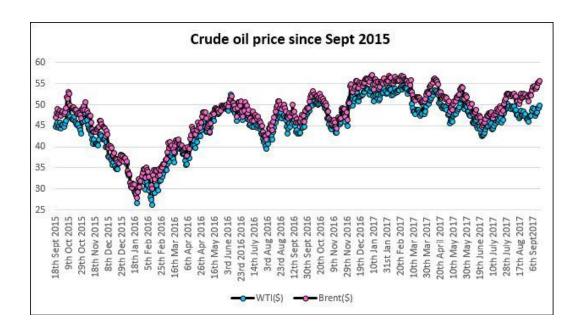
www.chopraseismic.com Calgary, Canada





- The price of crude oil fluctuated this week for various reasons that include the following:
 - a. There were doubts over the restart of the refineries after the devastation caused by hurricane Harvey displacing several thousand people and destroying their homes, though no serious damage was done to the refineries, ports and pipelines. But they were all shut down before Harvey struck. Some refineries such as Valero Energy Corp. and Citgo Petroleum opened, but others are still shut.
 - b. Per the EIA, the US crude inventories increased by 4.58 mb the week before last to 462.4 million, the imports into the US Gulf Coast area fell to the lowest levels since 1990, and

- the gasoline stockpiles slid by 3.2 mb to 226.7 mb. The price of crude oil fell due to all this buildup. Last week, the gasoline stockpiles fell to 218.3 mb, and the crude output rose by 572,000 b/d to 9.35 mb/d.
- c. Later in the week, Paris-based IEA said that the oil demand in 2017 will increase by the maximum in two years, and also that OPEC and its allies discussed the extension of their supply cuts past the end of March 2018. The compliance of the member countries and allies to the supply cuts rose to 96% in August. The crude oil price looked up due to all this.
- Energy ministers from Saudi Arabia, Venezuela and Kazakhstan have met, and in separate statements have said that all options are open in their attempts to balance the world oil markets, which include the possible extension of production cuts beyond March 2018. This issue will be discussed at the ministerial meeting of OPEC and its allies scheduled for November 2017 at Vienna. There again, the different variables such as compliance levels of OPEC members and its allies, the oil output recovery in Libya and Nigeria, the US shale oil output, and the global oil demand, will be discussed.
- The IEA has said that the global demand for crude oil will climb in 2018, because of stronger than expected consumption by Europe and US. It increased its estimate for demand growth in 2017 by 100,000 b/d to 1.6 mb/d.
- After hurricane Harvey, hurricane Irma has battered Florida and parts of Georgia coast. Goldman Sachs Group said that Harvey's aftermath remains a bigger concern for the oil market, as Texas is home to twice the oil consumption per capita of Florida. Both storms will impact about 600,000 b/d in demand. Six percent of the US refining capacity remains shut. The US crude oil inventory builds could grow to record levels thus.
- Per the EIA forecast released on September 12th, the US crude oil production will reach a record high in 2018. The production fell by 40,000 b/d averaging 9.2 mb/d for the month of August, but the production will grow to an average of 9.3 mb/d for 2017, and 9.8 mb/d in 2018, which is the highest annual average in US history. US had a high of 9.6 mb/d in 1970.
- India has decided to offer larger areas with higher oil and natural gas reserves for auction later this year, as it seeks to reduce crude oil imports by 10% in the next five years. Per a conservative estimate, the reserves offered will be twice those offered in the first round. Last year, India offered 67 small oil and gas fields holding 625 mb in reserves in its first auction in six years. Per the Indian Oil Ministry, the country's import bill is estimated to touch %85 million by March 2018, which is a big strain on its finances. India has also decided to cover its entire sedimentary area of 3.14 million square kilometers under exploration. Less than half of this area has been apprised so far, and the government will spend \$452 million on this initiative. The oil consumption in India fell by 6.1% in August in the wake of floods that ravaged several parts of the country.

So much for the industry news this week.

For the lighter side this week

Recently, my wife drew my attention to a short 1-page article she received from her friend, which said 'Canadian pulses poised for the limelight'. It was a nice, brief and an informative article that prompted me to explore a little more for my own information. Here is what I found.

Let us begin with some terms – legumes, lentils and pulses.

Legumes are plants (pea family) grown primarily for their seeds or grains. Examples are peas, beans, peanuts, etc.

Lentils refer to several plants that yield lens-shaped seeds as food.

Pulses refer to the edible seeds of plants in the legume family that include dried peas, beans, chickpeas and lentils. The word 'pulse' comes from the Latin word 'puls' which means thick soup or porridge. Thus, pulses is a more general and inclusive term.

Pulses are high in protein, almost twice as much as in wheat, rice or barley. They are rich in fiber and have low glycemic index, and thus help in decreasing and controlling cholesterol and blood sugar levels. They are also high in vitamin B, and key minerals including iron, potassium, magnesium and zinc. Consumption of pulses in our diet as a replacement for animal protein can limit the amount of saturated fats. As the article said, pulses "can help control and prevent diabetes, reduce the risk of heart disease, and help with weight management, cholesterol reduction and anaemia prevention".

India has been the biggest producer, as well as the largest consumer of pulses since long, due to its appetite for reasonable vegetable-based protein. But lately, with the growing population and rising incomes, the demand for pulses has grown to high levels, higher than the pulse agriculture can possible reach, making the country a net importer. In 2013-14, India produced 19.25 million tonnes of pulses, which fell to 17.3 million tonnes in 2014-15, and roughly a similar number in 2015-16. Various factors (lack of irrigation, farmers opting for high-yield crops such as paddy and wheat, rural infrastructure, susceptibility to pests and diseases, poor market linkages, etc.) have prevented increase in the country's production. India now imports pulses from Canada, Myanmar and Australia.

Canada on the other hand has developed a multi-million-dollar pulse industry in the last 25 years, and now accounting for 35% of global pulse trade, including 95% of the world's lentil production, which it sips to 150 countries each year. In 2015, Canada exported 6 million tonnes of pulses worth over \$4.2 billion. Of this, it shipped \$1.5 billion worth of peas and lentils to India in 2015.

In Canada, Saskatchewan is the home to the largest (79.3%) pulse area, besides Manitoba, Alberta, and British Columbia. Pulse crops thrive on the dry, fast-draining soils in these areas and have the advantage of climate, innovative and research developing new varieties, access to western ports for shipping to markets in China, India and Turkey, and government support. For the farmers, growing pulses in rotation with other grains and oil seeds disrupt the disease and insect cycles, and add nitrogen to the soil (so less fertilizer consumption) and providing valuable nutrients to the future crops, besides spending less on input and getting good selling prices. Thus, a large part of the pulses in Canada are grown for exports.

The global pulse industry also came in the limelight and media attention, when the United Nations declared 2016 as the international year of the pulses.

The variety of dishes and soups that are made from lentils, and one can consume and relish, is unbelievable. I love them all, and I am sure you do too.

I hope you find these interesting. So much for this post! My next post will come up after I get back from attending the SEG Convention at Houston, scheduled from 24th to 29th of September, 2017. Till the next post, stay safe and happy! **September 16, 2017** Page 4