

Research Documents with New Comments 3

Introductory Note

This series is an effort to present the updated research documents with information collected through recent Ethnobotanical surveys (December 2010 onwards).

Medicinal herbs of Chhattisgarh, India having less known traditional uses XXXVIII. Sawan (*Echinochloa* sp. Family: Poaceae)

Research Note - Pankaj Oudhia

© 2001, 2002, 2003 Pankaj Oudhia - All Rights Reserved

<http://www.pankajoudhia.com/RA2.pdf>

Sawan is not a new name for the paddy growers of Chhattisgarh. It is one of the common herbs grow with cultivated paddy crops. In the literatures of weed sciences, it is described as obnoxious weed that competes with paddy crop for light, moisture and nutrient and reduces the yield upto great extent. A lot of research works have been done on control of this so called weed. Over dozen of Indian research institutes and many scientists are still engaged in search of new chemical tools to manage this weed in paddy fields. They are organizing field demonstrations at farmer's field to convince them that how the new chemical tools are effective against Sawan. Every year, many tons of lethal chemicals are dumped in paddy fields which are damaging our ecosystem very badly. The paddy growers are living with both paddy and Sawan since generations. They are well aware how to manage the weed in crop fields in ecofriendly ways. The paddy growers of Chhattisgarh, particularly the senior growers are not ready to use chemicals to control this weed. They are aware that in times of severe drought in early days, the grains of Sawan have saves their life as substitute to paddy. They are also aware about the nutritive value and use of Sawan as fodder for their cattle. Now days, due to heavy population pressure and increased illegal encroachments in pasture lands, it is very difficult to get fresh fodder.

Common names of Sawan around the world.		
S.No.	Languages/Regions/Countries	Names

1	America	Billion dollar grass
2	Bengal	Samra shama, Sanwa, Saon, Shama. Shamula, Syamadhan
3	Bihar	Sama, Sanwan, Sawan
4	Canarese	Same, Save
5	Chinese	Shan Tzu
6	English	Japanese Barnyard Millet
7	Gujarati	Samo, Samoghas, janglisamak
8	Hindi	Samak, Sanwa, Sawa, Sawan, Shama
9	Kashmir	Karin, Soak
10	Malay	Padi barong
11	marathi	Janglisama, Samul
12	Persian	Bajri
13	Sanskrit	Avipriya, rajadhanya, Shyama, Tribija
14	Sinhalese	Welmarrku
15	Tamil	Kudraivallipillu, Raipillu
16	Telugu	Bonta chamalu, Bontashama, Chama, Chamalu, Sawa
17	Uriya	Samu

The so called unwanted plants named by the weed scientists, are providing fodder to the cattle and saving its lives. It is common belief among Chhattisgarh paddy farmers that the presence of Sawan in crop fields is beneficial because this herb is having the unique capacity to extract the nutrients in better ways as compared to average paddy plants. They allow the initial growth of Sawan in field and later burry it in soil to convert it into nutritious manure. The old plants are removed by the farmers through hand weeding and with the help of collected plants, they prepare rich manure and later apply it in crop fields. In India, due to increasing population, the number of

unemployed natives is increasing. The method of hand weeding provides employment opportunity to rural youths. It stops the use of chemicals for weed control. Also, through hand weeding, they get freshly uprooted plants that can be used either for manure preparation or for preparation of herbal formulations. Like other herbs on this earth, Sawan also possess valuable medicinal properties and uses. Although the traditional healers aware of its traditional medicinal uses are less in number but they have sufficient knowledge to establish it as medicinal herb. The senior traditional healers still remember that in early days Sawan was under cultivation as minor millet crop in tribal belts of Chhattisgarh. They blame the new technology and introduction of high yielding varieties of food crops that have replaced this valuable crop. During my ethnobotanical surveys in different parts of Chhattisgarh, I have seen many variations in Sawan herbs I personally feel that the researchers working on this herb must visit Chhattisgarh to observe these variations in different parts. As medicine, Sawan is used alone or in combination with other herbs in treatment of liver related troubles. The healers use it very frequently with Bhui aonla (*Phyllanthus amarus*). As medicine, whole herb is used, preferably before flowering. In many parts of Chhattisgarh, the healers use it in treatment of Jaundice.

New Comments added on December 8, 2010

It is wrong perception among many Traditional as well as modern medical practitioners that when *Phyllanthus* species specially *Phyllanthus amarus* is present in any formulation used for liver related diseases with other herbs, the main role is played by it. It is not correct always. The Traditional Healers of Chhattisgarh Plains use Bhui aonla with Sawa Type 2 in Hepatoprotective Formulations. They claim that Bhui aonla increases the efficacy of Sawa and vice-versa. And one will never get the miraculous effect if any of the herbs is used as single herb. This unique combination of Bhui aonla and Sawa is not mentioned in ancient literature related to different systems of medicine. Based on the condition of patients the Healers add up to 100 herbs one by one in this base formulation in order to make it stronger.

The traditional healers of Chhattisgarh use the whole herb in treatment of dysentery. Many times it's over dose can result in the problem of constipation. The healers suggest the patients, in such cases to take a glass of milk to nullify the bad effects of its overdose.

New Comments added on December 8, 2010

Through recent Ethnobotanical surveys in different Indian state including Chhattisgarh, Orissa, Jharkhand, Bihar, Maharashtra, West Bengal, Gujrat, and Madhya Pradesh I collected information about over 500 Traditional Formulations in which Sawa or Sawan is added as important ingredients. The Traditional Healers of Chhattisgarh use it with different types of Medicinal Rice. As mentioned in base article that over dose of Sawa results in constipation, the

Healers of Chhattisgarh having expertise in use of Kodo (*Paspalum scrobiculatum*) always suggest patients to take Sawa with Kodo and vice-versa. According to them, this combination nullifies harmful effects of each other. Sawa is also having special properties to nullify harmful effects of many Medicinal Rice types. It is very important information.

The Healers of Jharkhand are not in favor of recommending Sawa as food for everyone. At first they examine patients and based on their condition specially status of digestive as well as respiratory systems they suggest whether Sawa is beneficial for them or not.

It is becoming difficult to get Sawa grains in urban areas. Its demand is increasing but it is hard to get genuine Sawa. Adulteration is common practice. Other grass seeds are added which results in toxicity. In rural areas Sawa is available in abundance but due to modern farming the Healers warn natives to remain far from Sawa growing in rice fields where heavy amount of agrochemicals are used. Collection of Sawa grains requires much patience. Many Healers employ labours for this purpose. While surveys in North Chhattisgarh I have observed that many Healers grow Sawa in Badi or in small fields in place of Rice for year round use.

The Traditional Healers of Chhattisgarh have rich Traditional Allelopathic Knowledge but unfortunately they are not practicing it sincerely. The Healers of Chhattisgarh Plains use tree leachate and barks whereas the Healers of Gariaband region use Genchi and other wild types of Curcuma for the same purpose. Sawa is also enriched with desired medicinal properties through unique use of Gindhol i.e. *Sterculia urens*. I have collected information about 140 Herbal Solutions used to treat Sawa before collection. In early days when Sawa was under cultivation as upland crop farmers were practicing Traditional Agricultural Knowledge to protect it from pests and to enhance its growth. At present this knowledge is in danger. I have documented this knowledge in its original form. The senior farmers of Kanker region use Modgar tree leachate for this purpose whereas Beeja tree leachate is used by the senior farmers of Mainpur region.

All species of Sawa are important part of my report on Type II Diabetes. These species are added in Gorochan based Traditional Formulations used in treatment of diseases of nervous system. I documented information about 35 Gorochan based Traditional Formulations in which Sawa species are added as primary ingredients, 50 and 30 Traditional Formulations in which it is added as secondary and tertiary ingredients, respectively. Most of these Formulations are yet not reported in ancient literatures related to different systems of medicine.

The traditional healers of Narharpur region, suggest the patients having the problem of piles, to rub the fresh leaf juice of Sawan in affected parts in order to get relief from intense pain.

New Comments added on December 8, 2010

When I shared this information given by the Healers of Narharpur region with Healers of different parts of India I got interesting comments. Most of the Healers informed that alone Sawan or Sawa is not much effective. It must be used with other herbs in order to get the desired results. The Healers of different parts of Chhattisgarh suggested 55 medicinal herbs, whereas the Healers of Jharkhand suggested 9 Herbs. The Healers Orissa informed that Sawa must be used with 33 medicinal herbs. Recent interactions with the Traditional Healers of Gujrat and Rajasthan revealed that 95 different medicinal herbs can be added with Sawa. Out of these 95 herbs many herbs are desert herbs growing in place where Sawa never grows.

The senior paddy growers of Durg region informed me that in early days, when the medicinal rice varieties were under cultivation in Chhattisgarh, the removal of Sawan from crop fields was not allowed. According to them, the presence of Sawan in crop fields plays an important role to increase the medicinal properties of medicinal rice varieties. This is new information for me. Through this article, I would like to request the young researchers working on weeds to focus their studies on this aspect also. The above mentioned traditional medicinal uses of Sawan have not been reported earlier. This article is first written document on this aspect. Unfortunately, I have yet not found the medicinal uses of Sawan in different reference literatures related to indigenous systems of medicine in India.

New Comments added on December 8, 2010

During recent Ethnobotanical surveys I interacted with tens of Traditional Healers having expertise in use of Medicinal Rice. They confirmed the beneficial effects of Sawa on Medicinal Rice in crop fields. Based on it I motivated many young researchers to conduct research. I was assured for experiments. I arranged seeds of many Medicinal Rice types for them. Medicinal Rice Tenduphool Type 1 is one of these Medicinal Rice types.

Total 7 species of *Echinochloa* have been reported in India. In Chhattisgarh, *E. colona* and *E. crusgalli* are common. Both species are known as Sawan. I am describing the botany of both species, I have noted from reference literatures. Botanically, *E. colona* (Syn. *Panicum colonum* syn. *Millium colonum* syn. *Oplismenus colonum* syn. *Echinochloa zonalis*) is a slender, tufted, quick-growing, annual, having height upto one meter; leaf flat, glabrous, 5-20x4-11 mm; Inflorescence simple racemes, rather distant; spikelet ovoid or ovate-elliptic, upto 3.2 mm long, Fruit broadly elliptic, Plano-convex. Botanically *E. crusgalli* (Syn. *Panicum crusgalli* syn. *Millium crusgalli* syn. *Pennisetum crusgalli* syn. *Echinochloa hispidula*) is a tufted annual, having height upto 1.2 meters; Leaf linear, flat, 7.5-52.0 cm; Inflorescence usually more or less branched, upto 5.0 cm long; spikelet upto 4-8 mm, awn present; Fruit ovoid caryopsis. There are

many herbs present in Chhattisgarh, declared by the weed scientists as harmful weeds .Through the articles; I am trying to document the traditional medicinal knowledge about these so called weeds for the future generations. I am confident, that like present generation, the future generation will also not consider these valuable medicinal herbs as weed.

New Comments added on December 8, 2010

I arranged 25 samples of Sawa from different parts of India and presented it to the Traditional Healers of Chhattisgarh to compare it with local types. I will share the findings of their experiments soon.

While visit to Southern Chhattisgarh I observed unique use of soil collected from root zone of Sawa population as medicine. It is used both internally as well as externally. Sawa population growing in wet points under partial shade of large trees is preferred.

Even after writing much on different aspects of medicinal uses of Sawa types, it seems that I failed to generate interest of young researchers to focus their attention on this useful herb but I will continue the efforts.

Thank you very much for reading the article.

Citation

Oudhia, P. (2010). Research Documents with New Comments 3: Medicinal herbs of Chhattisgarh, India having less known traditional uses XXXVIII. Sawan (Echinochloa sp. Family: Poaceae). <http://pankajoudhia.com>

© Pankaj Oudhia