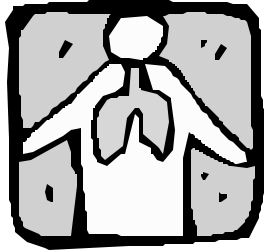


FARMER'S LUNG

Hypersensitivity Pneumonitis

Student Reference Sheet

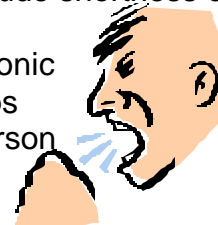
Agricultural workers are exposed to many air pollutants that can cause disease. One such disease is Hypersensitivity Pneumonitis, more commonly known as Farmer's Lung.



Farmer's Lung is an allergic disease caused by the inhalation of organic molecules that irritate the air sacs of the lungs, causing them to become inflamed. Fibrous scar tissue can then develop on parts of the lungs and cause mild to severe restriction of lung function.

Farmer's Lung is an occupational disease caused by exposure to organic irritants, such as dust, gases and fumes, vapors, fungus, molds, and bacteria. These irritants are found everywhere in agriculture, including the following: *bird droppings, dust, compost piles, moldy hay, wood chip litter, bedding, grain bins and elevators, silos and grain storage, insecticides, pesticides, confinement buildings, and livestock working areas.* The particles may also be found in air conditioners, humidifiers, vents, and heating systems. The disease occurs more often in late winter and early spring.

The disease has two levels, acute and chronic. An acute infection results in severe symptoms four to eight hours after exposure. Symptoms include shortness of breath, fever, cough, phlegm, chills, fatigue, muscle pain, and loss of appetite. Often mistaken for the flu, it can develop into a chronic form that is permanently disabling. The chronic form develops gradually over about ten years, and is not reversible. The person eventually dies from not being able to breathe or from other respiratory diseases that occur more easily if the person also has Farmer's Lung.



If a farmer develops the acute form, he/she can still farm, but only if the irritant organic molecules are avoided. The symptoms may diminish in 2-5 days, but the affected person will have to avoid the irritants. Someone else, using protective equipment to minimize exposure, must remove the materials (bedding, chemicals, feed, etc) or complete the farm tasks around the materials.

The chronic form affects less than 5% of farmers who develop the disease. Chronic cases develop emphysema, permanent irreversible lung damage, weight loss, and cough. This form develops gradually over about ten years, and is not reversible. The person eventually dies from not being able to breathe. Farmers tend to die 8 years after being diagnosed with the disease. Of those who have the chronic form, 55 out of every

100 farmers are forced to quit farming. Smokers are even more likely to develop Farmer's Lung than non-smokers.

Prevention is better than any cure! People in agricultural occupations who face exposure and risk from the irritants and allergens can protect themselves in four simple ways:

- 1. Personal Protective Equipment** -- when it is not possible to keep mold out of the air or separate yourself from irritants, wear a suitable mask for protection. Depending on the job, protective equipment is available from a simple dust mask to a full-face respirator and self-contained breathing apparatus. Protective equipment must **always** be worn when exposure is possible. The cost is relatively cheap. It may be as little as a dollar.
- 2. Ventilation** -- do not allow for the buildup of dusts, molds, and other irritants. Avoid stirring particles into the air, and allow for a well-ventilated work area with the venting blowing **away** from workers. Dry, moldy material such as hay, feed, and bedding should not be contained in a confined work area.
- 3. Change Behavior** -- do not enter areas of allergens unless you have to, and minimize the time in the areas. For example, consider alternative storage of hay to reduce manual labor and personal exposure (switch from square bale hay to round bale) or switch feed forms and feeding systems (automatic instead of manual feeding, or adding oil to feed). Always wear some type of protection to separate yourself and the air you breathe from the irritants.
- 4. Education** -- inform workers and educate yourself to the dangers present in the air. Provide personal protective equipment and safety materials for everyone involved in your farm--including yourself. Know when danger levels exist, especially in high-risk areas such as silos and manure pits. Look for new alternatives in doing tasks, to reduce the incidence of disease infection.

Avoid exposure to disease-causing agents by using personal protective equipment, proper ventilation, changing your behavior, and educating farm workers. Prevention is the only way to avoid many years of illness, pain, and even death.