Stubble burning

Preliminary information

Dry vegetation is sometimes burned deliberately in order to green grasslands more rapidly for pasture, or sometimes to draw out game animals while hunting. Stubble consists of the lower parts of crop stems left in the ground after harvesting.

In autumn, agricultural fields are strewn with unharvested stubble. Abandoned fields can also become overrun with perennial weeds and birch trees. In such circumstances it is tempting to find a quick, cheap way to retain or enhance the soil's fertility. Unfortunately, many farms and local residents believe that the deliberate burning of grass and stubble is the best option. It is a traditional, albeit mistaken, belief that the ash residue from burning dry grass fertilizes the soil, and that warming the soil contributes to the more rapid growth of seedlings.

In reality, grass burning only worsens the situation. Organic crop residues are not returned to the soil by rotting, but are instead washed away as surface runoff. As a result, soil fertility is diminished. Without shrubs and trees to prevent runoff and erosion, soil degradation is accelerated. Villagers afraid of uncontrolled fires started up by their neighbours often retaliate by lighting their own fires, and the burning of dry grass turns into mass disaster.

The burning of dry vegetation on agricultural land is a primary cause of the vast majority of forest and domestic fires. It is even possible for the cost of the damage from these fires to exceed government revenue from forestry profits. But there are environmental impacts as well — on agricultural fields and pastures, marshes, steppes, etc.

While recognising the reasons behind the agricultural practice of field burning, there is an evident need to return to rational long-term planning and to introduce new technologies to maintain soil fertility, such as shelterbelts, erosion control techniques and water-protection forests. This will contribute to the abandonment of the traditional method of grass burning.

What can you do?

Discuss the situation described below and argue your point of view.

When visiting the countryside during autumn or early spring, you see some farmers or labourers setting fire to stubble near a forest or meadow. What should you do?

- Stop to explain to the workers that stubble burning is bad for the soil and destroys many useful invertebrates in its upper layer, and warn them that the fire could spread to the nearby forest, meadow, or even buildings.
- Call the police or fire department.
- Call your local or regional administration.
- Get angry, but otherwise do nothing.
- Initiate a local information campaign about the dangers of stubble burning.
- Take other actions

Information campaign

A serious information campaign is needed to convince people about the dangers and drawbacks of grass burning. Successful advocacy starts with an understanding of the basic problem:

- What are the perceived benefits and dangers of burning grass?
- How do fires get started?

The questionnaire below can be used to spark a local-level information campaign.

1. What causes grass fires?

- ☐ Unextinguished campfires
- ☐ Cigarette butts and matches
- ☐ Children starting fires for fun
- ☐ Agricultural burning (to get rid of dry grass)
- ☐ Deliberate grass burning (unattended)
- ☐ Dry grass burning around homes in villages
- ☐ Intense heat and/or drought
- ☐ Other

2. What are the dangers of burning grass?

- ☐ It can start a forest fire.
- ☐ It can start a fire in a nearby settlement or village.
- ☐ It destroys all living things (animals, insects, birds' nests).
- ☐ It burns the fertile layer of the soil.
- ☐ It creates smoke pollution.
- ☐ It causes no damage at all.
- ☐ I don't know.

What can be done to prevent grass fires?

- ☐ Include lessons in schools about the dangers of grass fires.
- ☐ Use media to conduct a massive public-awareness campaign against grass fires.
- ☐ Create a local brigade to extinguish grass fires.
- ☐ Take precautionary measures (e.g. clear dry grass, dig ditches as firebreaks, impose fines for burning grass).