticides and Toxic Substances. A Guide to Heat Stress in Agriculture. May 1993; EPA-750-b-92-001.

⁴¹ Bytomski JR, Squire DL, Heat Illness in Children. Current Sports Medicine Reports 2003, 2:320-324.

⁴² Ibid, 321.

⁴³ American Conference of Governmental Industrial Hygienists (ACGIH). 2011 Threshold Limit Values (TLVs) and Biological Exposure Indices (BEIs). Heat Stress and Heat Strain, p.211-220. ISBN: 978-1-60726028-8.

⁴⁴ Occupational Safety and Health Administration (OSHA) Technical Manual. Section III: Chapter 4 Heat Stress. Directive Number: TED 01-00-015.

⁴⁵ Available at <http://www.citizen.org/documents/Petition-for-a-heat-standard-090111.pdf>

urging OSHA to implement a permanent heat standard that would apply to all indoor and outdoor workers.

Young workers must be given access, at no cost to themselves, to cool, potable water sufficient to maintain adequate levels of hydration. Workers should be encouraged to drink at least one quart of water per hour that is palatable and served in individual cups. Additionally, young workers must be given periodic rest breaks every hour, which includes access to sufficient areas of shade with enough cover to be able to protect all workers comfortably at one time.

Both California and Washington have implemented heat stress rules and we urge DOL to examine these regulations in implementing new heat stress regulations. While California and Washington have demonstrated the critical importance of having a specific heat standard, the actual standards as written omit a number of areas crucial for adequate worker protection.⁴⁶ In California, the standard does not have a heat stress threshold that accounts for humidity, does not provide for paid, mandatory rest breaks for workers, and only requires employers to provide shade for 25% of the workforce when temperatures rise above 85% and, in Washington, the standard is only applicable from May 1 to September 30 of every year. We urge the DOL to go beyond these measures.

Prohibit Piece-rate System for Children

Currently, there is no H.O. that provides protection against the strenuous demands of the piece-rate compensation system. Many crops in the U.S. are harvested under this system, in which workers are paid by the number of fruits or vegetables harvested and not by the amount of time worked.⁴⁷ Faster more experienced workers harvesting certain crops on a piece-rate basis can earn more than the minimum wage, however the rates are low enough that workers often have to work extremely hard for very little.

According to a 2004 Oxfam study, tomato growers in Immokalee, Florida, paid workers “as little as 40 cents for every 32-pound bucket of tomatoes they picked. A tomato picker thus had to harvest 125 buckets—practically 2 tons—of tomatoes to earn just \$50 a day.”⁴⁸ Workers who are weaker, slower, or less experienced usually earn considerably less than minimum wage, even though this is technically illegal. The “best” tomato pickers in the Immokalee area “average 100 to 150 buckets a day for daily earnings of \$40 to \$60 [at \$0.40 a bucket], while women and older workers often pick 70 to 80 buckets, for about \$28 a day.”⁴⁹

This compensation system causes farmworkers to work at extreme speed, without breaks, and prompts many farmworkers to bring their children to work with them in the fields.⁵⁰ As young workers race to pick as much as possible under this compensation system, the health risks associated with such a work environment increases the likelihood of injury or illness, particularly those related to heat-stress. Moreover, these children may be inclined to skip rest and water breaks in order to maximize their earnings.

⁴⁶ California Code of Regulations. Title 8, section 3395, Heat Illness Prevention.

⁴⁷ Association of Farmworker Opportunity Programs, Children in the Fields: An American Problem 16 (2007).

⁴⁸ Oxfam America, Like Machines in the Fields: Workers without Rights in American Agriculture 12-13 (Boston: Oxfam America, 2004), <http://www.oxfamamerica.org/files/like-machines-in-the-fields.pdf>.

⁴⁹ Ibid.

⁵⁰ Association of Farmworker Opportunity Programs *supra* note 47.

The piece-rate compensation system is too dangerous of a dilemma for young farmworkers. Farmworker Justice urges the Department to prohibit the piece-rate payment system for workers under the age of 16.

Imperative that Regulations be Adopted within 30 Days

Farmworker Justice urges the DOL to adopt the proposed regulations, subject to the improvements and modifications that we and other worker advocates have recommended, as expeditiously as possible—within 30 days of the end of the comment period. DOL has spent nearly a decade refining the proposed regulations and has finally addressed the recommendations of NIOSH, producing reasonable and feasible regulations that improve the safety of youth workers across the country. Thirty (30) days should be the maximum time for DOL to consider and incorporate the minor adjustments that we and other advocates recommend making to the proposed regulations. Any new major expansions of these safety proposals should begin immediately and implemented separately.

Conclusion

Farmworker Justice and the undersigned organizations value the increased safety protections embodied in these proposed regulations. Where possible, we recommend that they be strengthened. Although we understand that the current regulations do not address protections for 16- and 17-year-olds working in agriculture, we urge the Department of Labor to limit the minimum age for hazardous work in tobacco to 18 years. Additionally, we strongly urge that the proposed regulations be promulgated 30 days after the comment period ends, and that work begin immediately to add heat stress and piece-rate prohibitions and that proposed rules in these areas be issued before the end of 2012.

We look forward to your swift implementation of these regulations.

Farmworker Justice
California Rural Legal Assistance Foundation
Legal Aid Services of Oregon
National Council of La Raza (NCLR)
New Mexico Center on Law and Poverty
Pineros y Campesinos Unidos del Noroeste (PCUN)
United Farm Workers
Virginia Legal Aid Justice Center -- Immigrant Advocacy Program
Worker Justice Center of New York