

Aloo Paratha MOD2: Hungry Planet

Mira Das

Aloo Paratha

Culturally significant in India, specifically Punjab. Invention stemmed from stuffing parathas with sweet fillings, which later evolved when potatoes were introduced by early Portuguese traders.



Recipe & Embodied Carbon

Recipe

- 1. Pressure cook/boil potatoes until tender (not mushy).
- 2. Make dough while potatoes cook: Mix flour, oil, and salt. Combine with water as needed to make a soft, non-sticky dough. Cover and rest dough until ready to use.
- 3. Cool and peel potatoes while they are still warm, and then grate/mash until there are no chunks left. Don't over mash.
- 4. Add ginger, red chili powder, coriander, salt, lemon juice, fenugreek leaves, and carom seeds to potatoes. Add more to taste.
- 5. Roll dough ball in hands with flour, and flatten onto surface. Roll into a disc and place a portion of the potato stuffing in the center, bringing the dough up and over to seal.
- 6. Heat a pan with ghee to cook paratha. Flip back and forth while cooking, looking out for bubbles and golden brown spots. Smear more ghee on the paratha and cook until golden brown all over.
- 7. Take off of stove and stack in a plate. To serve, put butter on top and serve with yogurt or pickle.



Ingredients



Flour

Harvested, inner seed ground into flour. Wheat needs sun, moderate temperature.



Leaves, Ghee

Coriander and fenugreek leaves are sown and harvested (easy to grow!) Ghee (dairy production).



Potatoes

Grown & harvested on farms. Temperate climate with enough rainfall.



Lemon Juice

Lemons are grown on trees and are extracted of its juice. Sub-tropical weather (hot, dry summers.)



Spices

Chilis, ginger, seeds are grown and ground. Moist, tropical, warm weather.



Oil & Salt

Oil is extracted from seeds, fruits, nuts, grains, etc. Salt comes from dried salt/mineral beds.

Ingredient	Amount	Carbon	Total	Big
Wheat Flour	1/4 cups	214 gCO2e		
Salt	1/4 tsp	2 gCO2e		P
Oil	1/8 tbsp	6 gCO2e		B
Potatoes	3	55 gCO2e		
Water	5 cups	300 gCO2e		P
Ginger	1/8 tsp	~0 gCO2e*	*too small to calculate	5
Coriander	1/4 tbsp	2 gCO2e		
Red Chili Powder	1/8 tsp	~0 gCO2e*		P
Carom Seeds	1/8 tsp	~0 gCO2e*		5
Lemon Juice	1 tbsp	9 gCO2e		
Ghee	1 tbsp	127 gCO2e	**rounded up	P
Fenugreek Leaves	1/8 tsp	2 gCO2e	718 gCO2e**	
	Wheat Flour Salt Oil Potatoes Water Ginger Coriander Red Chili Powder Carom Seeds Lemon Juice Ghee	Wheat Flour Salt 1/4 tsp Oil 1/8 tbsp Potatoes 3 Water 5 cups Ginger 1/8 tsp Coriander 1/4 tbsp Red Chili Powder 1/8 tsp Carom Seeds 1/8 tsp Lemon Juice 1 tbsp Ghee 1 tbsp	Wheat Flour 1/4 cups 214 gCO2e Salt 1/4 tsp 2 gCO2e Oil 1/8 tbsp 6 gCO2e Potatoes 3 55 gCO2e Water 5 cups 300 gCO2e Ginger 1/8 tsp ~0 gCO2e* Corlander 1/4 tbsp 2 gCO2e Red Chili Powder 1/8 tsp ~0 gCO2e* Carom Seeds 1/8 tsp ~0 gCO2e* Lemon Juice 1 tbsp 9 gCO2e Ghee 1 tbsp 127 gCO2e	Wheat Flour 1/4 cups 214 gCO2e Salt 1/4 tsp 2 gCO2e Oil 1/8 tbsp 6 gCO2e Potatoes 3 55 gCO2e Water 5 cups 300 gCO2e Ginger 1/8 tsp ~0 gCO2e* Corlander 1/4 tbsp 2 gCO2e Red Chill Powder 1/8 tsp ~0 gCO2e* Carom Seeds 1/8 tsp ~0 gCO2e* Lemon Juice 1 tbsp 9 gCO2e Gipee 1 tbsp 127 gCO2e "rounded up

Climate Adaptation Recommendations

India's climate change impact:

- 1. Declines in monsoon rainfall
- 2. Extremities during dry seasons and wet seasons
- 3. Increase in number of droughts
- 4. Groundwater is being overexploited (water tables could decrease)
- 5. Increasing temperatures

Impacts on Ingredients:

- Wheat and rice production is negatively affected
 - Too hot!
- Potatoes are getting either too much water or not enough
- Spices & lemon juice: need tropical weather
 - Half temperate, half tropical
 - Could be affected in the future
- Ghee (clarified butter): dairy producers
 - Pastures

Thanks!