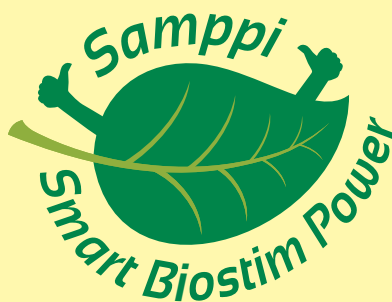




Samppi

Fast source of nutrients and energy

- Unique, highly concentrated liquid fertilizer from Japan
- **Smart Biostim Power** composition
- Faster minerals uptake, growth and recovery of crops
- Better fruit coloration and quality, higher yield
- Low pH and adjuvant improve efficacy



| Organic substances | | Mineral nutrients | | | |
|--------------------|----------------|---|-------|-----------------|--------|
| Sugars | Glucose | Nitrogen (N) | 8,0 % | Boron (B) | 0,1 % |
| | Sucrose | Phosphorus (P ₂ O ₅) | 3,0 % | Iron (Fe) | 0,4 % |
| Organic acids | Citric acid | Potassium (K ₂ O) | 3,0 % | Molybdenum (Mo) | 0,1 % |
| | Succinic acid | Magnesium (MgO) | 2,0 % | Copper (Cu) | 0,05 % |
| | Malic acid | Calcium (CaO) | 1,0 % | Zinc (Zn) | 0,05 % |
| | Tartaric acids | Manganese (Mn) | 0,7 % | Adjuvant | |

Samppi is unique, highly concentrated liquid fertilizer for foliar application produced by company OAT Agrio Co., Ltd. in Japan.



Why is Samppi different?

Unlike other foliar fertilizers, Samppi contains Smart Biostim Power composition.

Smart combination of nutrients, EDTA, organic acids, sugars and adjuvant ensures significantly faster and more effective uptake and distribution of mineral and organic substances in plants. Sufficiently quick absorption of Samppi provides the fast and the most effective results. Organic acids (succinic, citric, tartaric and malic) and sugars (glucose, sucrose) stimulates biochemical processes and provides power for intensive plant growth

and development. Water soluble phosphorus and calcium strengthen plant cells. Samppi helps the crops grow healthier and stronger with positive effects on yield and its quality. Samppi is chemically stable and can be mixed with other products.

Samppi is also highly effective when applied in times of difficult conditions for a nutrient uptake by roots such as extreme drought, leaching of nutrients from the plant due to the long rainy season, damage of roots or unsuitable soil properties (low or high pH blocks the micro-nutrients uptake).

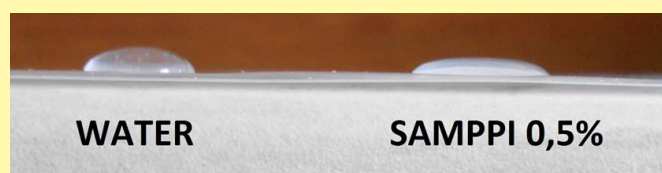
Notes for users

- Easy to use, possible tank-mix application with majority of plant protection products and urea.
- When mixing, first dilute SAMPPI in water (2/3 of tank capacity) and mix well. Then add fungicide or insecticide gradually and mix again. Add remaining volume of water.
- Avoid mixing with strongly alkaline compounds (Cu hydroxides, Zn), calcium polysulfides (lime sulphur), fosetyl-Al, herbicides and other fertilizers (except urea). Mixing with those kind of products may cause the aggregation, lower efficacy or phytotoxicity.
- Always test mixtures on a small number of plants before large scale use.
- Minimum recommended dose rate per season is 1 l/ha.

Low pH of Samppi (pH 1,2) decreases alkalinity of hard water. Samppi enhances fungicide efficacy in tank-mix combination.

High quality adjuvant increases adhesion of spray liquide on leaves.

| | Samppi | 0,5% dilution | 0,1% dilution |
|----|--------|---------------|---------------|
| pH | 1,2 | 3,15 | 4,15 |



High content of EDTA enables plants to take up Ca and Mg from hard water in forms that can be used as nutrients.

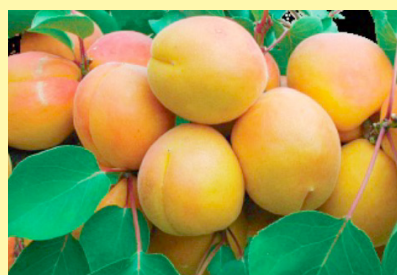
| Uniqueness | |
|--|--|
| Smart composition of mineral nutrients, organic substances and high-quality adjuvant | |
| Effects | Advantages |
| <ul style="list-style-type: none"> ● Higher fruit quality and yield increase ● Improved fruit coloration and reduction of fruit drop ● Better tissue quality, firmness and longer shelf life ● Activation of root growth and nutrient uptake ● Faster recovery and prevention from micronutrient deficiency ● Stronger and healthier vegetable seedlings | <ul style="list-style-type: none"> ● Low application dose rate ● Faster nutrients uptake in difficult conditions ● Possible mixing with fungicides and insecticides ● Enhanced fungicides efficacy in tank-mix ● Low pH decreases alkalinity of hard water ● Suitable for IPM technology |
| Safety | |
| Produced from the highest purity raw materials by know-how of Japanese company OAT Agrio | |

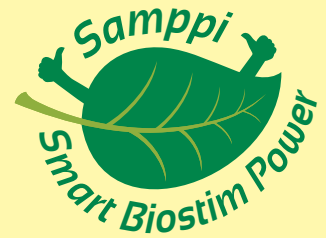




Fast source of nutrients and energy

| Orchards, grapevine and berries | | | | |
|---|-----------|------------|---|---|
| Crop | Rate l/ha | Water l/ha | Target | Time of application (crop growth stage) |
| Apple | 1,0 | 400 - 1000 | Better fruit coloration | 1st: 5 weeks before planned harvest 2nd: 3 weeks before planned harvest 3rd: 1 week before planned harvest |
| Apple, Pear | 1,0 | 400 - 1000 | Prevent physiological disorders Higher yield Better fruit quality | 1st: after flowering (BBCH 71 – 79) 2nd: 1 – 2 weeks after 1st application 3rd: 1 – 2 weeks after 2nd application |
| Sweet cherry, Sour cherry, Plum, Apricot, Peach | 1,0 | 400 - 1000 | Prevent physiological disorders Higher yield Better fruit quality | 1st: after flowering (BBCH 71 – 79) 2nd: 1 – 2 weeks after 1st application 3rd: 1 – 2 weeks after 2nd application |
| Grapevine – wine production | 1,0 | 500 - 1000 | Higher sugar content Better juice quality Suitable for IPM technology Lower Botrytis infection | 1st: before flowering (BBCH 53 – 60) 2nd: after flowering (BBCH 71 – 79) 3rd: ripening (BBCH 81 – 85) |
| Grapevine – table grapes | 1,0 | 500 - 1000 | Better fruit quality Suitable for IPM technology Lower Botrytis infection | 1st: before flowering (BBCH 53 – 60) 2nd: after flowering (BBCH 71 – 79) 3rd: ripening (BBCH 81 – 85) |
| Blueberry | 0,5 - 1,0 | 300 - 600 | Earlier harvest Better fruit quality Increased size uniformity and fruit firmness Higher yield | 1st: fruit growth 2nd: before harvest, 2 – 3 weeks after 1st application 3rd: 2 – 3 weeks after 2nd application |
| Raspberry | 0,5 - 1,0 | 300 - 600 | | 1st: beginning of flowering 2nd: beginning of harvest, 1 – 2 weeks after 1st appl. 3rd: 2 – 3 weeks after 2nd application |
| Strawberry | 0,5 - 1,0 | 300 - 600 | | 1st: beginning of flowering 2nd: 1 – 2 weeks after 1st application 3rd: 1 – 2 weeks after 2nd application |





Fast source of nutrients and energy

| Vegetables, seedlings and ornamentals | | | | |
|--|------------------|---------------|---|--|
| Crop | Rate l/ha (%) | Water l/ha | Target | Time of application (remarks) |
| Vegetable seedlings | 0,05 - 0,1% | | Growth acceleration Stronger seedlings (tissues) | When leaves are developed, before transplanting |
| Tomato, Egg-plant, Pepper | 0,5 - 1,0 | 300 - 600 | Growth acceleration Better fruit quality Higher yield | After planting During intensive growth (in 1 – 2 weeks interval) In time of difficult conditions for nutrient uptake (Effective in tank - mix with fungicides or insecticides) |
| Melon, Watermelon Cucumber | 0,5 - 1,0 | 300 - 600 | Higher flower/fruit number Better fruit quality Higher yield | |
| Carrot, Celery, Parsley, Radish, Turnip | 0,5 - 1,0 | 300 - 600 | Growth acceleration Higher yield and quality | |
| Onion, Garlic, Leek | 0,5 - 1,0 | 300 - 600 | Growth acceleration Higher yield and quality | |
| Broccoli, Cabbage Cauliflower, Lettuce, Spinach | 0,5 - 1,0 | 300 - 600 | Growth acceleration Higher yield and quality | |
| Beans | 0,5 - 1,0 | 300 - 600 | Growth acceleration Increase on number of flowers Bigger size of seeds | After planting During intensive growth of plants |
| Ornamentals | 0,05 - 0,1% | | Growth acceleration Prevent physiological disorders Better green effect | |

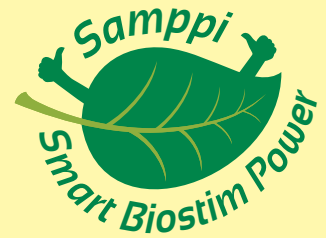




Fast source of nutrients and energy

| Field crops | | | | |
|-----------------------|-----------|------------|---|---|
| Crop | Rate l/ha | Water l/ha | Target | Time of application (crop growth stage) |
| Sugar beet | 0,5 - 1,0 | 200 - 600 | Higher sugar content Yield increase Better technological parametres | Tank - mix with fungicides or insecticides In time of difficult conditions for nutrient uptake |
| Malting barley | 0,5 - 1,0 | 200 - 600 | Grain uniformity Higher yield (no effect on grain N) | Tank - mix with fungicides or insecticides (BBCH 32 – 59) |
| Potato | 0,5 - 1,0 | 200 - 600 | Higher yield | Tank - mix with fungicides or insecticides (BBCH 31 – 69) 2 – 3 applications in 1 - 2 weeks interval |
| Sunflower | 0,5 - 1,0 | 200 - 600 | Higher oil content Yield increase | Tank - mix with fungicides or insecticides In time of difficult conditions for nutrient uptake |
| Tobacco | 0,5 - 1,0 | 200 - 600 | Higher yield and quality | 1st: after transplanting 2 – 3 applications in time of intensive growth, not later than 1 month before harvest |





Fast source of nutrients and energy

| Olives, citrus, kiwi and nuts | | | | |
|---|--------------------|---------------|---|---|
| Crop | Rate l/ha (%) | Water l/ha | Target | Time of application (crop growth stage) |
| Olives – table olives | Min. 1,0 (0,1%) | 1000 - 2000 | Better fruit set and fruit size Reduction of alternate bearing | 1st: before flowering (BBCH 55 – 60) 2nd: end of flowering (BBCH 69 – 71) 3rd: during fruit development In time of difficult conditions for nutrient uptake |
| Olives – oil production | Min. 1,0 (0,1%) | 1000 - 2000 | Better fruit set Reduction of alternate bearing Higher yield of oil | 1st: before flowering (BBCH 55 – 60) 2nd: end of flowering (BBCH 69 – 71) |
| Citrus (tangerines, oranges, lemons) | Min. 1,0 (0,1%) | 1000 - 2500 | Better fruit set and fruit size Prevent physiological disorders Better fruit quality | During intensive growth In time of difficult conditions for nutrient uptake Tank-mix with insecticides or fungicides |
| Citrus (tangerines, oranges, lemons) | Min. 1,0 (0,1%) | 1000 - 2500 | Better fruit coloration | 1st: 5 weeks before planned harvest 2nd: 3 weeks before planned harvest 3rd: 1 week before planned harvest |
| Kiwi | Min. 1,0 | 500 - 1000 | Better fruit set Better fruit quality | 1st: before flowering (BBCH 55 – 60) 2nd: end of flowering (BBCH 69 – 71) 3rd: during fruit development In time of difficult conditions for nutrient uptake |
| Pistachios, Almonds, Hazelnuts | Min. 1,0 | 500 - 1000 | Better fruit set Better fruit quality | 1st: before flowering (BBCH 55 – 60) 2nd: end of flowering (BBCH 69 – 71) 3rd: during fruit development In time of difficult conditions for nutrient uptake |
| Walnuts | Min. 1,0 (0,1%) | 1000 - 2000 | Prevent physiological disorders Higher yield Better quality | 1st: after flowering 2nd: 1 - 2 weeks after 1st application 3rd: 1 - 2 weeks after 2nd application |

