TORONTO ARTISTIC ORCHID ASSOCIATION
多倫多蘭藝會
Email: taoa_ca@yahoo.ca
Web site: www.taoa.ca

2007 年 5 月份通訊

會長的話：

各位蘭友，本年度蘭展經已圓滿結束，整體上算得成功。能夠成功辦好今屆蘭展，全賴全體參與的工作人員，使用其私人時間及精神，並配合義務工作的委員及萬錦市童軍第 23 壘儘心儘力爲蘭展服務，以致可以順利完成，故此，在此再次多謝；參與義工服務人仕如下 (排名以姓氏例出)：

Alice AU	Stephen AU	Eric CHAN	Ring Man CHAN
Lorna CHAN	周振德	Phung CHEN	Ki CHEUNG
Frederic CHIU	Chee CHONG	Shookie CHONG	Wen CHONG
Arthur CHUNG	Man Hang CHUNG	Tim Wai CHUNG	Henry FOD
方文偉	Siu Pang HO	Shirlina LAI-SOTIRIOU	黎淑儀
Alice LAM	Batty LAM	John LAU	Louis LAU
Richard LAU	Cecilia LEUNG	Diana LI	Patty LI
Eva LIANG	Lena MA	Paul MAK	Rosa MAK
Esther NG	Georgiana NG	Bi Lan OU	Andy SHENG
Alan WONG	Andrew WONG	Billy WONG	Maria WONG
胡美珍	Belinda YU		

同時，感謝吳志棋先生 (Wilson NG) 爲大會評審，更送出獎座兩個，爲本會增添評審特色。

以下爲本會在 2007 年蘭展得獎名單 ：

A) 國蘭組 ：

春蘭冠軍	陳大典 - 碧玉元河
秋蘭冠軍	麥蘇楚楚 - 綠鳥咀
墨蘭冠軍	湯慈開 - 日向
最佳帶花株獎	陳大典 - 豆蘭
最佳擺設獎	陳大典
全場最佳栽培獎	湯慈開 - 唐山虎
全場總冠軍	湯慈開 - 唐山虎

B) 洋蘭組 :

獎項	花名	得獎者
冠軍	Maxillaria tenuifolia	馮潔蘭
	Milt. Herralexandre ‘14189’	紀安琍
	Paph. Maudiae	陳桂炎
	Pharg. Bessese	陳桂炎
亞軍	Paph. armeniacum	莫健霖
	Den. chrystotoxum	莫健霖
	Paraphalaenopsis labukensis	莫健霖

	Den. superfum	莫健霖
	Phal. Manii	本會蘭友
	Epi. parkinsonianum	本會蘭友
季軍	Diaca. Chantilly Lace 'Twinkle'	本會蘭友
	Phal. Brother Lawrence	陳桂炎
	Epi. Sunny Girl x Joseph Li	陳桂炎
	Epi. Xanthinum	陳桂炎
	Best display by Orchid Society	

種植洋蘭入門班

本會爲照顧初學種植洋蘭會員之需要，將於 6 月份開始舉辦「種植洋蘭入門班」，每班人數最多爲 12 人，每星期一次，上課地點及時間細則將會在 5 月份例會中宣佈，有興趣之會員請與本人 – 李彭靜璇 (Rosanna)聯絡，名額有限先到先得。

7 月份例會 "Pot Luck" 聯歡會

爲使各會員更加深切互相認識，本會將於 7 月份例會舉行 "Pot Luck" 聯歡，各位會員可以帶備已煮熟的「拿手小菜 」、「甜品」等藉此機會與其他會員分享；而本會亦將會提供某部份食物、飲品等，請各會員踴躍支持。

更換 2007 年度會籍

2007 年的新會藉已經由 5 月 1 日開始至 2008 年 4 月 30 日止。逾期未更換者將不會收到本會發出之會員通訊及不能享受各項會員福利；請將支票寄往：

Toronto Artistic Orchid Association
100 Cummer, Avenue, Toronto, Ontario M2M 2E4

或在 5 月份例會時用現金或支票繳交。

本會活動

2007 年 5 月 19 日 (星期六) 舉行例會，地點在大多倫多文化中心，雪怕大道東 5183 號 **(並請各會友在例會當日必需掛上會員證)。**

時間：**中午 12 時 30 分時至 1 時 30 分**

1. 會員蘭花售賣檯 – 歡迎非會員購買蘭花。蘭花寄賣服務只爲會員提供，請列明會員姓名、號碼、售賣蘭花價格及名稱以便存錄；成交後本會將收取 10% 服務費。
2. 抽獎券銷售 - **(只供會員參加)** 獎品皆爲熱心會員捐贈，各位如能提供蘭花或獎品，本會無任歡迎。
3. 蘭花醫生 - **(只供會員服務)** 蘭友可攜疑難雜症蘭花前來諮詢，但需先將蘭花用膠袋封好，以免傳染其它植株。**如蘭友有分株及換盆等困難 ，蘭花醫生將以該花盆的直徑大小計算，每吋收費壹元，並且以 10 吋盆以下爲限**。
4. 蘭花觀賞 - 歡迎蘭友携同蘭花展出。會場有表格供填寫, 簡列展出者姓名、蘭花名稱及栽種方法，例如室內或溫室, 施肥及特殊護理方法等。

下午 1 時 30 分至 3 時

1. 會務報告
2. 蘭花介紹
3. 專題講座
   題目：日本東京體育館蘭花展
   主講：李彭靜璇
4. 抽獎

5 月及 6 月份安省各蘭會活動：

5 月 5 日 (星期六)：美國蘭花協會多倫多中心評審 (非 AOS 或 SOOS 會員均可將蘭花拿去評審或觀摩)
地點：多倫多植物公園 (Toronto Botanical Garden)
Leslie Street & Lawrence Avenue East
時間：下午 1 時
費用：不收入場費

5 月 6 日 (星期日)：南安省蘭花會例會
地點：多倫多植物公園 (Toronto Botanical Garden)
Leslie Street & Lawrence Avenue East
時間 ： 下午 12 時至 3 時 (12 時至 1 時爲蘭花售賣及觀賞時間) ，購買蘭花時請勿議價
費用：不收入場費

6 月 2 日 (星期六)：美國蘭花協會多倫多中心評審 (非 AOS 或 SOOS 會員均可將蘭花拿去評審或觀摩)
地點：多倫多植物公園 (Toronto Botanical Garden)
Leslie Street & Lawrence Avenue East
時間：下午 1 時
費用：不收入場費

6 月 3 日 (星期日)：南安省蘭花會例會
地點：多倫多植物公園 (Toronto Botanical Garden)
Leslie Street & Lawrence Avenue East
時間 ： 下午 12 時至 3 時 (12 時至 1 時爲蘭花售賣及觀賞時間) ，購買蘭花時請勿議價
費用：不收入場費

水和肥料

陳桂炎

水篇

所有生命均倚靠大自然的賜與。生命必需靠三個元素是：陽光、空氣和水份。三者相輔相成，缺一不可。而植物因生長的地域、經緯、天氣和其它因素而影響到所需的三元素有很大的差異。例如沙漠植物、水生植物、雨林區內的植物都對所需的光、水、空氣都不同。沙漠地區的日夜溫差和雨林區的日夜溫差是相對的、水生植物會自己製造氧氣而附生植物全株均需大量的流動空氣、沙漠邊沿的植物可承受極高的碱質而沼澤池塘邊沿的植物卻需較低鹽份的水質。所以我們當要考慮所栽種的植物 (不獨是蘭花) 是否種在一個適於 (或近似) 的環境下，對植物的生長影響十分重要。

首先我們要明白根的作用，根是植物吸取水份、養料和支持植物的主要器官。它把水份和可溶性的肥料吸收輸送給莖和葉，在光合作用下製造成植物的花、果、莖、葉等器官。影響到根的形態，主要是水份和通氣 (或通風)。有些附生植物根部份也需光照才能健康生長。水質對植物影響十分重要，我們應對日常澆花的水，分析它們的酸鹼度 (PH) 和含有溶性鹽份 (E.C. 度電率以 μS/cm 爲單位) 與所種的植物是否配合。

說到 pH 值 (酸鹼值) 各處水源所取得的水均有所不同，自來水一般受取水的水源地質所影響。pH 值分 14 度，以 7 度爲中性水，低於 7 度爲酸性，數字越低酸性高。高於 7 度爲鹼性，數字越高則鹼性越高。在多倫多和 附近的食水一般大約 6.7 至 7.5 之間，大致上用來種植大部份花草包括蘭花在內均不成問題，可是有部份較需酸性的植物如 Phrag.， Cyp. 等拖鞋蘭和部份池塘邊沿的植物，需將水質調較至 5.5 至 6.5pH，之間則對植物生長較有利，明顯可見的是燒焦葉尾和抗病能力通常都是酸鹼過高或低而引起。常用減低 pH 的方法是加入鏻酸 (Phosphoric Acid)，氮酸 (Nitric Acid) 甚至有人用食用酸醋 (White Vinegar)。如要提高 pH 則可加入碳化鉀或硫化鋁於水或土壤中。

我們知道所有根的結構只能吸取溶於水中之養料，其實所有的養料 (肥料) 都只是一種鹽質，視乎該鹽質所含的成份可否被植物吸收使用，所以市面上有多種的肥料。有水性的及非水溶性的 (骨粉、血粉等) 都會對植物的生長有不同的影響。用以測量水中所含鹽份高低一般都用 EC (Electrical Conductivity Tester) 測量表，數值以(μ Siemens 或 μS/cm) 表示，數字越高則表示水中含鹽量越高。它測量的方法是計算每顆電子由一電極走向另一電極的導電量，純淨的水 (蒸餾水) 是不導電的，所以該數是零。雨水通常是 0.02 至 0.04 μS/cm，以水質來說，雨水是一個比自來水 (0.2 至 0.4 μS/cm) 更好的選擇，如果你用的水達致 0.5 μS/cm，便需考慮改善水質。如果你用的是井水，通常井水含有更高的鹽份可高至 2.0 μS/cm。這時你便要考慮使用反滲透式濾水 (Osmosis water treatment) 方法或以其它方法調低水質的 E.C. 值，否則水中的礦物質或鹽份會嚴重阻礙植物對有用肥料的吸收甚至將根部燒傷。

各種植物根的含水量有很大差異，一般來說附生蘭的根可儲存更大量的水份，所有植物的根部均需要空氣。尤其是氧氣 (水生植物會自己製造氧氣)，我們在選擇植料時便要因我們的種植環境及澆水習慣而決定應用那一種植料或混合其它植料或補充劑等共應用。一年四季中，一般花草在春、夏兩季都是主要的生長季節，這時候應給與更多的水和肥 (我通常是兩次澆水隨着一次施肥)。秋、 冬兩季多數是成熟期，植物會因陽光時間長短，熱力及質素而自動調節減少對水的需求，這時也應減水和減肥 (我通常是三次澆水隨着一次半濃施肥)。如果你環境容許的話，冬天應盡量給他們陽光，因爲多倫多冬天的陽光並不如夏天，因光的質素問題並不會灼傷大部份喜陰性植物的葉面 (如蝴蝶蘭、文心蘭、拖鞋蘭等)。這樣你的植物會更易開花 (因日夜溫差較大) 和顏色美豔。在室內通常濕度較外面低，可以的話日間多次潰濕葉面，置水盤於底下亦有助增加濕度，但要記着天黑前葉面表面不要有水潰，尤其是蝴蝶蘭和拖鞋蘭的中心部。晚間是大部份細菌最活躍的時間，黃昏及天曉是昆蟲最活躍的時間。

澆水每次要濕透到底部植料，你會發覺通常植料乾秀透後，第一次澆水約三十分鐘，後重澆一次會再吸很多的水份 (用手提起整盆植株便可分別)。施肥時根部不可太乾，以免燒傷根部尤其是根尖。澆水前宜先察看植料，加多利亞蘭喜全乾、跳舞蘭和蝴蝶蘭喜半乾、拖鞋蘭喜濕潤；而樹蘭和石斛蘭等在春 、夏喜濕潤而秋、冬喜乾爽。適當的澆水時間和方法會大大減少植物受受蟲和病菌都可以避免。開花株可移到較凉冷的地方和減少水份可使開花更持久。有些蘭友喜插木筷子於植料中以觀察水份。水溫與室溫相差勿多於 5℃以免造成根部傷凍。

肥料篇

施肥這問題比較容易解答，對蘭花來說大部分現在我們所種植於家中的蘭花都是氣生蘭。在野外，它們最重要的肥料來源是沖刷下來的腐植土或是溶於大氣中的有機氮素。所以熱帶雨林區的樹木和植物特別濃密，其中一個原因相信是每日的大雷和閃電而把空氣中的氮氣溶解於雨水中成爲有機氮肥。一個簡單的實驗可以把大雷雨後的雨水經冲倒至令一溶器，會產生大量泡沫，經一段時間才會消失和導電量 (EC) 和普通的雨水有些分別。氣生蘭靠長於空中或附於依附體的氣根吸收肥料，並沒有明顯的幼鬚根，所以對肥料的濃度要求寧淡勿濃。因通常盆由植料不含泥土，所以應盡量勿使用含尿素的化學肥，因尿素不單不能被蘭根吸收，嚴重的更會引致根尖燒傷、葉尖變黑色然後整片蘭葉死掉。每次施肥後的第二天，如能有機會大量澆水把多餘的肥料沖掉，這對蘭花的根部有很好的影響。

市面上所買到的肥料大致上可分爲有機 (天然性) 和化學合成性。天然肥的首選是腐植土、也有用骨粉、血粉、豆渣、酒糟和礦物質等。不過，隨腐植土比較見效外，其它方法如尿液等不用爲佳，試想要多久那些骨血粉才能溶化成爲可被根部吸收的有機鹽，看來直至植料腐壞了也未能分解。化學合成性肥料因人工合成，可以製成各種不同含量附加劑以適應不同用途。通常我們買來的化學肥料必有三個數值由左至右 N.P.K. (分列爲氮、鏻、鉀)。

N (Nitrogen) 氮素 – 爲植物光合作用造成葉綠素的主要原料，有部分植料分解時 (樹皮等) 亦會大量消耗氮素，所以用樹皮爲植料的蘭友要施以較多的氮肥。

P (Phosphorus) 鏻 – 爲開花和根部發展所需，近年新的理論是不應施以太多的鏻肥，以免植株未能成熟就開花而影響植株和花的質素，一株健康，粗壯的植株自然會有理想的花朵。

K (Potassium) 鉀 – 爲結果、植物細胞壁及根部發展所需，直接影響到植株的抵抗疾病和防蟲能力。

除了上述三要素外，化學肥都有不同含量的微量元素如 Ca (鈣)、Mg (鎂)、S (硫)、Fe (鐵)、Zn (鋅)、Cu (銅)、B (硼) 及 Mo(Molybdenum) (鉬) 等。其中以鈣最爲重要 (加多利亞蘭的新苗轉黑而死亡通常由鈣不足引起)，能增加根部對肥料的吸收速度。而少提及的鉬在非泥土性的植物起了很大的作用 (尤其是水栽植物更爲必需)。

每種蘭花所接受肥料的程度各有不同；Pharg. (南美洲濕水拖鞋蘭) 及 DISA (一種原產於非洲的地生蘭，多爲鮮紅色或黃色) 最不受肥，所以最好能夠於施肥後一天以清水沖淨植料。水可用雨水、O.S. (反滲透式濾水) 處理水或蒸餾水，以清除盆中之鹽份使生長健康。最近筆者看到有些報告，蝴蝶蘭可接受很高的鹽份肥料，美國德州 A&M 大學研究顯示可接受高達 300 至 500 PPM 之鉀肥，並表示如鉀肥不足可引致近底部之舊葉容易凋落。以筆者過去數年經驗這是事實之事。我現在所用之肥爲 Scott (Jack's) 廠之 15-5-15 cal-mag 肥，混合小量之 10-60-10 (Schultz 廠之出品)，份量按天氣及植株而定。之前所用之 17-5-19 (聖誕紅專用肥爲主，Plant-Product 廠出品) 亦有不錯的效果。各位選擇肥料之前，最好能夠查看有否含有尿素 (urea)，因含有尿素之肥料絕不適合於木合泥土 (Silcon) 植料主之用引致燒根。

TORONTO ARTISTIC ORCHID ASSOCIATION
多倫多蘭藝會

Email: taoa_ca@yahoo.ca
Web site: www.taoa.ca

May 2007 Newsletter

From the chairman:

2007 TAOA Orchid Show came to a close. It was successful. I have to attribute our success to all those who were involved, volunteers and 23rd Markham Scout Group.

List of volunteers is as follow:

Alice AU	Stephen AU	Eric CHAN	Ring Man CHAN
Lorna CHAN	Tsun Tak CHOW	Phung CHEN	Ki CHEUNG
Frederic CHIU	Chee CHONG	Shookie CHONG	Wen CHONG
Arthur CHUNG	Man Hang CHUNG	Tim Wai CHUNG	Henry FOD
Man Wai FONG	Siu Pang HO	Shirlina LAI-SOTIRIOU	Suk Yee LAI
Alice LAM	Batty LAM	John LAU	Louis LAU
Richard LAU	Cecilia LEUNG	Diana LI	Patty LI
Eva LIANG	Lena MA	Paul MAK	Rosa MAK
Esther NG	Georgiana NG	Bi Lan OU	Andy SHENG
Alan WONG	Andrew WONG	Billy WONG	Maria WONG
胡美珍	Belinda YU		

At the same token, a special thank to Mr. Wilson Ng as judge and he contributed two prizes.

The following list is winner of Chinese Cymbidium:

春蘭冠軍	陳大典 - 碧玉元河
秋蘭冠軍	麥蘇楚楚 - 綠鳥咀
墨蘭冠軍	湯慈開 - 日向
最佳帶花株獎	陳大典 - 豆蘭
最佳擺設獎	陳大典
全場最佳栽培獎	湯慈開 - 唐山虎
全場總冠軍	湯慈開 - 唐山虎

Prize	Plant Name	Winner
1st prize	Maxillaria tenuifolia	Phyllis Fung
	Milt. Herralexandre '14189'	Anli Sheng
	Paph. Maudiae	Tenny Chan
	Pharg. Bessese	Tenny Chan
2nd prize	Paph. armeniacum	Kent Mok
	Den. chrystotoxum	Kent Mok
	Paraphalaenopsis labukensis	Kent Mok
	Den. superfum	Kent Mok

	Phal. Manii	TAOA member
	Epi. parkinsonianum	TAOA member
3rd prize	Diaca. Chantilly Lace 'Twinkle'	TAOA member
	Phal. Brother Lawrence	Tenny Chan
	Epi. Sunny Girl x Joseph Li	Tenny Chan
	Epi. Xanthinum	Tenny Chan
	Best display by Orchid Society	

How to grow orchids

TAOA will conduct a beginner class commencing in June for 12 people once a week. Announcement will be made in May bi-monthly meeting. Those who are interested please contact Rosanna.

Pot luck party in July

TAOA will have a pot luck party in July. Please bring cooked food or desert to share with other members. TAOA will provide some food and drinks. Please come to support us.

Membership for 2007

2007 new membership starts from May 1st to April 30, 2008. Newsletters will not be sent to members whose membership is expired. Please send cheque to:

Toronto Artistic Orchid Association
100 Cummer Avenue, Toronto, Ontario M2M 2E4

or pay cash / cheque in May bi-monthly meeting.

TAOA Activity :

May 19, 2007 (Saturday) is our bi-monthly meeting, **(Proof of membership is mandatory)**
Venue: CCCGT, 5183 Sheppard Avenue East. Talk is given by Mrs. Rosanna Li on Tokyo orchid show.

Agenda

12:30pm – 1:30pm

1) Members' sale table – non-members are welcome to purchase. But sales table is for members only. Please put your name, member's number and price. 10% charge will be placed on plant sales.
2) Raffle tickets – **For members only**, prizes are donated by members. All are welcome to donate prizes.
3) Orchid cultivation consultation – **For members only**. Members are welcome to consult doctors on all cultural problems. If you require re-potting service, please wrap your sick plants in clear plastic bag to avoid spreading disease. **There will be a charge for potting material; it will be according to pot size, $1.00 for 1 inch. Pots cannot be larger than 10 inches.**
4) Orchid appreciation – Members are welcome to bring plants to show. Fill up forms supplied by TAOA accordingly: name of grower, plant name and cultural method e.g. indoors/greenhouse, management and any special cultural method.

1:30pm – 3:00pm

1) TAOA report
2) Orchid Appreciation
3) Special Talk – Topic: Tokyo Orchid Show by Mrs. Rosanna Li
4) Raffle draw

2007 Orchid Calendar for May & June:

May 5th (Saturday): AOS Toronto Centre Judging
Venue: Toronto Botanical Garden
Leslie Street & Lawrence Avenue East
Time: 1:00 pm
Admission: Free of charge (non AOS/SOOS members are welcome to bring plants to be judged or participate)

May 6th (Sunday): SOOS Monthly Meeting
Venue: Toronto Botanical Garden
Leslie Street & Lawrence Avenue East
Time: 12:00 - 3:00 pm (12:00 - 1:00 pm plant sale)
Admission: Free of charge (Please don't haggle when buying plants)

June 2nd (Saturday): AOS Toronto Centre Judging
Venue: Toronto Botanical Garden
Leslie Street & Lawrence Avenue East
Time: 1:00 pm
Admission: Free of charge (non AOS/SOOS members are welcome to bring plants to be judged or participate)

June 3rd (Sunday): SOOS Monthly Meeting
Venue: Toronto Botanical Garden
Leslie Street & Lawrence Avenue East
Time: 12:00 - 3:00 pm (12:00 - 1:00 pm plant sale)
Admission: Free of charge (Please don't haggle when buying plants)

Water & Fertilizer

Tenny Chan

Water

Live survives rely on three resources: sunlight, air and water. We should understand our growing environment, climate and irrigating habit before we decide what material to put into the pots for our plants. Usually, we mix more than two types of material, aggregate, mycorise or even formaldehyde as potting mix.

Usually, we use tap water to irrigate our plants. The quality of tap water greatly depends on its source, which would eventually affect the value of pH and EC. We can measure pH value of water by using a pH meter, pH test paper or pH solution. pH is divided into 14 grades, pH 7 is known as neutral. pH value lower than 7 is considered as acidic, the lower number is the higher acidity. Conversely, value higher than 7 is considered as alkaline, the higher number is higher alkalinity. In the Greater Toronto area, the pH value of water is usually around 6.8 to 7.5. Water with this pH value does no harm to most of the house plants including orchids. However, there are some plants that would need more acidity in water. Phragmipedium, Cypripedium and some lake marginal plants need water with pH value 5.2 to 6.5 to obtain best growing results. Blacken of leaf tips, yellowish or brownish leaves and deficiency of the immune system in a plant is usually caused by the inappropriate pH of water and soil. We can lower the pH value in water by adding Phosphoric acid, Nitric acid or even household vinegar. Potassium bicarbonate or Pot-hydroxide are used in raising the pH of soil or water.

Roots are structured only to absorb water and water soluble nutrients. While all soluble nutrients or fertilizers are just a form of soluble salts, not all kinds of soluble salts are beneficial to plants. Different types of fertilizers influence the growth of plants in different ways. There are various types of fertilizers available in the market, some are soluble in water and some are not. Examples of insoluble fertilizers are bone meal or blood meal. To find the rate of contents of soluble salts in water we would use an Electrical Conductivity Tester. The measurement unit is μ Siemens per centimeter (μS/cm) – i.e. the conductivity that an ion runs from anode to cathode. Pure water, such as distilled water, cannot conduct any electrical ion. The reading of such water should be zero. Rain water in Toronto area usually ranges from 0.02 μS/cm to 0.04 μS/cm and tap water are 0.15 μS/cm to 0.35 μS/cm. In case if you find your water has EC value larger than 0.5 μS/cm you should consider to improve your water quality. To do so, you can mix with other sources of water or by employing an Osmosis Water Treatment to lower your EC value of your water. Too high content of non usable soluble salts (usually from water softener or well water) will inhibit the root's ability to absorb other useable salts or nutrients. This would sometimes cause root-burn, which would dehydrate the hair-roots or cause roots rot on orchids. The amount of water inside roots is greatly different from plants to plants. Generally, roots of epiphytic orchids can store greater amount of water. All types of roots need air (aquatic plants can produce oxygen on their own).

Spring and summer are the growing season for most of the plants. During this period, water and fertilizer plants should be given generously and prevent plants from drying up. Personally during these two seasons, I irrigate three times following by a full strength of feeding. In Toronto, there is a longer period that the orchids have to stay indoor. In the cold days, the sunlight quality is greatly different from that of the summer. We should give as much sunlight as we can to the orchids between December and March. You will find that the orchids are easier to form flowering buds because of the change of temperature on leaf surface between day and night. The colour of flowers is more remarkable, vibrant and profuse. When growing orchids indoor, relative humidity is usually inadequate. To resolve this, spray water mist several times a day or put a dish of water with pebble under your orchid will help a lot, but remember to dry up the surface of the leaves before sunset, especially the center of Phalaenopsis and Paphiopedilum. This is because nighttime is the most active hours of fungus while dawn and evening are the most active hours of insects. Whenever you are watering, give generously until water flushing out from bottom to have better gas exchange. You will find that most of the dried potting media will absorb a lot more water after a second round of watering 30 minutes after initial watering. You can tell by picking up the pot to check the weight. Before you fertilize the orchids, you should check the potting media that is somewhat dampened. This will avoid burning the roots especially the tips. Also check your orchid before irrigating, Cattleya should be totally dry, Oncicdium should be moist in the summer and dry in the winter. This is the key secret of keeping orchids, appropriate irrigating technique and timing will greatly decrease infection of disease, fungus and insects. One important aspect is air movement when growing orchids indoor. If you can have air to drift or swing the leaves' surface slightly, this

will help eliminate 90% of insects and fungus problems. By moving blooming orchids to a cooler area giving less water can keep the bloom longer. Some people insert a soft-wood stick or wood chopsticks into the potting media to help observe the water content. Temperature of the irrigating water should not be lower than room temperature by 5℃ to avoid harming the roots.

Fertilizer

Most the orchid we grown (no matter terrestrial or epiphyte) are sponge roots. The main source of fertilizer is come from the tree leaves composite or the nitrogen content in air that dissolved into rain water after thunderstorms. That why the plants in tropical rain forest are usually huge. Since orchid doesn't have hair roots, feeding should not be heavy. Usually we are using soiless mix for potting orchids. Try to feed your plants in low rate concentration and containing no urea. Urea concentrated in orchids root tip will cause burning that shown in the leaves tip.

All fertilizer must be dissolved in water so the roots can uptake. Organic fertilizer needs a long time to decompose to form absorbable.

Whenever we read the label of fertilizer, there are three main figures we should read – N, P, K, (from left to right).
N (Nitrogen) – all leaves need nitrogen to build up their structure. Some of us use tree barks as a potting media that also consume a lot of nitrogen.
P (Phosphorus) – encourage flowering and develop root system.
K (Potassium) – the essential of building cell wall, roots system and fruits, directly affect the growth of the plant immune system.

Beside the macro nutrient, many labels also show the content of micro nutrient is also important for plants. Some micro nutrients are calcium, iron, magnesium, sulphur, zinc, copper, borex and molybdenum.

Some orchids are sensitive to heavy feeding. Phargmipedium (South American species) and DISA (native of South Africa) are good example. I would recommend flushing your plants after the second day of feeding by using OS, rain or distillated water. On the other side, Phalaenopsis can take a very high rate of Potassium. The A&M University in US had proved that they can even take 500 PPM of potassium to prevent dropping of old leaves of Phalaenopsis.

Take care not to use the fertilizer that contains urea to prevent black leaves because urea only decompose by Silcon. (Plant product's 17-5-19 fertilizer will be a good choice for general growers).