NEPALI TEA ASSESSMENT

NEPAL, ECONOMIC, AGRICULTURE, AND TRADE ACTIVITY

MAY 2011

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I. EXECUTIVE SUMMARY

The emergence of specialty tea as a beverage of economic and cultural significance in the United States is on the rise. Tea sales in many market categories are growing, new tea lines appear monthly, and new brewing accessories of every type are commonly introduced in retail outlets. The emerging U.S. specialty tea industry presents a wealth of new opportunities.

While good tea is certainly not new to North America, great quality tea has been scarce until recently. There are many parallels between the phenomenal growth of the U.S. premium coffee, beer, and health food industries, and the emerging specialty tea industry. Specialty coffee expanded exponentially in the U.S. when combined with the “retail theatre” of attention grabbing steam machines, skilled baristas, and good music. Now chai and other novel tea-based brews are drawing in consumers to tea and coffee outlets with the same enticing atmosphere. With freshness and “see it brewed here” confidence, creative North American tea entrepreneurs are attracting consumer attention by marketing the superior quality of teas harvested by hand in exotic lands.

Some key points that will be highlighted in this report include the following:

- An overview of my observations and recommendations for strengthening the Nepali tea industry following an extensive tea tour in Nepal.
- Several tea production factories were visited in eastern Nepal and I am confident that many of the teas I sampled can be sold in the specialty tea market in the United States. Details will be shared throughout this assessment.
- A review of tea manufacturing requirements and how I graded Nepali producers.
- An overview of the specialty tea market in the United States.
- Added value services that will help sell Nepali tea.
- U.S. Government regulations on imported teas.
- Market price indicators for specialty teas similar to Nepali teas that are currently sold in the United States.
- Suggestions for follow-up activities that will support the introduction of Nepali tea to external specialty tea markets.
- A list of interested Nepali tea buyers complete with contact information.

I am extremely positive about the tea industry in Nepal; with young tea bushes, and very capable factory management, the groundwork is in place for a strong future. The key to selling Nepali teas is for the producers and exporters to monitor the specialty tea market, particularly in the United States. Sellers in Nepal must track new trends and respond accordingly. I am convinced that with high exposure, the tea industry in Nepal will flourish. Events with many buyers such as trade shows and continued consultations with tea experts will lead to high rewards.
II. INTRODUCTION

Upon arrival to Kathmandu on May 6, I met with NEAT senior leadership and NEAT’s full-time tea expert. The tea expert and I began our meetings with leaders of the Nepali tea industry at the headquarters of the Himalayan Orthodox Tea Producers Association and the Himalayan Orthodox Tea Producers Cooperative (HOTPA/HIMCOOP) which resulted in tasting some excellent teas that were all above the standard of the Darjeeling teas that I tasted at the North American Tea Championships earlier in the year.

Teas in the black, green, white and oolong categories showed neat leaf appearance, even infusions with clear aromas, evidencing regional characteristics and resulting in a good overall cup quality. One of the oolongs was one of the best I have tasted. The HOTPA members were very excited about traveling to the June World Tea Expo in Las Vegas, Nevada and I was able to offer advice regarding questions they should ask buyers at the exposition and what types of questions they can expect in return. After this introduction I was eager to go to the field and see how Nepali teas were grown and manufactured.

II.a. Field Report

The field trip began in Dhankuta and continued through Terathum, Ilam, Panchthar, and Jhapa districts. Unfortunately, the timing of the visit occurred immediately after a 15 day general strike that adversely affected the first flush, compounded by hail in parts of the eastern region resulting in very poor leaf – known as bhanji (dormant buds) - and heavy stalk. Teas made “pre-first flush” were of good to excellent quality, evidencing that the leaf standard was within the acceptable leaf count range prior to the delay. Producers now look forward to a trouble free period to ensure that there will be a good second flush.

Despite the poor condition of the tea gardens, I noticed that the tea bushes were young (approximately 15 to 20 years old) and therefore once tables have been established throughout the growing areas, both yield and quality should improve. With attention to detail in both the factory and the field, The Nepali tea industry looks promising.

May 08, 2011

Dhankuta District

I participated in a meeting with the Managers of Jun Chiya Bari and Uwapani Tea Estates and we discussed the difficulties of receiving good quality leaves from tea growers. The preceding 15 day strike had caused problems in the field; with almost no plucking, the quantity of first flush teas was low and the small quantity of leaf received at the factory was very poor, containing a lot of bhanji leaf, and excess stalk.

May 09, 2011

Jun Chiya Bari factory visit- Dhankuta District

The manager for the Jun Chiya Bari tea factory, Mr. Morris Orchard, showed us the factory which was hardly functioning due to a lack of suitable tea leaves. Presently, the garden is dormant, under bhanji phase. We were however able to examine and taste different types of Specialty First Flush Teas that were manufactured prior to the general strike that froze tea production. The Himalayan Orange Black Tea was outstanding, while the other grades tasted were equal or better than the qualities of this type of tea presently sold in the United States. Next, we visited Kuwapani Tea Estate where we were
introduced to several specialty teas that were manufactured pre-strike. The Kuwapani Clonal Tippy teas were both excellent in leaf style and taste.

We continued to Guranse, where we visited the Guranse Tea Factory. We proceeded to tour the factory which has a capacity of 120 metric tons of made tea. With the present situation in the tea garden and resultant poor leaf, the factory was forced to gear down operations to around 25 metric tons of made tea. We did have the opportunity to examine their White Teas, which I found to be of good quality and certainly appropriate for sale on the U.S. specialty tea market.

We continued to Gorkha Tea Estate in Fikkal, Ilam where we arrived in the evening. Again the leaf issue was discussed at length as well as the poor conditions in the field.

May 10, 2011

Ilam
The manager of the Gorkha Tea Estate, Mr. Uttam Pradhan, showed us around the factory. They export most of their top quality teas to Tee Gschwendner in Germany. The factory also has a project funded by the German International Development Agency (GIZ). It was brought to our attention that the project between GIZ and Gorkha Tea Estate is being phased out at the end of 2011. As such, it is imperative to make inroads here with the goal of generating direct sales to the U.S. specialty market. We tasted the pre-first flush teas sold to Germany and they ranged from good to excellent. As with the other factories visited, the workers’ strike and poor weather conditions led to a sub-standard green leaf that was unsuitable for the specialty tea market. They believe that the quality will improve soon and they look forward to a good second flush.

Later we continued to the Nepal Green and Specialty Tea Factory and were given a tour by the manager, Mr. B.B. Rai. We saw some past crop teas that were exceptionally well made by machines imported from Japan and China. The types of teas produced were White Tea, Oolong, Sencha, Bancha, Clonal Delight, and Emerald Green. This factory would be an excellent source for the U.S. specialty tea market; however they have very small capacity because almost all the teas are sold before they are even made, mainly to Japan.

The next visit was to Nepal Small Tea Producers Limited (NESPROL), where we met and had discussions with Mr. J.P. Gurung, visiting consultant to NESPROL from Darjeeling, India, Mr. Punam Rai, Manager at NESPROL and Mr. S.K. Pradhan, Tea Scientist. We discussed leaf standards and collection methods, and I explained the Kenya Tea Development Agency’s (KTDA) model which calls for the following:

a.) Supply planting materials and fertilizers to farmers on a credit basis;
b.) Provide supervision and training to farmers;
c.) Arrange inspection, collection, and transport of green leaf;
d.) Make proper arrangements for processing and marketing.

The KTDA model was considered not to be feasible in its entirety. There was no manufacturing taking place, nor were there any teas available for tasting.
Next, we traveled to Ilam Tea Producers PVT Limited (ITPL) at Altabare. ITPL is presently the largest producer in Nepal. ITPL owns two factories in Ilam. The Altabare factory has a production capacity of 10 million kilos per year. In 2010 the small amount produced, 0.7 million kilos, was shipped to India. After meeting with Mr. Krishna Prasai, the Director and Promoter of Altabare, we visited the second factory which was similar to those previously visited. The joint operation of the two factories, Altabare and Ilam, are expected to produce around 1.6 million kilos of medium to top quality teas this year.

We continued to the Ilam Chiyabari factory, a sister facility of Jun Chiyabari in Hile, Dhankuta. Mr. Robin Bhanerjee showed us around the factory which has a capacity of 300 metric tons and plans to produce at least 250 metric tons this year. The factory was very well planned, clean, and with up to date internal leaf transportation systems. The ranges of teas tasted were all considered suitable for the U.S. specialty market.

May 11, 2011

Ilam

We proceeded to Mai Tea Factory located in Jasbire, Ilam where we met with Mr. Andrew Gardner, the General Manager. Mr. Gardner took us on a quick tour of the factory. At the time of this visit, discussions were going on with the Maitea Farmers regarding the improvement of leaf standard, and pricing issues. No teas were available for tasting because there was no production taking place and pre-strike teas had already been sold.

Later in the afternoon, we visited Dahal Bandhu Small Tea Farmers Processing Industry in Sakejung. Mr. Mohan Dahal, the owner, showed us his factory. He began his tea processing about 5 years ago and has been constantly upgrading his operation as he learns. He produces a small quantity (100-500 kilos) of specialty hand rolled teas to order for both local buyers and international visitors. The teas we tasted were certainly acceptable for the specialty market in the U.S., and the hand rolling makes them unique. There are apparently 15 such units throughout Ilam, all equipped with Chinese “mini machinery.” These farmers are in need of training in quality improvement, including tea tasting and manufacturing techniques. The Chinese machinery is new to them and they are further in need of engineering instruction and technical support.

We continued our travels to the Shangrila Tea Factory of Himalayan Tea Industries (P) Ltd., Nepaltar, in Sakejung, Ilam where we spent the night. We met with Mr. R.C. Bista and held general discussions.

May 12, 2011

Greater Ilam area and Bhadrapur, Jhapa

In the morning we toured the Shangrila Tea Factory which is certified organic by the National Association of Sustainable Agriculture Australia (NASAA), ISO 22000, and the Hazard Analysis and Critical Control Points system (HACCP). They also have several other local and international certifications. We tasted some top quality teas that could be sold in the United States; however they are currently selling all of their top grades to Tee Gschwendner in Germany.
Later in the day we went for a whirl-wind tour to Parajuli Industries in Bhadrapur, Jhapa. This is a dual producer of Orthodox and crush, tear, and curl (CTC) teas with new machinery. Unfortunately there was no manufacturing taking place, and therefore no teas to taste.

**II.b. Tea Manufacturing Requirements**

Tea manufacturing requires an appropriate environment, infrastructure, and technique. The factories we visited on this field trip displayed strong production operations. Below are five essential requirements for tea manufacturing:

1.) **Withering**
Withering is the reduction of moisture content between 55/70 % to 75/80%, during which chemical changes occur in the tea leaves which are an essential part of the development of the flavor of tea. This process takes several hours, usually overnight and processing continues the following day. Withering must be maintained until completion, prior to the leaf being processed. Teas tasted on this trip evidenced correct withering. An efficient green leaf collection center within 3 km from the factory that inspects pre-final acceptance quality would cut down on unnecessary time in inspecting and rejecting sub-standard tea at the factory. It would speed up movement from delivery to the withering process. More detailed information about the proposed collection centers will be discussed below in the “Recommendations” section.

2.) **Rolling**
Rolling has two objectives a) to reduce the leaf size and b) to disrupt the leaf structure in order for the polyphones oxidize to be brought into contact with the flavones and facilitate efficient oxidation. The standard rollers, though getting old, were well maintained, and the function was carried out satisfactorily.

3.) **Oxidation**
Oxidation starts as soon as the leaf is disrupted. During oxidation the tea color changes from green to brown as the flavones and thearubigins form. Oxidation must be stopped when these have reached their optimum content and the tea quality has reached its peak. Throughout the processing phase, the leaves must be kept moist and their temperatures kept low to avoid unwanted substances being formed. An experienced tea-maker is required to manage this process because it is probably the most critical step in producing tea. Incorrect oxidation will spoil the tea and lead to disaster. I found the level of expertise in all factories visited to be of a high level, as evidenced by the teas tasted at each factory, including those receiving particularly bad leaf. Oxidation was carried out using the tray method or on a tiled floor, both methods were equally adequate.

4.) **Drying**
This operation stops oxidation at its optimum point and then reduces the moisture content of the tea to 2.5- 3.5% at which point the tea will keep its quality. The process is carried out by hot air which is heated indirectly by a heat exchanger from furnace-flue gasses. Fuel for the furnaces used in Nepal is a combination of wood and coal. Tea samples at the factory evidenced that dryers were functioning properly with no sign of smoky or burnt characteristics in the finished tea.
5.) Sorting/Grading
Tea from the dryer must be cleaned to remove any foreign matter, stalk and fiber, and then sorted into size ranges of established grades. This process is conducted over a series of sieves of various sizes and styles. This is a standard methodology used in Black Tea manufacturing in every tea producing country. The equipment used in the Nepali factories I visited while old, is well maintained and operated correctly. The standard of cleanliness throughout the factories I visited was high, especially in the organic factories, where rules were strictly adhered to.

II.c. Exceptions
There are two exceptions to the above mentioned requirements for tea manufacturing:

a.) Green Teas Are NOT Oxidized; withered leaves are steamed or pan-fired for about one minute, and are usually rolled twice before drying. There were no Green Teas being manufactured during my visit, however I was able to taste Green Teas from a previous production cycle and they were well made and had a sweet and very appealing cup quality. Nepali Green Teas can be sold in the U.S.

b.) Oolong teas are semi oxidized, usually between 20% and 50%. They inherently posses a sweet character, and this characteristic was evident in all the oolongs I tasted in Kathmandu and in the field.

III. RECOMMENDATIONS
The production of made and graded teas varied between 30% to 40% primary leaf grades, which is extremely good. Most top quality teas are presently exported to Germany and some are then re-shipped to the specialty tea market in the United States. A small quantity of tea is exported to the U.S. directly. I am confident that with increased exposure to markets in the United States; the amount of direct sales can be increased substantially.

Quality begins in the field and leaf condition is of utmost importance. Below are my recommendations:

- To maintain the flow of good tea leaves coming into the factory, collection centers should be constructed in the main growing areas. These facilities should be a maximum of 3 kilometers from the factory and consist of a cement platform and a corrugated iron roof. A large metal topped table to tip out teas for inspection and a scale would be required for first weighing.

- The centers should be managed by an inspector from HOTPA or HIMCOOP who should represent the first step of quality control and ensure that no preventable delays occur between the center and the factory. This type of support allows the factory to receive quality leaves before final weighing and inspection, thus cutting down the time from reception to the withering process. This system works very well in other tea producing countries.

- Training Centers should be established for the small scale farmer/producers, emphasizing the importance of good quality leaves and a leaf count minimum of 80%. Trainings should be followed up with demonstrations of correct manufacturing methods and machine operation and maintenance.
• Technical support should be extended to producers with a goal of achieving organic certification. Assistance should be focused to the field and factory to achieve organic status in accordance with organic requirements. Producers will also need support with completing required paperwork. Nepali producers should all strive to develop pesticide free products. The worldwide demand for organically certified tea is growing at an extremely fast rate.

• While the best quality black, green, white and oolong teas are sold with relatively little effort overseas, a larger volume of secondary grades go to India. I believe that Nepali producers can add value to their teas by using secondary grades as a base blend for Flavored Teas, Dried Fruit and Spice Blends, and Chai Blends.

• Approximately 65% of the specialty tea market in the U.S. consists of Flavored Teas, Herbal and Dried Fruit Mixes, chais, and Chai Blends. We can help Nepali producers make these types of teas which would result in increased earnings. As secondary grade teas are presently exported to India for discounted prices, they could instead be turned into value added teas as previously described, for higher prices.

• Nepali tea producers must look into exporting flavored teas: a good flavoring and an efficient blending drum, manufactured locally is all that is required. Flavor application and blending costs for these teas are essentially limited to the cost of the flavoring, herbs, and a simple tumble drier which could be constructed locally. I can set this up during a follow up visit in October/November.

• Nepal should try to produce their own variations of chai(s) and benefit from this fast growing sector of the U. S. specialty tea market.

• Members of HOTPA attending the World Tea Expo in June should take careful note of the value added teas displayed in various booths and pay close attention to the chais and flavored teas.

• A careful study of other exhibitor’s booths at the World Tea Expo to see what innovative tea based products (like Bubble Teas or Flower Teas) are being marketed may result in identifying resources in Nepal that can be used to develop an equally innovative product.

• Nepali tea qualities must be compared with those sold on the U.S. specialty market to ensure that they can be matched or bettered, and most importantly to see if the Nepali product has a competitive price point.

• Shipping logistics from producers in Nepal to U.S. buyers must be studied carefully and consistently. There is a direct correlation between thoroughly researched shipping methods and profitability.
Given the desire for the small packers to deal directly with origin, and the origin producer’s similar desire to deal directly with the end user, the following concepts should be considered to drive sales to mutual satisfaction:

- **Teas packed in 10 kilo bags**
  Packaging should be tagged with each individual producer’s registered trademark. The importer of record will purchase a full container load, and on arrival should take the necessary steps to distribute minimum single units to the retailer/wholesaler. This concept allows the importers and distributors to reach small buyers without having to re-pack. Producers should make 10 kg the minimum packing load from origin to the importer, and then on to the retail/wholesale trader.

- **Vacuum Packed Teas**
  Vacuum packed teas maintain freshness and provide a safe cross-contamination barrier for different teas shipped in the same container (i.e. orthodox leaf teas: black, green, white, oolong, as well as CTC teas, chais and flavored teas). The increased sale price will allow both the seller and buyer to help cover the cost of equipment and labor.

- **Literature**
  Sellers can never have enough literature to forward to their buyers for distribution in retail outlets, via mail orders, internet advertising, or simply as hand-outs at their customer focused tastings which is a proven and effective sales method.

- **World Tea Media**
  World Tea Media is part of the World Tea Expo Group, the editor is well known to me and has been very successful at including well presented specialty coffee information on his website. He has recently joined World Tea Media and sends out information in his website to some 5,000 specialty tea enthusiasts entitled “Great Gardens.” He will be covering the Nepal focused tasting at the June World Tea Expo and I will find out what costs are involved in advertising in this extremely successful exposure vehicle. Information published includes attractive photos of estates, a brief history, full contact details, and U.S. agents’ details. If agreeable, I can manage this account.

### IV. SPECIALTY TEA MARKET OVERVIEW

With the high level of expertise in the manufacturing of teas in Nepal the challenge of matching and exceeding the quality of high quality teas made elsewhere can be met. Leaf style is the main criteria for specialty tea buyers in the U.S.

The specialty tea market in the U.S. places a premium on high quality long leaf teas with limited annual production and manufactured using orthodox methods. These teas typically include black, green, oolong, and white teas from small tea producing regions or estates. These teas are also referred to as Premium Teas or Gourmet Teas.

The specialty tea market experiences an annual increase in sales of 20% to 25%. While specialty teas represent only a small proportion of global sales, their potential for growth
is good given rising disposable incomes and the fact that it is fashionable to consume more sophisticated teas within niche markets.

Black teas sold in the United States are mostly sourced from Sri Lanka and India as regional or single estate origins for the specialty sector as well as in some blends created either at origin or in the U.S. Specialty green teas mostly come from China or Taiwan, with the top qualities originating in Japan.

New origins of black, green, white, and oolong teas (Kenya is now marketing a “Purple Tea”) are continually appearing on the market. Howard Schultz, owner of Starbucks, the leading retailer in the specialty coffee business said: “There is no such thing as quality – it is perceived quality that sells in the specialty market; with an exotic origin, uniqueness and a good story to tell.” Nepal has the story, exotic production origin, and manufacturing know-how to compete in the specialty market.

Due to the large volume of Nepali teas exported to India or passing through India en route to a third country, it is well known that a portion of Nepali teas are contained in the Darjeeling teas sold to the U.S. specialty market. As a result, we can conclude that if Nepal teas are good enough to attract Darjeeling exporters to include them with their teas, they are certainly good enough to be sold directly to the U.S. specialty market on their own merit.

Specialty tea importers have a considerable amount of business at stake when servicing their clients, and tea producers at origin rarely consider this important aspect. Many of the teas needed are seasonal and only available from source for one or two months of the year, but the packers want to have deliveries when needed. There is a huge difference in mind-set between the producer and specialty tea dealer – the producer thinks in terms of “how many containers can be sold” and the importer is thinking “how many kilos can I take.” This is where the European Houses are able to take advantage and offer “mixed origin and type” teas by the pallet load and ship them in split containers with teas for other buyers.

For a producer to deal directly with a specialty tea buyer in the United States, it is not so much the quality of the tea, but the ability to supply small quantities at competitive prices regularly which is a critical key to business. In Bolivia I was able to create a viable business based on exporting tea by airfreight (Federal Express and DHL). Nepal is presently doing this with their top quality teas. The buyer receives the tea at his/her door and the considerable profit margin more than takes care of airfreight costs. In Tanzania, I am combining a pallet of tea with a container load of coffee, shrink-wrapped and suitably segregated to avoid cross contamination. The pallet load of tea now travels at the FCL (full container load) freight rate, which makes for increased gross profit. Logistics must be studied carefully and continually to result in a business with the maximum opportunity for profitability.

The following are some quality teas that are presently featured in the U.S. specialty tea market.

**Organic Teas**

Organic tea continues to draw increased attention. Green and black teas are being linked to health and healing. The possible presence of pesticides and chemicals in normal teas is perceived as a problem by many consumers. The ability to sell a tea as organic or
“pesticide free” gives the vendor a tremendous advantage over others who are unable to claim this. The U.S. media continues to present findings linking tea consumption to improved physical health. Tea drinkers in the U.S. are searching for stress reduction and inspiring yet congenial solitude. The specialty tea consumer is looking for definable superior quality, peak flavor, leaf purity, freshness, and connoisseur level knowledge from retailers.

Organic teas are an extension of the specialty tea sector and currently enjoy an annual growth rate of 35%. Development of high value specialty tea manufactures must include the maximum possible quantity of organic teas. Demand for good organic teas outweighs current supply. Organic certification can take several years to achieve and is more difficult to attain in a smallholder context. Furthermore, manufactures must dedicate themselves to ensuring that non-organic teas cannot contaminate the organic material. Currently the Darjeeling/Nepal region premiums for certified organic teas are running between $5.00 and $15.00 USD per pound (sales prices). Experts predict that the organic demand for all food products is here to stay and will continue to increase as the market expands.

**Flavored Teas and Tisanes**

Most specialty markets are extended by the introduction of flavored teas and then into fruit and herbal teas, known as tisanes. Approximately 65% of the U.S. specialty market consists of flavored teas and tisanes.

Imported specialty flavored teas originated almost exclusively in Europe, however the number of flavored teas prepared locally is increasing rapidly along with origin flavored teas. Nepali tea producers must look into exporting flavored teas: a good flavoring and an efficient blending drum, manufactured locally is all that is required. The vastly increased profit margin available coupled with the market share, makes this a logical and important step for the producers’ secondary grades. It also gives the buyer a decent base tea with “origin” character, rather than using a miscellaneous, multi-origin blend.

The most popular flavors are influenced by the country of sale, though Earl Grey (flavored with oil of bergamot) continues to be a favorite. The huge number of flavors available and the limitless permutations possible offers the marketer constant innovation in this sector.

The vendor continuously researches the current flavor preferences in the U.S. and creates an offer sheet accordingly. Local companies in the U.S. are continually trying to emulate these products. This added value feature can be carried out at the production level.

**Chai**

Chai started off similar to the drink from the east – black tea, cardamom, cinnamon, cloves etc. but now has expanded to include green, white and even oolong teas as well as non-teas like rooibos, mixed with any number of herbs and in several cases flavored indiscriminately. One can be creative with creating his/her own chai, and as a judge at the North American Tea Championships I have witnessed just that.

Nepal should try to offer their own chai(s) and benefit from this fast growing category of the U.S. specialty tea market – I am sure that they will attract interest (locally grown teas, herbs and spices from the top of the world, consumed in the traditional way). The Masala
Tea presently sold in the local markets in Kathmandu, is an attractive brew and can be included with medium Nepali orthodox or CTC teas to make an excellent chai.

**Novelty Teas**
Novelty teas fuel the development of the tea market in some developed countries. Examples in North America include Brick Teas, Tea Flowers (bunches of green tea tips that open up as a “flower” in hot water), and Bubble Tea (a sweetened colored tea drink with tapioca globules, sucked up through a wide straw). The market is continuously looking for new and exciting tea based products that can compete successfully against the influx of new drinks. A careful study of the exhibitors’ booths in Las Vegas to see what is offered in this exciting sector of the tea industry may result in discovering novel products that could potentially be produced in Nepal.

**IV.a. Tea exportation to the United States and FDA requirements**
Tea can currently be imported to the United States duty-free. The importation of tea blends all have to pass FDA inspection along with all other teas, but to date are not attracting any duties or other charges. This may change soon and I will be monitoring the situation and will report to you immediately should there be any change. Prior to exporting any tea to the United States producers must go online and retrieve an FDA registration number and that number must appear on all documentation. Through my meetings with HOTA officials in Kathmandu, I confirmed that they are well aware of the FDA registration number requirements and Nepali producers shipping to the U.S. have been successful.

United States Government regulations on pesticide residue issues in imported tea can change frequently which makes it difficult to communicate to farmers. This issue presents immense challenges to tea producing countries who export to the United States. Current pesticide standards for tea in the U.S. do not adequately consider transference from the leaf to the cup and require costly testing in each producing country.

The following pesticides are currently authorized for use on tea in the United States:

<table>
<thead>
<tr>
<th>Pesticide</th>
<th>ppm (part per million) level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetamiprid</td>
<td>50 ppm</td>
</tr>
<tr>
<td>Dicofol</td>
<td>50 ppm</td>
</tr>
<tr>
<td>Etoxazole</td>
<td>15 ppm</td>
</tr>
<tr>
<td>Propargite</td>
<td>10 ppm</td>
</tr>
<tr>
<td>Pyriproxyfen</td>
<td>.02 ppm</td>
</tr>
<tr>
<td>Glyphosate</td>
<td>Dried tea 1ppm/ instant tea 7.0 ppm</td>
</tr>
<tr>
<td>Chlorfenapyr</td>
<td>.01 ppm</td>
</tr>
<tr>
<td>Endulsulfan</td>
<td>24 ppm (combined residues of several pesticides)</td>
</tr>
<tr>
<td>Carfentrazone</td>
<td>.1 ppm</td>
</tr>
</tbody>
</table>
V. MARKET PRICE INDICATORS FOR NEPALI TEAS

The following are prices for specialty teas similar to Nepali teas, currently offered in the United States; in USD/ per pound.

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Black Teas</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Darjeeling</td>
<td>JUNGPANA (Upper) FTGFOP1</td>
<td>$27.00</td>
</tr>
<tr>
<td>Darjeeling</td>
<td>First Flush Selection</td>
<td>$12.00</td>
</tr>
<tr>
<td>Darjeeling</td>
<td>PUTTABONG SFTGFOP1</td>
<td>$17.00</td>
</tr>
<tr>
<td>Darjeeling</td>
<td>First Flush House Blend</td>
<td>$9.00</td>
</tr>
<tr>
<td>Darjeeling</td>
<td>SOOM TGFOP1</td>
<td>$14.00</td>
</tr>
<tr>
<td>Darjeeling</td>
<td>MONTEVIOT Organic FTGFOP1</td>
<td>$17.00</td>
</tr>
<tr>
<td>Darjeeling</td>
<td>(in between flush) FTGFOP1</td>
<td>$9.00</td>
</tr>
<tr>
<td>Darjeeling</td>
<td>RISHEEHAT FTGFOP1</td>
<td>$15.00</td>
</tr>
<tr>
<td>Darjeeling</td>
<td>House Blend FTGFOP1</td>
<td>$8.00</td>
</tr>
<tr>
<td>Darjeeling</td>
<td>SUNGMA FTGFOP1</td>
<td>$12.00</td>
</tr>
<tr>
<td>Darjeeling</td>
<td>FINEST SELECTION</td>
<td>$12.00</td>
</tr>
<tr>
<td>Darjeeling</td>
<td>Second Flush</td>
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</tr>
<tr>
<td>Darjeeling</td>
<td>OOLONG POOBONG</td>
<td>$21.00</td>
</tr>
<tr>
<td>Darjeeling</td>
<td>SINGELL Organic FTGFOP1</td>
<td>$13.00</td>
</tr>
<tr>
<td>Darjeeling</td>
<td>AMBOOTIA Organic FTGFOP1</td>
<td>$14.00</td>
</tr>
<tr>
<td>Darjeeling</td>
<td>MARGARET’S HOPE FTGFOP1</td>
<td>$9.00</td>
</tr>
<tr>
<td>Nepal</td>
<td>MALOOM FTGFOP1</td>
<td>$11.00</td>
</tr>
<tr>
<td>Nepal</td>
<td>KATMANDU TGFOP</td>
<td>$8.00</td>
</tr>
<tr>
<td><strong>Green Teas</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Darjeeling</td>
<td>RISHEENAT KGFOPI</td>
<td>$8.00</td>
</tr>
<tr>
<td>Darjeeling</td>
<td>ARYA Organic GFTGFOP1</td>
<td>$9.00</td>
</tr>
<tr>
<td>Darjeeling</td>
<td>JASMIN ARYA Organic GFTGFOP1</td>
<td>$11.00</td>
</tr>
<tr>
<td><strong>White Teas</strong></td>
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<td></td>
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<tr>
<td>Darjeeling</td>
<td>HAPPY VALLEY Imperial White</td>
<td>$31.00</td>
</tr>
<tr>
<td>Darjeeling</td>
<td>HAPPY VALLEY JADE PEARLS Organic</td>
<td>$24.00</td>
</tr>
<tr>
<td>Darjeeling</td>
<td>HAPPY VALLEY WHITE PEKOE Organic</td>
<td>$30.00</td>
</tr>
</tbody>
</table>

Chais are primarily based on black teas and are made up of North or South Indian, Sri Lanka and East African teas as single origin, blended, or multi-origin blends. Chai teas are presently offered at between $ 10.00/lb. and $ 15.00/lb. Since the base price for the tea is around $ 4.00/lb. and spice/blending costs less than $ 2.00/lb; an attractive profit margin is available. Similarly, flavored teas such as Earl Grey and single fruit flavors vary from $8.00 to $12.00/lb. Flavored and fruit combinations are from between $10.00/lb. and $ 15.00/lb. and attract similar gross profits.
VI. FOLLOW-UP ACTIVITIES

June 2011
- Provide support in arranging the NEAT/HOTPA sponsored booth at the World Tea Expo. Create and display primary Leaf Grades, Medium Blends, Earl Grey, one or two flavored teas, and chais. I will collect information at the show regarding the cost and supply of flavorings and shipment details to Kathmandu. I will also arrange a “Badge Scanner” for the booth and ensure that all visitors to the booth are scanned, which will help to follow up with sales.

July/August 2011
- Arrange and begin focused tasting and presentation visits to strategic buying areas countrywide. A 2-3 day visit every 2-3 months. I will need updated advertising material, information booklets, posters, DVD(s), and fresh samples. To start, I will create flavor teas, tisanes and chais here and send detailed formulas to Nepal in order to replicate.

September 2011
- Visit and report on World Tea Expo East in Philadelphia. I will provide a list of all attendees, network with buyers, report on any new innovations, and taste flavor teas and chais at exhibitors’ booths. Furthermore, I will re-check with flavoring suppliers and test liquid vs. crystal flavoring. I will also test chais for types of base teas used and how many contain flavoring.

October/November, 2011
- Follow-up visit to Nepal.
- Arrange for flavors and implement flavoring and blending.
- Create chais and chai blends.
- Construct a small blending drum and arrange a supply of heavy duty polythene bags as liners for the drum.
- Make arrangements for heavy duty/hard sided export tea sacks from Sri Lanka.
- Visit transport and shipping facilities in Nepal and study trans-shipment points and on-carrying possibilities to the east and west coasts of the United States. Re-check freight rates: full container loads and pallet loads for part container loads.
- Discuss plans for placement of Leaf Collection Centers and training. I will also submit costs for approval and initiate construction.
- Re-visit growing areas and assess tables, leaf condition, and green tea production.
- Review scanned information from the World Tea Expo Booth with HOTPA members and find out what contacts have been made. I will also create a list of buyers for me to contact.
- Submit report on the World Tea Expo East.
- Discuss visit to Specialty Coffee Association of America’s Expo in Seattle, Washington at the end of April 2012. This show is drawing an increasing amount of attendees each year. I can possibly arrange for space in one of my associate’s booths as an information outpost for Nepali tea – hand out literature, and show some samples.
- The same could be possible for one of the Fancy Food Shows held three times a year in New York, Chicago, or San Francisco.
ANNEX A: SPECIALTY TEA BUYERS

Specialty Tea Buyers fall into one of 3 categories:

1. Those few who are capable of buying full container loads (i.e. up to 15,000 kgs. at a time).
2. Those capable of buying up to 5,000 kgs at a time.
3. The rest who buy anything from 1 kg to 100 kg at a time.

Below are six buyers from each category who have expressed interest in purchasing Nepali teas. With the “Badge Scanner” in the booth at the World Tea Expo we will be able to expand on this list considerably.

1.) Adagio Teas
   Cynthia Fazekas
   141 Lanza Avenue, 18D Garfield NJ 07026
   917-815-7185 fax 917-591-5625
   Cynthia@adagio.com

R.C. Bigelow, Inc.
Cindi Bigelow
201 Black Rock Turnpike, Fairfield, CT 06825
203-334-1212 fax 203-382-5509
cindi@rcbigelow.com

The G. S. Haly Company
Michael J. Spillane
156 Arch Street, Redwood City, CA 94062
650-367-7601 fax 650-367-0291
gshaly@pacbell.net

Harney & Sons
Gary Harney
851 Dog Kennel Road, Sarasota, FL 34240
GHarney@aol.com

The Republic of Tea
Barbara Graves
8 Digital Drive, Suite 100, Novato CA 94949
415-382-3413 / 800-354-5530 fax 415-382-3401
Barbara@Republicoftea.com

TAZO
Keith Hutjens
501 SE 2\textsuperscript{nd} Avenue, Portland, Oregon 97214
503-736-9005 fax 503-231-8801
khutjens@tazo.com
2.) Teas Etc.
Beth Johnston
480 Tall Pines Road, Suite C, West Palm Beach, FL 33413
561-683-6838 / 800-832-1126 fax 561-683-6837
Beth@TeasEtc.com

Mighty Leaf
tea company
Jill Portman
136 Mitchell Blvd., San Rafael, CA 94903
415-491-2650 x 102 fax 415-472-1648
Jill@mightyleaf.com

Serendipitea
Linda Villano
32-29 Greenpoint Avenue, Long Island City, NY 11101
718-752-1444 fax 718-752-0333
Linda@serendipitea.com

Simpson & Vail
Jim Harron
Quarry Road, Brookfield, CT 06804
203-7750240 fax 203-775-0462
jim@svtea.com

The Metropolitan Tea Co.
Gerry Vandergrift
60 Industrial Pkwy., Suite 776,Cheektowaga, NY 14227
800-388-0351 fax 800-319-8327
sales@metrotea.com

Special Teas
Jurgen Link
2 Reynolds Street, Norwalk, CT 06855-1015
203-866-1522 fax 203-866-1528
link@specialteas.com

3.) The East Indies Company
Mim Enck
7 Keystone Drive, Lebanon, PA 17042,
717-228-2000 fax 717-228-2540
mstea@paoline.com

Tea Source
Bill Waddington
752 Cleveland Ave. South, St.Paul, MN 5516
651-690-9822 fax 651-690-9820
bill@teasource.com
Nothing But Tea (Part of the Teacraft Group) in the United Kingdom has indicated that they would be interested in buying some Nepali tea:

Nigel Melican,
Teacraft, 1 Grisedale Court, Kempston,
Bedford MK42 7EE, U.K.
Tel: 44-1234 852121
Fax: 1234 853232
Nigel@nbtea.co.uk
ANNEX B: ORGANIC TEA CERTIFICATIONS RECOGNIZED IN THE UNITED STATES

a) OCIA Organic Crop Improvement
b) USDA
c) BFA (Australia)
d) NPOP and CCOF (India) (Indian Programme of Organic Produce)
e) EU Organic Certification
f) JAS (Japan)
g) Bio (Germany)
h) Bio (Suisse) also IMO
i) AB (France)
j) ECO Certification
ANNEX C: CONTACT INFORMATION FOR TEA ESTATES VISITED

1.) Jun Chiyabari
   Hile, Dhankuta
   Contact: Bachan Gyawali, Chairman
   Phone: 9801020260
   Email: bachan@nbe.np

2.) Kuwapani Tea Estate
   Hile, Dhankuta
   Contact: Sushil Rijal, Chairman
   Phone: 9852020259
   Email: kuwapanitea@ntc.net.np

3.) Guranse Tea Estate
   Hile, Dhankuta
   Contact: Suraj Vaidya, Chairman
   Phone: 9851036766
   Email: gte@voith.com.np

4.) Gorkha Tea Estate
   Sunderpani, Fikkal, Ilam
   Contact: Udaya Chapagain, Chairman
   Phone: 98510784687
   Email: uchapagain@gmail.com

5.) Nepal Green and Specialty Tea Industries
   Baudhadham, Fikkal, Ilam
   Contact: Dilip Rai, Chairman
   Phone: 9851084515
   Email: punamrai27@hotmail.com alternate: sakurachiya@hotmail.com

6.) Nepal Small Tea Producers Limited
   Doctorkhola, Fikkal, Ilam
   Contact: Dilip Rai, Chairman
   Phone: 9851084515
   Email: punamrai27@hotmail.com alternate: sakurachiya@hotmail.com

7.) Ilam Chiyabari- Narayani Group
   Aitebare, Ilam
   Contact: Bachan Gyawali, Chairman
   Phone: 98010202360
   Email: bachan@nbe.np

8.) Ilam Tea Producers- Aitebare Division
   Aitebare, Ilam
   Contact: Ashok Muraka, Chairman
   Phone: 9852021671
   Email: murarka@wlink.com.np
9.) Himalayan Shangrila Tea Industries
   Nepaltar, Sakejun, Ilam
   Contact: Kamal Mainali, Director
   Phone: 9851021068
   Email: kamalrajmainali@hotmail.com

10.) Mai Tea Company
    Jasbire, Ilam
    Contact: Suresh Vaidya, Chairman
    Phone: 9841379472
    Email: gte@voith.com.np

11.) Ilam Gold Enterprises Dahalbandhu Orthodox Tea
    Sakejun, Ilam
    Contact: Mohan Dahal, Chairman
    Phone: 9842636151
    Email: Not Available

12.) Parajili Tea Industries
    Bhadrapur, Jhapa
    Contact: Chandi Parajili, Chairman
    Phone: 9852671009
    Email: Not Available