



Rumex, the weed spreading rapidly across the tsamdros of Bhutan

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The high-altitude grazing lands of Bhutan, essential for yak herding, are facing an increasing threat from weeds such as *Rumex* species, commonly referred to as dock (Eng.), *halhaley* (Nep.), *sheylempo* (Sha.) and *shomda* (Dzongkha). *Rumex* has proliferated across both summer and winter grazing pastures, especially in areas where yaks are confined for milking and feeding, as this creates fertile soil conditions due to dung, urine, and soil trampling.

RAPID SPREAD OF AN INVASIVE

The plant is now found at altitudes ranging from 2500 to 4,300 meters above mean sea level (masl), encroaching on valuable grazing lands. For instance, a quick survey of 186 tsamdros (rangeland parcels) showed that 49 (26%) are heavily invaded by *Rumex*, while 127 (68%) are partially invaded but showing rapid spread every season. The spread of *Rumex* reduces available space for growth of palatable grasses that are critical as fodder for yaks and horses, as well as for wild herbivores.



A tsamdro in Chele la invaded by Rumex.

alternatives in the market and a shortage of manpower. According to Pema Wangchuk, a local highlander, this traditional knowledge has been lost over time. In the past, the roots were used to treat jaundice, and both the roots and leaves were boiled to create baths for curing joint pains. Rumex is very difficult to uproot; even a small remaining fragment of its root can reestablish and spread quickly, making it hard to control. The loss of traditional knowledge, combined with the plant's invasive nature, underscores the importance of both reviving local practices and finding new ways to address the issue.

While *Rumex* has recognized medicinal value in other parts of the world, its potential benefits are not widely known in Bhutan. Currently, only one manufacturing unit produces Rumex juice, but public awareness and market demand are low. Unless we find uses on a much larger scale, this is unlikely to make a dent on the invasive.

RANGELAND RESTORATION TRIALS

We have been working with experts from the International Centre for Integrated Mountain Development (ICIMOD) and other national agencies like Department of Livestock to trial various treatments in Rumex invaded sites. These include physical removal, controlled burning, and reseeded of plots with grasses.

However, the scale of the problem is daunting. The map above, based on reports from various districts, shows the extent of the problem. This problem must be tackled at scale and with speed.

The early results from our trials are promising and we hope that with the sustained effort and collaboration among agencies, we can arrest the spread of this problematic invasive that is rapidly taking over our tsamdros. The future of yak pastoralism and the wildlife of our highlands depends on it. Recognising the negative impacts of this invasive and raising public awareness is a good first step.



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PHOTOS

Page 1 & 4: Jitendra bajracharya, ICIMOD