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Corn cultivation disrupts the global ecosystem

The high demand for corn in the global market is compelling farmers to replace native food grains with corn. Corn is widely used by industries like food, cosmetics and ethanol production. Advanced cultivation techniques, improved fertilization and genetically high breed varieties have resulted in increase of corn yield in 20th century. According to a report the global corn industry is expected to reach \$199 billion dollar by 2026. Most of the grasslands in US, Africa and Europe are being converted to cropland with alarming biodiversity loss, alteration of ecosystem services and increase in greenhouse gas emissions. GHG emissions for crops or products are measured as per their carbon footprint. The estimated carbon footprint for maize production in conventional, reduced, and no-tillage systems is reported respectively at 2347.4, 2353.4, and 1868.7 CO₂ eq. per hectare.

Corn production has increased from 765 million metric tons in 2010 to 1116.41 million metric tons in 2020. The United States is the foremost corn producer, accounting for about 360 million metric tons production. The US is followed by China, Brazil and the EU. Corn products are in high demand in the food market - corn grain, corn starch, corn syrup, and corn chips. This is a major staple food for humans and a key feed for poultry and dairy cattle. An increase in corn-based alcohol production is another major reason for its high demand in the market.

The low harvest time (60-100 days), high market demand and good profit incentivize farmers to cultivate more corn. The demand for corn has influenced subsistence agricultures across the globe. Brazil recorded about 60 per cent increase in corn production in the last 10 years. Brazil is the second largest corn exporter in the world.

Brazilian grassland accounts for 30 per cent of Brazil's corn production. The increased corn agriculture has destroyed about 40 per cent of the native vegetation in the region. The corn is also harvested from Mato Grosso, the Amazon frontier state. The cultivation of corn along with soy in Brazil are responsible for converting pastureland into agricultural fields. This along with deforestation to facilitate crop production is destabilizing the ecosystem services in the region. It is transforming the pristine Amazon rain forest into pastureland.



There was an 88 per cent rise in deforestation in the Amazon rain forest in 2019 compared to 2018. This rain forest ecosystem is home to about 3 million biological species and over 2500 plant varieties. The Amazon constitutes 60 per cent of the world's rain forests and supplies 20 per cent of the world's oxygen in exchange for sequestering harmful CO₂. Hence, it is popularly referred to as the lungs of the world. Any damage to this unique ecosystem can have irreparable global consequences. Temporary economic gains from corn export can never compensate for these losses.

Most West African countries cultivate corn as it is the major diet of

rural people. This region is worst affected by climate change and water scarcity. According to reports, about 1 million deaths due to hunger and famine was recorded in this region between 1968-1980. About 25 per cent of farmland in Africa cultivates maize. The cultivation of crops in the African savanna was promoted by the African Development Bank. 400 million hectares of the savanna region is expected to be converted into farmlands. Though drought resistant, corn requires water for its growth. Hence, facilitating massive corn production in this area can burden the already depleting water resources. This can accelerate the southward migration of the Sahara desert and

tributes greatly to food security. But the artificial demand for this crop created in the market promotes unsustainable cultivation practices. The climate change movement is focused on the global reduction in GHG emissions. Public opinion should also be generated against corn cultivation. For short term economic gains, corn cultivation is resulting in enormous biodiversity loss, deforestation and depletion of natural forest resources.

On the one hand, scientists are engaged in supplying the world with high yield, stress resistant, pest resistant corn varieties. But on the other hand, farm industries are converting more and more forestland and grassland to corn production. This sets in motion the vicious cycle of deforestation and biodiversity loss in the tropics, subtropics and temperate regions across the globe.

Corn is an important crop which serves millions of people, and con-

tributes greatly to food security. But the artificial demand for this crop created in the market promotes unsustainable cultivation practices. The climate change movement is focused on the global reduction in GHG emissions. Public opinion should also be generated against corn cultivation. For short term economic gains, corn cultivation is resulting in enormous biodiversity loss, deforestation and depletion of natural forest resources.

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100 YEARS AGO OCCASIONAL NOTE

A communiqué has been issued under the signature of the Chief Minister to H.H. the Maharaja Holkar of Indore, the purport of the document being to denounce certain allegations appearing in the press and emanating from a "clique of interested agitators." To many readers it may appear that the Government of the Maharaja are putting themselves to unnecessary trouble; for most people, probably, have never heard of the allegations in question. However, it is clear that the Indore Government consider that they have been misrepresented seriously by statements which have found some measure of publicity in British India, and the Chief Minister, in his communiqué, remarks that "the newspaper press of British India ought to know that this Government (of Indore) cannot directly deal with them and are therefore at a disadvantage as regards criticism appearing in the columns of the newspaper press situated outside their jurisdiction." This complaint, unfortunately, is neither exceptional nor novel. Most Governments at some time or other - the British Government, in particular, at all times - have had more or less reason to be aggrieved by criticisms or attacks appearing in a foreign press. There is no objection to fair criticism. There may be a grievance when hostile propaganda is in question, but in either case it is difficult to suggest a feasible remedy except the obvious one of telling the public the other side of the case.

NEWS ITEMS SUGAR PRODUCTION IN INDIA

Inquiries were recently undertaken by the Department of Statistics, India, regarding the sugar-producing capacity of the sugar factories in India on the lines of those made in 1918. Of the ninety factories to which schedules were sent, returns from forty only were received. Of the remaining fifty, twenty-eight did not furnish returns, ten were either closed or not in working order, six were engaged in the production of raw sugar, sugar-candy, etc., four did not manufacture or refine sugar, one did not start business, and one sold sugar-producing appliances only. Of the forty returns received, one was defective and another was not taken into account as the factory produced molasses only. The maximum amount of sugar that can be produced by these factories is, according to the returns furnished, 16,800 maunds per day.

GUARANTEES ON JUTE CONTRACTS

Some discussion on the subject of guarantees on jute contracts took place at the annual meeting of the members of the Calcutta Jute Dealers Association, held at the Royal Exchange. Mr. George Morgan, who presided, said that the present position was that the Committee had addressed the two Loose Jute Sellers' Associations on the question and had invited an expression of views of these Associations on the general question. The replies received from the Associations indicated quite clearly that they were opposed to any alteration of the present system and that they desired to retain the existing standard of 40 per cent good sacking warp for 4's. He considered that the matter must be again taken up by the Committee.

EMPLOYERS AND EMPLOYEES

A special meeting of the Employees' Association, held in connection with the recently founded Co-operative Stores, took place at the hall of the Indian Association, Bow Bazar, yesterday afternoon. Mr. H.W. Carr, of Messrs. Balmer Lawrie & Co., presiding. The proceedings opened with an address by Mr. S.N. Banerjee, who dwelt at length upon what he described as the unenviable condition of the clerical classes in Calcutta, and appealed very strongly to the consideration of the employers. He was followed by Dr. Mookerjee, Professor of Economics, who gave some interesting facts and figures as to the progress of cooperation in other countries and urged that the Association should get to work in earnest if they wished the recently started cooperative stores to be a success.

SUB-ASSISTANT SURGEONS

A general meeting of Sub-Assistant Surgeons in connection with the medical and surgical exhibition which is to be opened in Delhi by His Excellency the Viceroy was held in the Town Hall last evening, the Hon. Mr. C.A. Barron, the Chief Commissioner, presiding. Rai Saheb Hari Ram detailed the requirements for the proposed exhibition. Lieut.-Colonel C.H. James, then expressed his views on the usefulness of the Sub-Assistant Surgeons in India, where their number exceeded ten thousand. He was of opinion that this class of medical practitioner afforded the greatest medical relief in places more or less inaccessible to the other classes of medical men, even Vedic and Unani. The President was requested by Mr. Abdul Hasan, Munsif, to accord the association his patronage to which he consented.

IT CAME TO MIND | MANISH NANDY

Being Branded

For years I drove Mercedes cars. They were good cars and needed no attention from me, which qualified for my unqualified loyalty. In the rare case something went wrong, the Mercedes service was impeccable in most countries. That was important in my itinerant life style. It was also a practical choice: when I left a country after three years, a Mercedes car sold quickly at a good price.

When I was in Manila, on an impulse I ordered a souped-up sporty BMW. I loved driving it. But it drew a phenomenal amount of attention that I found exasperating. It reached a limit when a colleague introduced me to an awe-struck visitor as "Mr. BMW." I thought that was the kind of branding I could do without. I did not buy another BMW in the ensuing twenty years.

Marketing people talk excitedly about branding. How important it is to secure a share of the market for a product. Since we are now inclined to speak of people as products too, it is to be expected that we would talk of branding of people too. We may not all be very special, but we are all specialists now. One is not a banker, one is an investment banker. One is not a doctor, one is a gynecologist. Once there are enough investment bankers and gynecologists, I am sure pioneering bankers and doctors will develop further sub-specialties and promptly brand themselves with a new name. Our role will be to stand in awe of the new sub-specialty and rush to use its service.

Of course, it is useful to know what other people do. You can take their help when you need it. That is why society initiated a branding sys-

tem. When you have a problem in your bathroom, you call a plumber. But it is a bad plumber who not only fixes your leaking faucet, but also tries to fix a leaking roof instead of telling you to get a roofing specialist. It is the problem of a specialist who does not know the limit of his specialization. The other problem is the problem of the specialist who draws the limit too closely, echoing Voltaire's laughable eye specialist who is a specialist of the left eye only.

By then it is not society's useful branding, it is our branding of ourselves.

In school I had a friend in our class, Jay, who had a way of telling jokes. We enjoyed and laughed at his jokes. He continued to tell his jokes. Later, as we graduated to other classes, he remained a fount of jokes and became informally crowned as the clown of the class. I met him five years later, among other friends, and was surprised to see him persisting in his role as the joker. I wondered if he would ever break out of that role and try something different. He had branded himself too indelibly to change.

Early success can be pleasing, but it can also become a fetter. It may stop us from seeing beyond the comfort of what we do easily or well and try something that has the potential of far greater accomplishment and, just as important, far greater satisfaction. I suppose it is not just success but also failure that can influence us strongly. When I was young, I was painfully shy and had difficulty, when asked, even to say my name. I saw how people reacted to my mumbling, how quickly they turned away and lost interest in



Illustration: Debabrata Chakrabarty

what I had to say. I struggled to overcome what at one point seemed to me an inherent handicap and took an inordinate interest in public speaking. Soon I was speaking in college and university debates and, by most accounts, excelling. My later work involved a lot of public seminars, key briefings and even press conferences. I seemed to draw adrenalin from larger crowds. I am glad I have stopped in order to try other things.

Have you ever seen an animal branded? The animal is roped, brought down, its legs tied and a huge hot iron, with the owner's initial or mark, is applied to its back or side. Some owners don't want to spoil the

skin, which can be sold at a good price, and apply the iron to the animal's face. If you think this is harsh, you should view the alternatives: branding with corrosive chemicals, freeze branding with liquid nitrogen or cartilage branding by mutilating the animal's ears.

Starting with Egyptians four thousand years back, we have branded animals - cows, horses, mules, buffaloes, even sheep and goats - to display the glory of ownership. The very word brand comes from the same source as fire. We have branded baby calves and colts, before they were weaned, because owners thought they would be easier to handle. By any

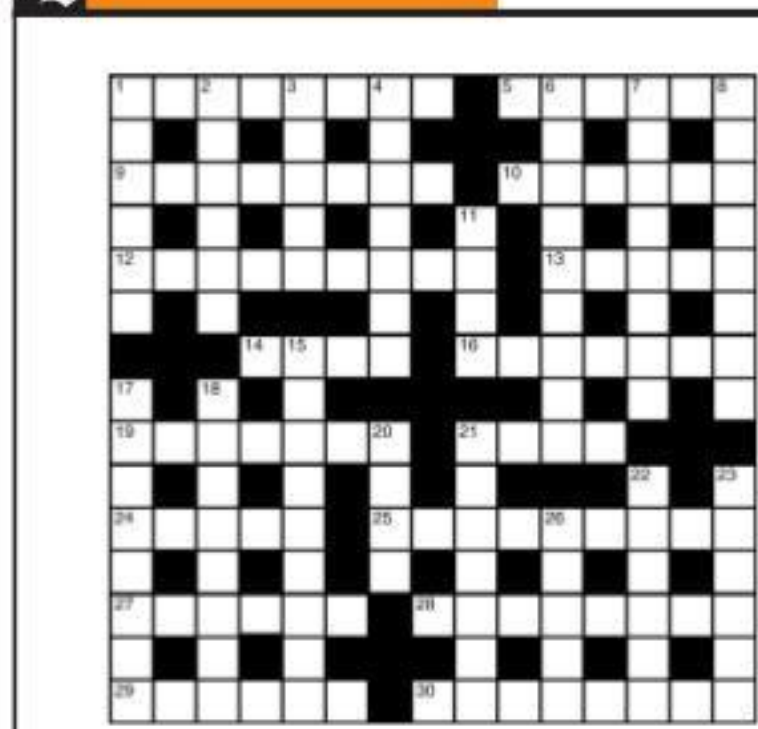
standard, it is an unspeakably cruel and offensive practice.

There must be few things sadder than when we choose to brand ourselves and imprison our free selves in the cage of a concept. Like Chinese women, whose feet were tightly banded from young days so that they could have beautiful small feet, we adapt to the shackles of our own idea, adopt a new persona and strive to make a reality out of an illusion. It is no less cruel than what we have been doing to the animals.

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CROSSWORD

NO 28819



ACROSS

- 1 Qualify to get drink producing ID (8)
- 5 Black king you're initially finding dull (6)
- 9 Expert is broadcast live before now (3-5)
- 10 One taking advantage of a vehicle ferry regularly (6)
- 12 Candidate in sandwich shop having goal to meet the Queen (9)
- 13 Treatment facility in pub holding male back (5)
- 14 Confront exterior features (4)
- 16 Vagrant putting newspaper in

DOWN

- 19 Towel? (7)
- 19 Sister almost trips avoiding duke in shades (7)
- 21 Way to record pace (4)
- 24 Artist finally sculpted two bones (5)
- 25 Carry out utensil (9)
- 27 Measure jade green boxes (6)
- 28 Female embracing crew in lift (8)
- 29 Special educational needs bothered governing body (6)
- 30 Clergyman trailing king is always close (8)

DOWN

- 1 Temporary retail outlets in post offices enthralling youngster (3-3)
- 2 Inquirer ekes out sign of hesitation (6)
- 3 Selects note in audition as fairy (5)
- 4 Remains in lodge outside university (7)
- 6 Reprobate tribe disbanded during occupation (9)
- 7 Article and note supporting main upset for art lover (8)
- 8 American convict in square with chick (8)
- 11 Set foot in gastro diner (4)

- 15 Designer in the Arctic collapsed (9)
- 17 Gatecrashes popular, authentic society holding first of dances (8)
- 18 Funny person I scold about clothing (8)
- 20 Soloist not even opening (4)
- 21 Presume dancing is best (7)
- 22 John or Paul perhaps got the best of the French (6)
- 23 High Street I deserted (6)
- 26 Raptor starts to eat allosaurus, gauging left eyeball (5)

NOTE: Figures in parentheses denote the number of letters in the words required. (By arrangement with The Independent, London)

