

# BUCKWHEAT – WHERE BUCKS CAN BEGIN!

Aug 30, 2021



By KN Kumar

People of the state – especially those from the Khasi & Jaintia Hills are aware of the commonly found plant Jarain. Most consider this plant to be an invasive weed, while some use its sour leaves in the local cuisine. Prima facie the utility of the plant seems to end there. But there is a lot more to learn about this family of plants, botanically known as Fagopyrum species under the family Polygonaceae. Of particular interest to us in Meghalaya is a sister plant of Jarain – scientifically Fagopyrum esculentum, and commonly known as Buckwheat. This article seeks to create public awareness about the commercial and nutritional potential of Buckwheat for undertaking cultivation in Meghalaya. Buckwheat is neither native to, nor found in the wild in Meghalaya. Since the ecology of the K&J Hills seems to favour Jarain (*F. cymosum*) extensively, it is reasonable to assume that the other members of the family should also grow well in our state. Even as we are testing out this assumption in a few farmers' fields in East Khasi Hills and Ri Bhoi districts even as I write this article, I think the time to elaborate the reasons as to why we should look at Buckwheat more seriously is now. Hence, this effort. To begin with, Buckwheat is a pseudo cereal, somewhat like Quinoa. While it is a good source of carbohydrates like Rice and Wheat, it has more protein than both, and has no gluten at all. Since it has a low-medium Glycemic Index (55) as compared to Wheat (75) and Rice (73), the benefits of Buckwheat with respect to maintaining the blood sugar levels are now widely known and thus it becomes a good option for people with type 2 diabetes. Its amino acids are very balanced, it is rich in minerals, vitamins and other bio-active compounds and is increasingly being deemed as a superfood by the global dietitians.

From a farmer's perspective, the advantages of cultivating the Buckwheat are manifold. It is a short-duration crop, (about 3 months), rain-fed, and suitable for marginal and low-fertile soils of Meghalaya. Most importantly, the cost of cultivation is low because no chemical inputs are required. The plant is suitable for pollinators like honey-bees because of its copious flowering. Buckwheat honey is rare to get and is very expensive, so an additional source of income can be created to Buckwheat farmers by making some small additional investments in skilling them in apiculture. That is what we are attempting through the KVK, East Khasi Hills district.

As is always the case, whenever we seek to introduce a new crop, we ought to be very certain about the market for the fresh produce and the potential for processing opportunities. Such a market survey helps us in deciding where we should pitch ourselves as a state, to avoid any potential farm distress. Our study reveals that India is a net importer of Buckwheat. India imports about 628 metric tonnes of Buckwheat every year, mostly as finished products. Russia, with an annual production of about 80000 M.T is the largest producer in the world, while Japan is the largest importer and imports more than 42000 M.T. annually. The made-in-Japan Buckwheat Soba noodles are a hot global product. Buckwheat is marketed as grain (whole seed), the dehulled groats (the kernel), flour, bran and the husk. Even the husk is used for stuffing pillows. Nothing goes waste because the potential of the plant as animal fodder is also sufficiently researched upon. Considering that India is an importer of Buckwheat, we may be in a position to do some import substitution while parallelly exporting to countries like Japan, whose demand, we learn, is insatiable.

Meghalaya can emerge as a leading buckwheat producer of the country if we look at the crop seriously, in part because only two states Uttarakhand and Himachal Pradesh are currently cultivating Buckwheat and on the other, Meghalaya's temperatures of below 30 degrees centigrade are highly conducive for the plant growth and flowering. The plant can tolerate the acidic conditions of our soils while also being cold and drought tolerant. Therefore, it may be suitable for the transition stage planting beginning late August and can continue till February/March. If systematically planted, two crop cycles can be taken up between August and May. Also, buckwheat can be grown in abandoned soils due to mining, and therefore, useful for phytoremediation. We have all the critical ingredients necessary for cultivating Buckwheat, so, the idea of growing the crop as a component of sustainable agriculture in an ecologically fragile state like Meghalaya is worthy of exploration. Now, let me update you about the trials conducted at the KVK, East Khasi Hills. We learnt a few lessons through these trails – chief among them being that the plant cannot tolerate heavy rainfall. So, no plantation should be done during Kharif season. We can safely recommend that the farmers may begin planting post the harvest of the Kharif crop or during the transition between Kharif and Rabi. Based on the trials conducted during the Rabi season the crop planted during the first week of February gave us a yield of about 300 Kgs/acre while in the second trial that was started in the first week of March the yield almost doubled to about 590 Kg/acre. The KVK has now commenced the next round of trials in the farmers' fields with planting done in the last week of August, to study if the plant can do just as well, during the transition between Kharif and Rabi. Even as the trials are going on, the Farmers' Commission assured the farmers that it will buy-back whatever quantities of Buckwheat they produce to insulate them from the market risks. Besides, we will need the seed for area expansion. Buckwheat seed is not that easy to get in large quantities. Even the initial Buckwheat seed of the variety VL-Ugal-7 was given to us gratis by a very committed ICAR scientist Dr. Arun Pattnayak, from Almora, which we are now multiplying through the KVK.

Before I conclude, I want to flag the various entrepreneurial opportunities in buckwheat. While there are several products that can be made and marketed with Buckwheat, I will just pick one product viz., the Buckwheat noodles, for discussion. The noodles made out of Buckwheat flour can be a very good alternative to the conventional noodles that are made with maida (refined wheat flour). Wheat flour

loses fibre, Vitamin B, and Iron in the refining process. Worse, obesity, type 2 diabetes, insulin resistance and elevated cholesterol are attributable to the regular and high consumption of maida. The noodles market in India is a Rs.10,000 crore business and is said to be expanding at a compounded annual growth rate of 5.6%. Wai Wai, the popular brand based out of Assam and Uttarakhand, has established a very wide consumer base in the North-eastern states, and according to one report it earns 50 per cent of its total revenues from the region. The noodles business in the Northeast is on a high growth mode. To my mind, this growth is coming at a cost to the health of the people. We can easily substitute the maida based noodles to buckwheat-centric noodles – a much healthier option for the people of the region. And, Meghalaya can be central to this because we have a head-start and commercial production can start very soon if the market for the value-added products is also tied-up. There are other products, viz., buckwheat husk stuffed pillows which are highly valued in Japan, for their healing properties, the buckwheat bread, bakery items, buckwheat honey, etc. The list is pretty long for a curious mind intent on entrepreneurship. And, our farmers will benefit immensely when local entrepreneurship joins hands with us. If you can forgive my rhetoric a bit, bucks can actually begin with the Buckwheat. Any takers?

*(The writer is Chairman, Meghalaya Farmers' (Empowerment) Commission)*